Application for Promotion to Full Professor

Dr. Kelly Alldredge Russell

Birmingham-Southern College

September 2022

Table of Contents

I. Letter of Application

II. Reflections on Scholarship, Service, and Teaching

III. Curriculum Vitae

IV. Department Summary Letter

V. Letters of Support from Colleagues

VI. Appendices

a. Scholarship
b. Numerical Course Evaluations
c. Representative Narrative Course Evaluations
d. Post-Tenure Review - 2019

Memorandum

To: Daniel Coleman, President
Dr. Tim Smith, Interim Provost
Committee on Promotion and Tenure

From: Dr. Kelly Alldredge Russell

Re: Application for Promotion to Full Professor

Date: September 26, 2022

Please accept the following as my application to promotion to the rank of Professor. My application includes reflections on my teaching, scholarship, and service to the college.

Appended to this application are materials including numerical course evaluations, representative pink sheets, and evidence of scholarship

Current Scholarly Activities

My mentor once told me that when it comes to research, "One must always keep a list." I currently have two things on my list. One is a 5-year grant project which includes a multi-disciplinary team of BSC colleagues. The other is a personal project on the topic of ungrading.

"STEMMING the Tide: Empowering Youth to Face Coastal Environmental Challenges" is a project funded by the National Association of National Academies of Sciences, Engineering, and Medicine. The Principal Investigator on the grant is Roald Hazelhoff, and the co-PIs are Vince Gawronski, Kate Hayden, Desiree' Melonas, and me. Mark Meade and Louanne Jacobs have joined as consultants for the grant project.

The trajectory of the project has renewed my spirit in so many ways. BSC offers faculty the opportunity to work across disciplines. STEMMING the Tide brings Political Science, Chemistry, Urban Environmental Science, and Education together for a common goal. Each of us brings unique perspective and varied research interests to the project.

Our work is centered in Africatown, Alabama. Africatown is three miles north of the city of Mobile. This tiny area of our state has received much attention as of late. The town was established by kidnapped individuals brought to Alabama on the last known slave ship, the *Clotilda.* In 2019, it was announced that the wreckage of the *Clotilda* had been found. This news has led to books and documentaries about the story of Africatown and the *Clotilda*. In a way, the STEMMING the Tide team is working to tell the story of Africatown. This is not the story of an illegal slave ship. This is not an award-winning documentary soon to be released on Netflix. The story we want to tell is the story of a community that has faced environmental injustice for more than 100 years.

Industry has ravaged the land, water, and air of the community. Paper mills polluted the town. The Cochrane–Africatown bridge was opened in 1991 and was touted to be a "landmark and symbol of progress to residents and visitors alike" by the Alabama Engineering Hall of Fame. My BSC colleagues and I have crossed "symbol of progress." As we drove across the bridge for the first time as a team, I noticed the air change. We noted a distinct chemical smell as we reached the midpoint between downtown Mobile and Africatown. We watched as men fished alongside the abandoned papermill catching fish not safe to eat. We walked through the community and saw the run-down condition of the school.

Our goal is to co-create a curriculum with the teachers at Mobile County Training Center that will bring awareness to the environmental hazards. Teachers have begun to write lesson plans and propose projects. We will fund projects proposed by eighth graders that will give them opportunities to make a change in their environment. As we each bring our own disciplinary lenses to the project, we hope to bring this Community of Practice model to other communities.

My second current project is a look into grading practices. I have long been interested in how grades impact learning. Research shows that grades diminish student interest and cause students to limit their thinking by discouraging risk-taking (Kohn, 1999).

I have been attracted to a relatively new approach to assessment sometimes called "ungrading." I have been collecting data in my ED 201 Introduction to Education class, and in January I have a leave to work on an article. I will present on this topic at the Association for Constructivist Teaching conference at the University of Northern Iowa.

Kohn, A. (1999). *Punished by rewards the trouble with gold stars, incentive plans, A's, praise, and other bribes*. Houghton Mifflin Co.

Scholarship Guidelines for Promotion to Full Professor

The Scholarship Guidelines for the Department of Education state that in order achieve promotion to Full Professor, a faculty member is expected to complete the following:

1. at least one Major scholarly activity;
2. at least at least one additional Substantive (or Major) scholarly activity
3. at least two additional Significant (or Substantive or Major scholarly activities.

The Education Department defines these categories as follows:

Major

- Book – scholarly trade book, research monograph, r textbook
- Article published in a peer-reviewed publication (electronic/online or print)
- Book chapter in a research monograph, textbook, or other scholarly work
- Undergraduate research leading to a publication
- Consultation on a research article that leads to a peer-reviewed publication
- Funded peer review grant proposal (ACS or national/international organization)

Substantive

- Presentational of papers and lectures at national conferences or professional meetings
- Appointment as an editor of a professional publication
- Invitation to consult on education policy activities
- Invited talk at an official organization
- Undergraduate research leading to a presentation
- Annotated bibliography created for a journal or website
- Curriculum developed for a public, private, non-profit, organization alone or in conjunction with undergraduate BSC students
- Funded peer reviewed local or regional grant

Significant

- Article published in a non-peer-reviewed journal
- Unfunded grant proposal
- Participation in scholarly professional development activities recognized by the profession
- Appointment as a consultant to local, state, national, international, public or private educational group
-

Scholarly work completed since my being granted tenure will be listed by category:

Major

Peer-Reviewed Articles:

Spencer, A., Barnes, G., Jacobs, L., Russell, K, and Dominick, A. (2022). Seeing Ourselves in the Children We Teach: Using Contemporary Young Adult Fiction to Prepare Preservice Teachers' Growth in Knowledge and Understanding of Students with Autism Spectrum Disorder. International Journal of SpecialEducation,2022.

Russell, K. (2022) Early Childhood Resource Review: Young Architects at Play. Science and Children/Dec 2021 (16)

Funded Peer-Reviewed Grant Proposals

STEMMING the Tide: Empowering Youth to Meet Coastal Environmental Challenges (2022) Funding organization: National Academies of Sciences, Engineering, and Medicine Gulf Coast Research Program ($1,250,000 - funded)3 Period of Grant: 2022 - 2027 Collaborators: Dr. Roald Hazelhoff, PI Dr. Kate Hayden - Co-PI Dr. Vince Gawronki - Co-PI Dr. Desiree Melonas - Co-PI Dr. Kelly Russell - Co-PI

Substantive

Presentational of papers and lectures at national conferences

Russell, K. & Barnes, G. (2019) There are no Weeds: Restorative Justice in the Elementary Classroom. Annual convention of the Association for Constructivist Teaching. Columbia, South Carolina.

Russell, K. (2017) The Implications of Piaget's Epistemological Theory on Early Literacy Instruction. Annual convention of the Association for Constructivist Teaching. Fullerton, CA.

Russell, K., Jacobs, L., Barnes, G., & Spencer, A. (2016) Remembering Again: Anchor Texts and Piaget's Theory of Memory. Annual convention of the Association for Constructivist Teaching. Houston, TX.

Russell, K. & Jacobs, L. (2014) Playing Their Game by Our Rules. Annual convention of the Association for Constructivist Teaching. Charleston, SC

Appointment as an editor of a professional publication

Science and Children NSTA Award-winning Peer Reviewed Journal Coordinating Editor, Early Childhood Resource Review column (2021-)

The Constructivist - Journal of the Association for Constructivist Teaching Editor (2017-2021)

Curriculum developed for a public, private, non-profit, organization alone or in conjunction with undergraduate BSC students

Jacobs, L. and Russell, K. (2021). The War on Terror: Teacher Resources and Lesson Plans The Alabama Veterans Memorial Park and Museum, alabamaveterans.org.

Significant

Unfunded grant proposal

STEAM Across the Curriculum (2022)
Funding organization: National Science Foundation ($190,000, pending review)
Collaborator: Dr. Amber Wagner

Integrating Computer Science and Computational Thinking into the PreK Classroom (2021)
Funding organization: National Science Foundation ($188,833, unfunded)
Collaborator: Dr. Amber Wagner

Integrating Computer Science and Computational Thinking into the PreK Classroom (2021)
Funding organization: National Science Foundation ($216,691, unfunded)
Collaborator: Dr. Amber Wagner

Participation in scholarly professional development activities recognized by the profession

Gawronski, V., Hayden, K. Hazelhoff, R. Jacobs, L. Melonas, D. and Russell, K. Using a Communities of Practice (CoP) Model to Empower Youth to Meet Coastal Environmental Challenges in Africatown, Alabama submitted to *The Conversation*

Jacobs, L. and Russell, K. (2022) Why is this workshop different from all other workshops?

Reflections on Service

Committee Work

It has been my experience that through our service to the college, we become more a part of the BSC community. It is through this service that we see both the big picture and the smaller cogs that are a part of life on The Hilltop. This service brings us into contact with colleagues from across the campus. Relationships formed in service can lead to co-designing classes or collaboration on publications and grant opportunities.

My service to the college includes:

Curriculum and Standards Committee – Birmingham-Southern College 2009-2010

Institutional Review Board – Co-chair – Birmingham-Southern College 2011-2012

Institutional Review Board – Chair - Birmingham-Southern College, 2012-2013

QEP Committee - Birmingham-Southern College, 2012

Faculty Development Committee - Birmingham-Southern College 2013- 2016.

Curriculum and Standards Committee – Birmingham-Southern College 2017 – 2020

Curriculum and Standards Committee co-chair – 2018-2019

Curriculum Task Force - Birmingham-Southern College – 2018-2019

Engaged Learning Task force - Birmingham-Southern College 2021-2022

Institutional Review Board - Birmingham-Southern College 2022- present

Advising

I currently advise 15 students. The minutia of advising is daunting. It feels sometimes like working a jigsaw puzzle with a few pieces missing! The unique curriculum at BSC can be tough to navigate for faculty and students alike. This is the tedious part of advising. The best part of advising is sitting down in my office with a student to touch base. The hardest part of advising is when a student is hurting, and I have no answers. I almost said that the proudest moment in advising is when you see an advisee walk across the stage at the end of there time at BSC. I then remembered having dinner with three former advisees this summer. They had graduated and begun their careers, but we still have a relationship where we can come together as colleagues and enjoy each other's company. That. That is the reward.

Organizations

I am the advisor for Kappa Delta Pi, the education honor society. Kappa Delta Pi is one of the largest and most prestigious educational honor societies, with more than 40,000 members and 600 chapters around the world. We are a "little sister" of the Mu Mu chapter at the University of Alabama at Birmingham.

This year we plan to contribute books to "Little Libraries" that exist in many areas of the city. These libraries allow families to take books from the small boxes designated as little libraries. Our plan is to keep the box near Bush Hills STEAM academy well stocked. Additionally, we plan to create baskets of books to put into public spaces where children often wait with their parents. These include pediatrician offices and laundromats.

I serve as the sponsor of a new group at BSC. This group is known as "NAMI on Campus." This organization is affiliated with the National Alliance on Mental Illness. There is such a need for safe spaces for students both get support and give support to others. This is evidenced by the number of students who come to my office to chat and the conversations I have with groups of students about the need for mental health allies. I have made myself available in recent years by being very open with students about my own mental illness. This has resulted in many conversations in my office with advisees and other students who need to talk.

Last year I decided that a NAMI on Campus group would be a good way to approach this as NAMI offers support to organizations on college campuses. As I began to move this forward to a reality for our campus, I learned that a student tried to organize a NAMI on Campus group last year but did not have a faculty sponsor. When I contacted her, I learned that she left BSC after the Fall of 2021 because of mental health issues. That further solidified the need for this group. We have just begun organizing after becoming an official BSC campus organization over the summer. Meetings will sometimes be pizza and movie nights, and at other times we will bring in guest speakers. People affiliated with the official NAMI on Campus organization and NAMI Birmingham are helping with our efforts. A fundraiser is planned for January that will be co-sponsored by NAMI Birmingham and NAMI on Campus BSC.

Reflections on Teaching

Teaching is a very metacognitive experience for me. My area of expertise does not allow me to merely deliver instruction. I am in a constant state of reflection. I have been teaching for more than 30 years, and my experience ranges from preschool to graduate school. The ages of my students may change, but my teaching philosophy remains constant. I am to my core a constructivist teacher. My philosophy is grounded in the works of Jean Piaget and Constance Kamii. Both Piaget and Kamii, his student and the chair of my dissertation committee, studied the nature of knowledge. How do humans acquire knowledge? We are dynamic consumers of our environment, and learning happens as we act on that environment.

It is my responsibility to create that environment. A poster hangs outside the door of my office. It is a quote attributed to Albert Einstein:

> "I never teach my pupils; I only attempt to provide
> the conditions in which they can learn."

If I were to teach my pupils, my job would take less effort. Providing the conditions requires skillful planning. The readings collected and the activities planned cannot be the same for every group of students. A course that I have taught in every semester of at least the last 10 years, is an example of how I create conditions for my students. This course was once a course that covered what I call "womb to tomb." Students studied development from zygote to death. I redesigned to have a more condensed lens of human development. It only made sense that a course within the education department would cover infancy through adolescence. That narrowed the focus of the content of the course in some ways, but it also opened us to endless possibilities.

In EPY 223, we spend the first weeks of class learning from a textbook as well as our collective experiences to answer the question, "Who are these children?" After that foundation is established, I never know where that class might take us. BSC students ARE children of the 21st Century. They know much more than I do about what it means to navigate the current world as a developing human.

Just days before writing this reflection, my students and I began to plan the rest of our term. In the syllabus, the next weeks are described s a time to learn about differences in physical, cognitive, and social-emotional development. Sections of the syllabus given at the first class were labeled "in the schools" and "in the news." I cannot prepare for what topics these placeholders will become each term. For the remainder of this term, my students have identified a myriad of topics: CoVid-19, bullying, charter schools, war. They are curious about how to talk to children about school shootings and how we can be more aware of and responsive to stigma surrounding mental health.

In allowing my students to design a large portion of our class, I have implemented several key components of my teaching philosophy. I have shared my power. Whether my students are eight or eighteen, they will only learn when allowed a sense of agency. I walk alongside my students

in our learning. Holding the power can mean control of the curriculum. Admitting that a student knows more than I do shifts the balance of learning. Students of physiology have taught me much about the brain and its workings. Students passionate about art therapy have led discussions about the benefits of aesthetic learning.

This approach as a community of learners underlies all my classes. As a first-grade teacher, I followed the interests of my students as we studied resources. I floated the idea of our making Valentine card to sell at the school's Open House. I had the kids' attention, and excitement was in the air as I laid out construction paper, markers, stamps, ink, and stickers. At the end of our first day of being card makers, my students were irritated because the stickers were gone. I asked, "What can we do?" Their own plans in how to keep that from happening became a lesson allocating resources. The students chose to make the cards with more stickers cost a whole dime more than the ones with no stickers – more economics lessons from six-year-olds.

It is this same problem-posing approach that I use in my BSC classes.

In Introduction to Education – What does it mean to be well-educated?

In Educational Psychology – How do developmental theories impact our teaching?

In Methods of Teaching Science and Health – Research tells us that science and social studies are often simply not taught in early childhood classrooms. Does this impact the gender divide in STEM fields?

In recent years, I have put the following quote on my syllabi:

> "A class…is an independent organism with its own goals and dynamics. It is always more than the most imaginative lesson plan can predict." (Thomas Kasulis)

My narrative student evaluations reveal themes that relate to my teaching.

- "She is passionate about teaching."
- "Emphasis on real-world application"
- "When things on her lesson plans weren't timed right, she always did what was best for her students."

My "pink sheets" also reveal things that reflect my areas for improvement. These often are in-line with my self-identified goals:

- "Could have been more structured and organized."
- "Be more specific about expectations."

My students are right. Organization is not my gift. I work hard to keep all aspects of my life in balance. Even in my most methodical moments, I see the forest and trip over the trees.

I can make a more concerted effort to make students comfortable with my expectations. I think the thing I am not able to communicate is that I want them to be specific about *their* expectations. I want them to not be constrained by my expectations. In giving them choice and voice, I often make them feel a bit adrift. Piaget would tell us that it is in this disequilibrium that we learn. Disequilibrium is uncomfortable. Creating a bit of discomfort is the job of a teacher.

Kasulis, T. P. (1991). Questioning. *Thinking: The Journal of Philosophy for Children*, *9*(4), 29–33. https://doi.org/10.5840/thinking1991948

Numerical Data

My post-tenure review occurred in 2019. For the purposes of analyzing my numerical data, I looked back to the method I had used for the post-tenure review, and I compared data from that review.

In 2019 I presented my data according to range of scores.

Term/Year	Range
Spring 2017	1.0-1.35
Fall 2017	1.0-1.9
Spring 2018	1.12-1.48
Fall 2018	1.31-1.88

At the post-tenure review, I noted that my spring scores are higher than my fall scores. I attributed this to the way that my teaching load is structured during the academic year. In the fall, I typically teach three 200 level classes. These classes are always much larger than the 300 and 400 level class I teach in the spring. (During the 2018-2019 academic year, I had 77 students in the fall and 30 students in the spring.)

I feel the differences in class sizes as well as the fact that my students in the fall are overwhelmingly underclassmen can explain some of this variability. My spring classes are primarily students with some prior knowledge of the material. Additionally, my lessened student load spring semesters allow me to better allocate my time and focus.

Analysis of the data by standard deviation showed a pattern. Items 11 and 15 were present in each term evaluated. Item 5 was present in two terms.

The prompts for these items:

Question 5: The course was organized in a way that enhanced my learning.

Question 11: The instructor's comments on course work were helpful.

Question 15: Please evaluate the quality of your own preparedness for class.

I chose to eliminate Question 15 as the nature of the question leans more toward student responsibility. I can plan and deliver well-designed courses that inspire students to put forth quality work, but I cannot be solely responsible for a student's self-identified level of preparedness for class.

My goals at the post tenure review were to evaluate cyclical data to improve the comments on course work because that Question 11 (The instructor's comments on course work were helpful) was present in each semester's data. Question 5 (The course was organized in a way that enhance my learning) was a second goals as that appeared in 2 of the semesters analyzed by standard deviation.

I will compare the Mean of those items (11 and 5) in relation to my numerical data from 2019-2022.

Comparison of Mean between 2019 Post-tenure Review and Promotion Review Items 5 and 11

Question	Mean (2017-2018)	Mean 2019-2022
5. The course was organized in a way that enhance my learning.	1.47	1.56
11: The instructor's comments on course work were helpful	1.50	1.48

Mean scores on both questions across both data sets were very close to the middle of the "1 – Excellent" and "2 – Good." I am pleased with these numbers.

Since the 2019 Post-Tenure review, I have concentrated on organization and comments on course work. For organization, I made conscious efforts to be responsive to students' needs regarding course structure and daily classes. Any one style of organization is not going to meet the way in which every student perceives organization, and the data make it difficult to measure changes, but I do believe that I have made improvements. I prepare multiple ways to present the expectations through the syllabus and through other information on Moodle such as regularly updated course schedules.

In the past 3 years I have been studying the concept of "ungrading." In most academic institutions from kindergarten through graduate schools require numerical grades and/or grades on an A-F scale. Research shows that grades undermine learning in several ways (Blum, 2020; Kohn, 2011). The practice of ungrading has had an impact on the feedback I give students. As I read students' work, I do not merely grade a multi-choice exam or adhere to a strictly numerical rubric. Students get copious narrative feedback. I pose questions, and students are

given the opportunity to revise and resubmit. In my opinion, this has improved my numerical assessments regarding the quality of feedback. My grading practice is further explained in the narratives about my teaching and scholarly work.

I have compiled my numerical data from Spring 2019-Spring 2022 in the same manner as I did at my post-tenure review

Term/Year	Range
Spring 2019	1.27-1.92
Fall 2019	1.02 – 1.59
Spring 2021	1.85-1.81
Fall 2021	1.5-2.22
Spring 2022	1.04 – 1.28

These data reveal that my numerical scores range from "1- Excellent" to "2- Good" except for a score of 2.22 in the Fall of 2021. This score appeared in Question 10 (The instructor returned graded assignments in a timely manner) and is the only score higher than 2 in my numbers going back to 2016. Thus, it is the only time I have scored between "good" and "satisfactory."

I believe that this score is a result of the fact that I no longer assign A-F grades except at midterm and the end of term. I give copious narrative feedback and allow resubmissions when students chose to refine their work based on my comments. My method of grading and research-based justification will be further explained in narratives about my teaching and scholarly work.

It is of note that in 2019 an area for improvement was the quality of feedback to the students. Since that time, students have responded more favorably to the quality of my feedback while at the same time noting that I may be a bit slow to return work.

For my promotion packet, I analyzed questions by aggregate mean scores. This revealed a perceived strength in Question 8 (The instructor promoted an understanding of general concepts not just knowledge of specific facts). The aggregate mean for that question across 5 terms is 1.282.

The question with the highest aggregate mean was Question 10 (The instructor returned graded assignments in a timely manner). The score on this question across 5 terms was 1.622. This was not surprising given the 2.22 I received in Fall 2021.

My numerical data consistently ranges between "excellent" and "good." The one area I will consider most closely moving forward will be whether my students perceive that I return work quickly. I want to measure that against students' numerical and anecdotal data. This will be done using the numerical values of my evaluations, the pink sheets, and the survey data from my current research. (IRB protocol # 2022-01-004)

Works cited:

Blum, S. (Ed.). (2020). *Ungrading: Why rating students undermines learning (and what to do about it)*. West Virginia University Press.

Kohn, A. (2011). The Case Against Grades. *Educational Leadership*.

Kelly Russell

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EDUCATION

Ph.D. Early Childhood Education – 2008
University of Alabama at Birmingham
Dissertation: *Children's Prenumerical Quantification of Time*

M.A.Ed. Elementary Education – 2004
University of Alabama at Birmingham

B.S. Elementary Education – 1990
University of Alabama at Birmingham

PUBLICATIONS

Books

Goldman, R., Aldridge, J., Russell, K. (2007). *Language and Literacy Supports for Struggling Readers,* Birmingham, AL: Seacoast Publishing.

Book Chapters

Russell, K. (2007). Working with diverse families: A transformative approach. In J. Aldridge & R. Goldman (Eds.), *Moving towards transformation: Teaching and Learning in inclusive classrooms* (pp. 45 -54). Birmingham, AL: Seacoast Publishing.

Peer Reviewed Journals

Spencer, A., Barnes, G., Jacobs, L., Russell, K, and Dominick, A. (2022). Seeing Ourselves in the Children We Teach: Using Contemporary Young Adult Fiction to Prepare Preservice Teachers' Growth in Knowledge and Understanding of Students with Autism Spectrum Disorder. *International Journal of Special Education,* 2022.

Russell, K. (2022) Early Childhood Resource Review: Young Architects at Play. *Science and Children.* Nov/Dec 2021 (16)

Russell, K. & Kamii, C. (2012) Children's Prenumerical Conception of Time. *Journal of School Science and Mathematics.* 112 (8). 476-482.

Kamii, C. & Russell, K. (2012) Elapsed time: Why is it so hard to teach? *Journal of Research in Mathematics Education,* 43(3), 296-315.

Kamii, C. & Russell, K. (2010) The Older of Two Trees: Young Children's Development of Operational Time. *Journal of Research in Mathematics Education,* 41(1), 6-15.

Russell, K. & Aldridge, J. (2009) Play, unity and symbols: Parallels in the works of Froebel and Jung. *African Journal of Psychology and Counseling,* 1(1), 001-004.

Russell, K. (2007, Summer). Interaction and influence: Teachers and curriculum. *Focus on Teacher Education, 7(4), 1 -3.*

Russell, K. (2004, Fall). Sitting down with Connie Kamii. *The Constructivist* [online], *15*(1) Available: www.odu.edu/act/journal

Multimedia

Gawronski, V., Hayden, K. Hazelhoff, R. Jacobs, L. Melonas, D. and Russell, K. Using a Communities of Practice (CoP) Model to Empower Youth to Meet Coastal Environmental Challenges in Africatown, Alabama submitted to *The Conversation*

Jacobs, L. and Russell, K. (2022) *Why is this workshop different from all other workshops?*

Jacobs, L. and Russell, K. (2021). The War on Terror: Teacher Resources and Lesson Plans *The Alabama Veterans Memorial Park and Museum,* alabamaveterans.org.

Martin, K & Emfinger, K. (Executive Producers) & Russell, K. (writer) (2007). *Developing oral language: Talk to learn* [DVD] Southern Early Childhood Association.

Editing

Science and Children NSTA Award-winning Peer Reviewed Journal
Coordinating Editor, Early Childhood Resource Review column
(2021-)

The Constructivist Journal of the Association for Constructivist Teaching
Editor (2017-2021)

GRANTS

STEAM Across the Curriculum (2022)
Funding organization: National Science Foundation ($190,000, pending review)
Collaborator: Dr. Amber Wagner

STEMMING the Tide: Empowering Youth to Meet Coastal Environmental Challenges (2022)
Funding organization: National Academies of Sciences, Engineering, and Medicine
Gulf Coast Research Program ($1,250,000 - funded)

Period of Grant: 2022 - 2027
Collaborators: Dr. Roald Hazelhoff, PI
Dr. Kate Hayden - Co-PI
Dr. Vince Gawronki - Co-PI
Dr. Desiree Melonas - Co-PI
Dr. Kelly Russell - Co-PI

Integrating Computer Science and Computational Thinking into the PreK Classroom (2021)
Funding organization: National Science Foundation ($188,833, unfunded)
Collaborator: Dr. Amber Wagner

Integrating Computer Science and Computational Thinking into the PreK Classroom (2021)
Funding organization: National Science Foundation ($216,691, unfunded)
Collaborator: Dr. Amber Wagner

Faculty Renewal Grant (2011)
Funding organization: Association Colleges of the South (funded)
Collaborators: Drs. Louanne Jacobs, Genell Ferrell, Amelia Spencer, and Kristen Harper

PRESENTATIONS

National Conferences

Russell, K. & Barnes, G. (2019) There are no Weeds: Restorative Justice in the Elementary Classroom. Annual convention of the Association for Constructivist Teaching. Columbia, South Carolina.

Russell, K. (2017) The Implications of Piaget's Epistemological Theory on Early Literacy Instruction. Annual convention of the Association for Constructivist Teaching. Fullerton, CA.

Russell, K., Jacobs, L., Barnes, G., & Spencer, A. (2016) Remembering Again: Anchor Texts and Piaget's Theory of Memory. Annual convention of the Association for Constructivist Teaching. Houston, TX.

Russell, K. & Jacobs, L. (2014) Playing Their Game by Our Rules. Annual convention of the Association for Constructivist Teaching. Charleston, SC

Russell, K. & Ferrel, G. (2010) Reconstructing a Constructivist Teacher Education Program. Annual convention of the Association for Constructivist Teaching. Napersville, IL

Russell, K., Aldridge, J. (2007, November) A search for wholeness: Parallels in the work of Froebel and Jung. Annual convention of the National Association for the Education of Young Children. Chicago, IL.

Aldridge, J., Russell, K., Jepkemboi, G. Is there a doctorate in your future? Annual MidSouth Reading and Writing Institute. Birmingham, AL.

Martin, K.; Emfinger, K.; Russell, K. (2006, November) Professional Development in Preschool

Settings: Building Literacy; Touching Teachers. Annual convention of the National Association for the Education of Young Children. Atlanta, GA.

Manning, M.; Kato, T.; Russell, K. (2006, November) Correlation doesn't mean causation: Phonemic awareness. Annual convention of the National Association for the Education of Young Children. Atlanta, GA.

Manning, M.; Kato, T.; Russell, K. (2006, November) Correlation doesn't mean causation: Phonemic awareness. National Council for the Teachers of English, Nashville, TN.

Russell, K., Aldridge, J., Emfinger, K., Christensen, L. (2007) Family matters: Equipping teachers to work with families in the 21st century. Annual Convention of the American Educational Research Association. Tampa, FL.

Russell, K., Aldridge, J. (2007) A Search for Wholeness: Parallels in the Work of Froebel and Jung. Annual Convention of the American Educational Research Association, Chicago, IL.

Aldridge, J.; Emfinger, K.; Russell, K. (2006, July) Can developmentally appropriate practice survive no child left behind? Whole Language Umbrella: Literacies for All Summer Institute. Charlotte, NC.

Aldridge, J.; Russell, K. (2006, June) Critical literacy: Teaching to transform the world. MidSouth Reading and Writing Institute. Birmingham, AL.

Aldridge, J.; Emfinger, K.; Strevy, D., Russell, K.; Kirkland, L. (2005, December) The language of instruction: Closing the gap between what we say and what they know. Annual Convention of the National Association for the Education of Young Children. Washington, DC.

Russell, K. (2005, June) Oral language development: Foundation to literacy. Annual MidSouth Reading and Writing Institute. Birmingham, AL.

International Conferences

Russell, K. (2008, July) A search for wholeness: Parallels in the work of Froebel and Jung. Annual convention of the International Froebel Society, Boston, MA.

Russell, K. (2006, April) Early Reading First Celebrates Preschool Teachers. Annual Meeting of the Association for Childhood Education International. San Antonio, Texas.

Russell, K. (2006, April) Invited Speaker for Celebration Breakfast, Annual Meeting of the Association for Childhood Education International. San Antonio, Texas.

Professional Experience

Research

Birmingham-Southern College, (Birmingham, AL) March 2022-present
Co-PI - STEMMING the Tide: Empowering Youth to Meet the Needs of Coastal Environmental Challenges

University of Alabama at Birmingham, (Birmingham, AL), September 2005 – September 2006, Curriculum Coordinator, Early Reading First Project

Teaching

September 2013 – Present, Associate Professor of Education, Birmingham-Southern College

September 2008 to August 2013, Assistant Professor of Education, Birmingham-Southern College

September 2007- August 2008, Instructor of Education, Birmingham-Southern College.

September 2006 to August 2007, Teaching and Research Assistant, Department of Curriculum and Instruction, University of Alabama at Birmingham

August 2005-May 2006, Music Teacher, Hayden Primary School

August 1998-May 2005, First and Second grade teacher, Hayden Elementary School

PROFESSIONAL SERVICES

Conference Chair

Association for Constructivist Teaching, 2022, Birmingham, AL (virtual)

Guest Editor

Focus on Teacher Education – Association for Childhood Education International – 2007.
Childhood Education – Special Theme Issue: Rethinking Diversity
Association for Childhood Education International, 2007.

Program Evaluator

Evaluation of the Even Start program for Sylacauga Alliance for Family Enrichment (May 2006).
Evaluation of the Even Start program for Selma, Alabama (April 2007)

Committees

Local Planning Committee for the annual conference of the Association for Childhood Education International, Atlanta, GA, April 2008.

Steering Committee for the 18th annual MidSouth Reading and Writing Institute – University of Alabama at Birmingham, June 2007.

Curriculum and Standards Committee – Birmingham-Southern College 2009-2010

Institutional Review Board – Co-chair – Birmingham-Southern College 2011-2012

Institutional Review Board – Chair - Birmingham-Southern College, 2012-2013

QEP Committee - Birmingham-Southern College, 2012

Faculty Development Committee - Birmingham-Southern College 2013- 2016.

Curriculum and Standards Committee – Birmingham-Southern College 2017 –

Curriculum and Standards Committee co-chair – 2018-2019

Curriculum Task Force - Birmingham-Southern College 2018-2019

Engaged Learning Task force - Birmingham-Southern College 2021-2022

Institutional Review Board - Birmingham-Southern College 2022- present

PROFESSIONAL ORGANIZATIONS

Association for Constructivist Teaching, President (2021-2023)

National Science Teacher Association, Column Editor, *Science & Children* (2021-)

HONORS & AWARDS

Outstanding Masters Student, University of Alabama at Birmingham,2004

Who's Who Among America's Teachers, 2005

STEMMING THE TIDE

EMPOWERING YOUTH TO MEET COASTAL ENVIRONMENTAL CHALLENGES

"THE WAY WE MOVE INFORMATION FROM OUR HEADS TO OUR HEARTS IS THROUGH OUR HANDS" - Brené Brown

STEMMing the Tide utilizes an interdisciplinary approach to co-develop and implement a novel STEMM program with an emphasis on environmental justice and climate change. This supplemental program can be easily adapted for use in the classroom, after-school program or summer camp program.

To contextualize in-class learning, students partner with community organizations to develop and participate in service projects funded by this grant aimed at revitalizing and restoring their neighborhoods, parks, and ecosystems.

Interested in working with us? Contact Roald at rhazelho@bsc.edu

COLLABORATE

Co-create a program to enhance any middle school curriculum leveraging active and service-learning pedagogies

COMMUNITY

Foster a community of practice by stengthening connections between educators, students & community to address local challenges

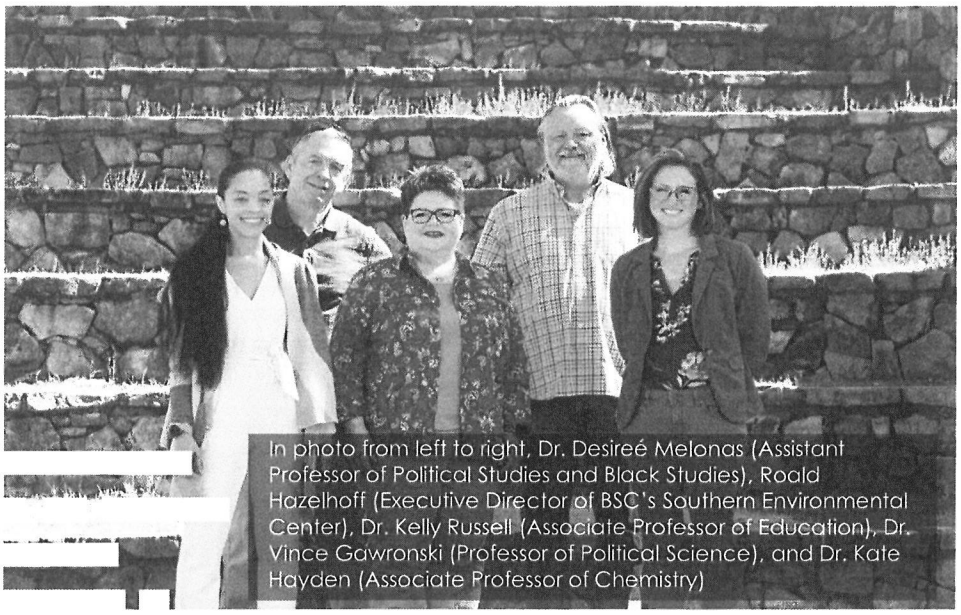
EMPOWER

Help students meet state standards in science and social studies while empowering them to become agents of change.

CONTACT | ROALD HAZELHOFF | RHAZELHO@BSC.EDU

WHO ARE WE?

We are a diverse team of subject matter experts who teach from an urban liberal arts college, Birmingham-Southern College (BSC). Our field research, consulting activities, teaching, and service-learning projects range widely but are mutually reinforcing. Each member has experience working in marginalized communities affected by environmental inequities and is supported by colleagues across Biology, Black Studies, Chemistry, Economics, Education, Political Science, and Urban Environmental Studies.



In photo from left to right, Dr. Desireé Melonas (Assistant Professor of Political Studies and Black Studies), Roald Hazelhoff (Executive Director of BSC's Southern Environmental Center), Dr. Kelly Russell (Associate Professor of Education), Dr. Vince Gawronski (Professor of Political Science), and Dr. Kate Hayden (Associate Professor of Chemistry)

WHY AFRICATOWN?

- >50% zoned for industry
- Significant soil, air, and water pollution
- Under utilized greenspace
- Food/health care desert
- Public interest increasing
- Historical signficance

WHY MCTS?

- 100% marginalized groups
- 80% economically disadvantaged
- 17% homeless
- <15% meet state standards

Are you here to stay?

We want to create something that is both impactful and sustainable. We believe our community of practice approach creates bridges between residents, students, educators and community partners that will last.

...one potential pathway for STEMMing the Tide:

1. PREPARTION

Summer workshops connect educators, researchers and community agencies to create active-learning lesson plans bridging science and social studies. ***Earn CEU credits and up to $1400 for participating.***

2. INTRODUCTION

6th graders are introduced to environmental challenges within their communities through in-school programming culminating with the immersive Estuary Corp program with Alabama Coastal Foundation.

3. EDUCATION

Lessons developed in summer workshops are implemented in 7th grade curriculum to enhance social studies and science courses. Students recieve locally relevant context, content and skills development.

4. ACTION

Leveraging knowledge gained in 6th and 7th grade, 8th graders propose and implement service projects partnered with community agencies.

Funding support provided by STEMMing the Tide.

Using a Communities of Practice (CoP) Model to Empower Youth to Meet Coastal Environmental Challenges in Africatown, Alabama

Vince Gawronski Kate Hayden, Roald Hazelhoff, Louanne Jacobs, Desiree Melonas, Kelly Russell – Birmingham-Southern College

Teacher professional development designed to result in student learning typically follows a top-down delivery model. Professional development content is usually based on standards and assessments, driven by compliance, and presented to teachers in a series of sit-and-get training sessions. The Community of Practice (CoP) model differs from traditional educational professional learning/professional development in that it is co-created by team members to meet the needs of a community of learners. The CoP learning community includes a variety of stakeholders participating as equal partners toward a shared goal.

"Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly." Communities of practice are learning communities in which all members, regardless of status, teach and learn from one another toward a common goal. In these democratic learning communities, all members whether novice or expert actively engage in situated, co-created learning. This is the ideal standard for educational professional development, but not the norm. It was, however, the model that formed the structure of the Stemming the Tide project. This project's learning community includes higher ed faculty from a broad range of disciplines, middle school subject-area teachers, leaders in the local community, and community non-profit experts. The resulting community of practice is dedicated to empowering students to recognize and address coastal environmental issues.

Africatown resides within the jurisdiction of Mobile, Alabama, but it is a victim of racist city planning and environmental injustice. Founded by freed and escaped enslaved people smuggled to Alabama on the Clotilda slave ship, Africatown became isolated from downtown Mobile by industrial zoning and highway and bridge construction. Africatown is surrounded by tar sand storage tanks, metal processors, chemical refineries, asphalt plants, paper mills, and high-volume truck routes, all of which have contributed to soil and air pollution coupled withand high incidences of illness in the Community

The discovery of the Clotilda by Ben Raines, a local journalist, piqued public interest in Africatown with its fascinating history and socioeconomic challenges. However, it has also made Africatown residents and local stakeholders suspicious of outsider intentions. Therefore, establishing a trusting relationship with potential community partners, stakeholders, and MCTS administrators and teachers was paramount to forming a Core Group of the CoP:

- The Core Group consists of members who are the most interested in (and often most passionate about) the Community.
- Having a Core Group is important for joint development, to include members' perspectives and instill a sense of ownership, to act as role models, enable more inclusive representation and diversification, and provide succession planning.
- When forming a Core Group, bear in mind that it is an actual team that needs to meet regularly, have governance with roles and responsibilities and a clear relationship to the Core Team.

To establish our CoP Core Group it was essential to win support from Joe Womack, President of Africatown Clean, Healthy, Educated, Safe, and Sustainable (CHESS), Anderson Flen of the MCTS Alumni Association and the Africatown Heritage Preservation Foundation, James Patterson, Principal of the MCTS, and Merceria Ludgood, Mobile County Commissioner. However, the Core Group also includes Mobile Baykeeper. Alabama Coastal Foundation, Mobile Environmental Justice Action Coalition (MEJAC). We have also reached out to several other subject matter experts, organizations, and businesses to become Active or Peripheral Members of our CoP.

Our Birmingham-Southern College CoP Core Team consists of the Executive Director of the Southern Environmental Center, two political science professors, one chemistry professor, and one education professor. The Core Team's expertise, field experiences, and distance from Mobile were advantages. While there are many beneficial Birmingham-Southern College connections in the Mobile area, we are not mired in local political or historical conflicts. We believe this allows us to provide an unbiased framework and a safe space for Mobile-based groups to come together and focus on the needs of this community and move forward.

We expanded and officially established our CoP through a two-day workshop in Mobile this past summer. The workshop focused on bridging relationships between educators at MCTS, community agencies that serve Africatown, and faculty from BSC while generating learning modules to pilot in the following academic year at MCTS. The teachers and partnering BSC faculty received stipends, while community partner organizations received donations to motivate their participation in the workshop and to compensate them for their time and work.

Short presentations introducing the objectives of the project and the essentials of successful CoPs (Community of Practice) and service-learning projects kicked off the meeting. However, a directed workshop "choreography" was necessary for establishing the CoP Core Group of the CoP. Meeting participants were divided into interactive "pods" consisting of one professor, one or two MCTS teachers, and one or two representatives from our community partners. While participants worked together in their main pod, opportunities for participants to rotate through

seriously as they were in the workshop. At the same time, many community partners found it refreshing that an outside group with grant funding wanted to focus on MCTS, a school with a student body of 100 percent economically disadvantaged and underserved students.

We think the workshop was successful because considerable time was spent building relationships with those involved before the meeting and then cultivating and extending those relationships across all the participants during the meeting. The participants noted in the survey that they would have liked "more time in group discussions" and to "learn more about service learning." At the end of the meeting, many participants recognized the importance of nurturing and maintaining these relationships. Avenues to maintain communication were established through social media, video conferencing, and regular meetings were established among the pods and the larger core group.

The workshop provided a space to share, collaborate, and co-create new knowledge. It generated creative synergies among the teachers, community partners, and subject matter experts. Everything centered on a shared passion for learning, environmental and social justice, climate change, and STEMM education.

We expect the CoP Core Group to lose members and to gain new members over time. The Core Team may even experience changes in its makeup. Nonetheless, the intent is for our CoP to deepen, endure, leave lasting legacies, and make Africatown more vibrant and resilient as a unique community.

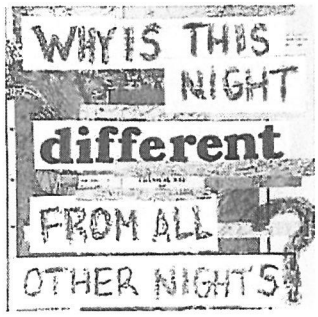
BLOG

8/8/2022

WHY IS THIS WORKSHOP DIFFERENT FROM ALL OTHER WORKSHOPS?

0 COMMENTS

By Louanne Jacobs and Kelly Russell



The Passover Seder contains a section known as "The Four Que central question is "How is this night different from all other ni response is something like, "On all other nights we _____ but o we _____." The premise is that the order and the content and the participation on this night of celebration will be different from all o could be said about the inaugural STEMMING the Tide worksh different in form, in content, and most importantly, in intent from workshop the two teacher-educators in the group had ever atten refreshing, invigorating, empowering, and oh so different fror workshops.

How was our workshop different? It began with the familiar "here is who we are, and here is the information." While this part of the day was intentionally brief, the audio-visual setup of the room res accompanying PowerPoint being unreadable to most of the audience. We could sense that the audie trying to figure us out: Who were we? What was our gimmick? What was our ask? Was this worth Why were professors from Birmingham talking to them about 5E lesson plans and learning theor books? Where were the lesson plans and the materials and assessments that these teachers were asked to incorporate into their already overwhelming workload? You could almost see these q thought bubbles floating above the teachers' heads. Teachers have learned to be skeptical when th to participate in workshops as participation, often, more closely resembles compliance. This is important ways in which this workshop was different from all other workshops – the curriculum, the to be co-created with teachers and students at the center. The familiar introduction format est groundwork for creating a community of practice by presenting our strengths and areas of experti inviting the teachers to join the community bringing THEIR expertise – their knowledge of the community, the existing curriculum, and, most importantly, their knowledge of the students who the center of the project.

As we broke into working groups comprised of teachers, community partners, and professors the tea to realize that there was no curriculum – they were being asked to look at content standards at thei

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and discipline and bring their own expertise to designing individualized needs-based curriculum. T the driver's seat of curriculum design. The vast array of expertise in the room had the potential hard to energize folks toward our project, but we are learning that this diversity of players who car same thing (Alabama's gulf coast) is a defining element of a Community of Practice. The dance of th going to be honoring all voices at the table.

As the first breakout group began, the teacher-educators in the group were still sorting out our dance – we soon realized that our role included that of convincing teachers that all other members were there to support the development of curriculum, not direct it. One group consisted of Kelly education professor at BSC, Alexandria Carter, a science teacher at MCTS, and Nate Carr, an environmental educator who works with the Mobile Baykeepers.

One thing Nate said while talking about his work stood out a to why we were all there. He explained that his job consist around to schools in Mobile County, "but this year [I] didn't ge MCTS." He wondered aloud why it might be that that school been inadvertently "last on the list." It was an opportunity for to talk about how amazing her students are and how th teachers often perceive that they are "last on the list" and I they are to be at the table for this project.The large round table and the way we had situated ourselv at a distance that allowed her to observe. She was far enough away that it was easy to be a sort of fly of this early exchange of ideas. She decided to take notes on what she was hearing and seeing.

She heard things like, "When you said that, it made me think..." and "Let me show you what I use wit I come into classrooms." In the picture, Nate has pulled up a presentation with images of local sea Alexandria discussed several that they had found students didn't know well. Alexandria shared her about what her students knew and didn't know about coastal wildlife, and this led to discussions abo don't know about the creatures around them. "They live near the water, but they don't get the char know what's there."

Louanne's group included Darrius Barnes, social studies t Heaven Pollard and Ellena Balcom from CHESS. Darriu MCTS but not new to the area or the profession. He ch on map skills for 7th grade based on his previous expe talked about how his students had little understanding o skills which grew into a conversation about roots and wi concept of place in geography. The group pulled Ra MEJAC into their constellation to talk about mapping usin balloon and all the geography concepts and skills students could learn by placing themselves, their their neighborhood at the center of an expanding set of balloon launches. At the center of this dis teacher expertise and student need supported by a growing community of practice. This, indeed, w than all other workshops.

Finally, this workshop was different from all other worksho was rooted in love. Paulo Freire's Pedagogy of the Oppre argues that education can be a practice of freedom and portra

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as facilitators of that growing emancipation through their love and learning communities. The common element at the c working group table was love: we do this work because we lov because we love the communities, because we love the schc we love our neighbors, because we love justice, because v coastline and our waterways...and above all, because we students.

SHARE

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DETAILS

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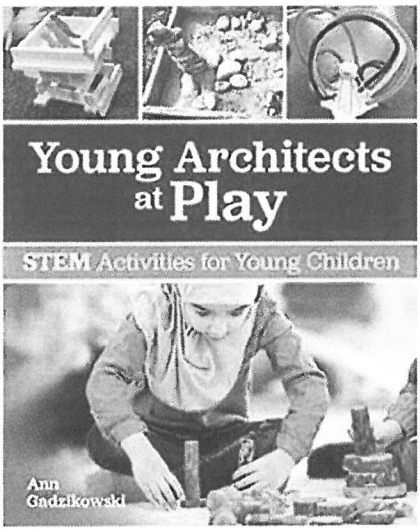
YOUNG ARCHITECTS AT PLAY: STEM ACTIVITIES FOR YOUNG CHILDREN

by Ann Gadzikowski
November 2020
Redleaf Press
160 Pages
$32.07



Young Architects at Play: STEM Activities for Young Children by Ann Gadzikowski is a comprehensive text that presents activities to do with children as well as the research and philosophy that grounds the practice of including architecture in STEM education.

Architecture is presented as both science and language. Discovering how blocks fit together or how to draw a structure involve concepts of science, engineering, and math. Children's spatial and reasoning abilities are enhanced through the emphasis of architecture in the early childhood classroom. As children become excited by their creations, they talk to teachers and friends, draw representations, and write about what they are doing.

Gadzikowski pulls from her extensive observations of children interacting with materials—natural, found, as well as commercial products like Jenga or LEGO. Emphasis of architecture's design principles, patterns, and aesthetic qualities make it clear that with an adult's guidance, play is much more than meets the eye.

The act of building block structures, sand sculptures, tunnels, and canals offers rich opportunities for language development as children explain their thoughts and negotiate with friends. Moral development is supported as children express their concern for friends and generate rules about their play. (What rules should we have for our structures? How do we comfort a friend who is sad because their structure has fallen? How do I respect the ideas and space of other children?)

The book starts with houses and homes. This is developmentally appropriate as it is a topic for which children naturally have schema. Focusing on homes and progressing to construction of bridges and other infrastructure allows children to move from the familiar to the more novel. They know that houses have a roof, walls, and doors. They understand that a house is where people sleep, eat, and live their lives with family. Gadzikowski calls to attention the emotional safety of children whose experiences at home may not be that houses are safe places.

The importance of children's physical as well as emotional safety is addressed in every activity suggested. Gadzikowski leads the reader through simple and more intricate activities and explains the complexities of such play. The role of the teacher in choosing materials, allowing opportunity for discovery, and pushing learning further is emphasized and supported by organized activities. Teachers are offered both the how and the why of architectural play. Gadzikowski provides big ideas and open-ended questions that will support teachers as they deepen children's experience and understanding.

The overarching theme of this book is how to honor children as curious architects. Each of the 20 suggested activities are presented in a format that helps the reader understand the intentionality that underlies what some may see as play. This is accomplished by outlining the purpose, materials, provocations, considerations for safety, questions that lead children to big ideas, and the next steps to take after the activity. This format is consistent across all activities, which makes *Young Architects at Play: STEM Activities for Young Children* an effective resource for teachers of preschool and early education. Teachers will gain an understanding of why architecture is a natural learning experience that brings what children know about structure how to use that innate interest to create valuable learning experiences. •

Kelly Russell (*krussell@bsc.edu*) is an associate professor of education at Birmingham-Southern College. She spent 10 years teaching first grade and now teaches preservice teachers how to bring STEM into the classroom. Dr. Russell is editor of the Early Childhood Resource Review column in *Science and Children*.

NEW: **Go on a Scavenger Hunt at the Park**

Click here to take a guided tour of the Park by video!

The Veterans Day step stone dedication ceremony and tribute to veterans will be held on November 6 at 1:30 pm. The Deadline to order step stones to be dedicated in November is October 1.

Click Here to Order a StepStone

Education
(Teacher's Links)

The Alabama Veterans Memorial Foundation, a 501 (C)(3) educational non-profit foundation, envisioned a memorial which would be a place of reflection, a place to educate, and a place to honor Alabama veterans who served during the 20th and 21st century wars. This vision was realized in 2001 with the dedication of the twenty-two-acre Alabama Veterans Memorial Park. The Park has remained for twenty years as a place where visitors can come to pay tribute to the brave men and women who served and who have died in defense of our freedom.

The Alabama Veterans Memorial Park also honors veterans by educating both adults and children on the enormous price paid by these brave men and women and their families for our citizens' freedom and peace. There are three main areas in the Park for educational opportunities.

1. Near the end of the 1000 foot beautiful-wooded Memorial Trail is the American Flag Plaza. In the middle of the Plaza stands a 120 foot-tall flag pole with the American flag flying from the top that can be seen from cars traveling on I-459 as they pass the Liberty Parkway exit. Encircling the flag pole are very special 4 inch by 8-inch brick pavers called StepStones. These StepStones have been engraved with a veteran's name, rank, and branch of service. This Plaza was created to honor all veterans because the Alabama Veterans Memorial Foundation believes that every veteran deserves a tangible way of being publicly recognized for his or her service. Whereas the next area in the Park, the Memorial Plaza, was created to honor Alabamians only, the American Flag Plaza is dedicated to all veterans who have served or all men and women who are currently serving, giving them a special place of remembrance. The honored veteran can be from any service time, any state and any branch; also, they may be deceased or living or currently serving. In addition to honoring a veteran, a military unit or a military-affiliated organization may be honored with a StepStone. Anyone can honor a veteran by purchasing a StepStone for a $100 donation. They are sold all during the year and are dedicated in two ceremonies each year – near Veterans Day and near Memorial Day.

2. At the end of the Trail is the Memorial Plaza where thirty-six columns reach upward twenty-four feet. Displayed on the columns are plaques that provide information about Alabama Medal of Honor recipients, Alabama artwork, and various documents about Alabama veterans. The text of the Medal of Honor citations as well as the documents are also printed on the Park's website, alabamaveterans.org.

3. Adjacent to the Memorial Plaza is the Hall of Honor. Written on the walls are over 11,000 names of Alabama veterans who were killed in action during the 20th and 21st century wars. The alphabetized names of the service men and women are listed by the war and then the Alabama county in which they enlisted. Included above each war name is a famous quote by the United States President at the time of the war.

To further the mission of education, the Alabama Veterans Memorial Foundation has worked with instructors from Samford University, Birmingham Southern and teachers from area schools to create Lesson Plans as an online presence for teachers to use in the classroom and for home-schooled students. These Lesson Plans, designed for fourth through eighth grade students, contain activities for students to learn about World War I, World War II, Korean War, Vietnam War,

Gulf War, and War on Terror. Each includes information about Alabama's involvement in these wars. These eight lesson plans are listed below.

Lesson Plan One: What is an Alabama Veteran?
This lesson plan contains activities for upper Elementary School students to discuss and discover more about veterans. It includes information about Alabama's Role in World War One, Alabama's 167th Infantry Regiment, and the Alabama Veterans Memorial Park in Birmingham as well as activities to learn more about the Star Spangled Banner and the Pledge of Allegiance.

Lesson Plan Two: World War Two: Alabama Veterans
This lesson plan contains activities for upper Elementary School students to discover more about World War Two, the branches and flags of the military, and three Alabama veterans. It also includes information about the United States after World War One, the factors leading to World War Two, Alabama during the World War Two and the famous Tuskegee Airmen.

Lesson Plan Three: Rosie the Riveter and Beyond: Alabama Women's Contributions during WWII
This lesson plan contains activities for upper elementary school students to discuss and discover more about the role of women in World War Two.

Lesson Plan Four: Medal of Honor Recipients
This lesson plans contains activities for students in upper elementary schools to discuss poems about veterans, to research Alabama Medal of Honor recipients, and to write a biographical poem about a recipient.

Lesson Plan Five: Korea and the Korean War
This lesson plan contains activities for upper Elementary School students to discover more about Korea and the Korean War by researching, analyzing pictures and writing.

Lesson Plan Six: the Vietnam War

Part A: The Impact of the Vietnam War on Alabama and the United States
This lesson plan contains an activity for upper elementary grades 4-6 to learn about the impact of the Vietnam War on Americans. Students will analyze opinions facing the Vietnam War as well as memorials honoring veterans who served during this time in history.

Part B: The History of Vietnam and the United States Involvement
This lesson plan is designed for middle school students or older studying the Vietnam War. This lesson contains an interactive slideshow with fill-in-the-blank guided notes to ensure active participation by all students. In addition, a gallery walk activity containing twelve diverse images from the Vietnam War (provided by the National Archives) has been included to allow students to apply what they have learned via an image analysis activity. QR codes have also been provided for each image in case teachers would prefer students to use technology to view the images.

Lesson Plan Seven: The Persian Gulf War

Part A: An Introduction to the Persian Gulf War, Geography and Key Vocabulary
This lesson plan contains activities for upper elementary grades 4-6 to become acquainted with the key events leading up to the Persian Gulf War, to learn pertinent vocabulary, and to identify countries of the Middle East on a map.

Part B: Key Events of the Persian Gulf War
This lesson plan uses illustrations for upper elementary school students to identify key events and elements in Desert Shield, Desert Storm, and Red Stone Arsenal. It also contains activities to process this lesson as well as learn about an Alabama soldier.

Lesson Plan Eight: War on Terror

Part A: What is Terrorism
This lesson plan contains activities for grades 4-8 to become acquainted with the key terms found in readings to define terrorism and will learn to use the definition of terrorism to evaluate the rationale for the 9/11 targets.

Part B: Alabama and the War on Terror
This lesson plan contains activities for fourth – eighth grade students to learn about Alabamians who lost their lives in the September 11, 2001 attacks. Students will create a poster and give a presentation commemorating the life of their assigned Alabamian.

Part C: The President Addresses the Nation
This lesson plan contains activities for fourth-eighth grade students to identify text information, use inferencing skills, and use supporting text evidence to answer questions about President George W. Bush's "War on Terror" speech to Congress and the Nation on September 20, 2001.

Part D: Look For The Helpers
This Lesson Plan contains activities for students grades 4-8 to learn about the role of first responders after the 9/11/2001 attacks as well as how Saint Paul's Chapel became a source of comfort for first responders.

Part E: The War on Terror from 9/11 to 9/11 Twenty Years
This lesson plan contains activities for fourth-eighth grade students to learn about the US involvement in Afghanistan and Iraq; they will also learn about the Alabamians who lost their lives during this twenty-year period.

New Lesson Plans will be added in the near future. Please check back periodically to see what's been added.

Alabama Veterans Memorial Foundation
[illegible]
Birmingham, AL 35243
(205) 305-6749
info@alabamaveterans.org

Download StepStone Order Form
Sign Up for our Mailing List

Lesson 8: The War on Terror: Part A

A Social Studies Lesson Plan Developed for Upper Elementary (4-6) and Middle School (7-8)

Created by Kelly Russell, Ph.D. and Louanne Jacobs, Ed. D.

Birmingham-Southern College

Lesson Title: Part A: What is Terrorism?

Curriculum Area: Social Studies

Grade Level: 4-8

Estimated Time:

One class period

Alabama Courses of Study Social Studies Standards:

Grade 4:

15. Identify major world events that influenced Alabama since 1950, including the Korean Conflict, the Cold War, the Vietnam War, the Persian Gulf War, and the War on Terrorism.

Grade 6:

12. Explaining how conflict in the Middle East impacted life in the United States since World War II Examples: oil embargoes; Iranian hostage situation; Camp David Accords; Persian Gulf Wars; 1993 World Trade Center bombing; terrorist attacks on September 11, 2001; War on Terrorism; homeland security

Objectives:

1. Students will be able to use key terms found in readings to define terrorism
2. Students will be able to use the definition of terrorism to evaluate the rationale for 9/11 targets

Evaluation of Student Learning:

Students will list each of the sites targeted on 9/11 and will use an established definition of terrorism to discuss why a terrorist would choose each of the sites.

Learning Design/Activity Plans:

Materials:

Highlighters

Chromebooks or other computers

To be Printed for each student

Lesson A: *Definitions of Terrorism Handout*

Links to be used in presentation:

Timeline of Events and Targets: https://timeline.911memorial.org/#Timeline/2

Procedure:

1. Place students in pairs or small groups.

2. Distribute the *Definitions of Terrorism Handout* and highlighters

3. Ask students to read each of the three definitions of terrorism on the handout.

4. Ask students to highlight key words in each of the definitions and be ready to discuss why they chose those key words.

5. Distribute Chromebooks or other computers

6. Direct students to the **Timeline of Events and Targets** on the 9/11 Memorial's website https://timeline.911memorial.org/#Timeline/2

7. Tell students that they will be reading and viewing an interactive timeline of the events of September 11, 2001. Tell them that the terrorists' targets that day were not randomly chosen.

8. Tell them that they will be reading and viewing to identify 3 targets which meet the criteria found in the definitions of terrorism.

9. Ask students to share their findings. Ask that they use highlighted vocabulary from the *Definitions of Terrorism Handout* to support their responses.

Additional Teacher Resources:

Targeting American Symbols New Yorker Magazine Cover Lesson Plan

https://www.911memorial.org/learn/students-and-teachers/lesson-plans/targeting-american-symbols

War on Terror: Lesson 8 Part B

A Social Studies Lesson Plan Developed for Upper Elementary (4-6) and Middle School (7-8)

Created by Kelly Russell, Ph.D. and Louanne Jacobs, Ed. D.

Birmingham-Southern College

Lesson Title: Alabama and the September 11 Attacks

Curriculum Area: Social Studies

Grade Level: 4-8

Estimated Time:

Three class periods (research, poster creation, presentations)

Alabama Courses of Study Social Studies Standards:

Grade 4:

15. Identify major world events that influenced Alabama since 1950, including the Korean Conflict, the Cold War, the Vietnam War, the Persian Gulf War, and the War on Terrorism.

Grade 6:

12. Explaining how conflict in the Middle East impacted life in the United States since World War II Examples: oil embargoes; Iranian hostage situation; Camp David Accords; Persian Gulf Wars; 1993 World Trade Center bombing; terrorist attacks on September 11, 2001; War on Terrorism; homeland security

Objectives:

Students will read newspaper reports about the Alabamians who lost their lives in the September 11, 2001 attacks.
Students will use the "Notetaking Graphic Organizer" to record information learned through reading news reports.
Students will locate and mark on a state map the city and county associated with their assigned Alabamian.
Students will graph the Alabamians who lost their lives by 9/11 target site, gender, age, city, county, etc.
Students will create real or virtual posters commemorating the life of the assigned Alabamian.
Students will use the posters to report on the life of the assigned Alabamian.

Evaluation of Student Learning:

Completion of the "Notetaking Graphic Organizer"
Participation in the Poster Presentation

Learning Design/Activity Plans:

Materials:

Chromebooks or another computer

Poster board (one board per group) or virtual poster board (Canva, PowerPoint, Prezi, etc.)

Art materials

Push pins

"Notetaking Graphic Organizer" - one for each student

" Graph Template" - one for teachers

One large Alabama State Map for classroom display - https://www.waterproofpaper.com/printable-maps/alabama.shtml

Al.com story on Alabama victims: https://www.al.com/news/2014/09/remembering_the_9_alabamians_w.html

CBS 42 story on the Alabamians who died in the Pentagon: https://www.cbs42.com/9-11-20-years-later/the-fearless-four-the-alabamians-who-died-in-the-pentagon-on-9-11/

WVTM digital story on Dwayne Williams, who died in the Pentagon: https://www.wvtm13.com/article/remembering-alabama-native-killed-in-9-11-attack-at-the-pentagon/23093650

Alabama News Center story on Wayne Williams and his brother's tribute: https://alabamanewscenter.com/2021/09/10/alabama-brother-of-9-11-victim-national-unity-is-best-tribute-on-20th-anniversary/

Obituary of Carl Max Hammond: http://www.legacy.com/sept11/story.aspx?personid=91694

Alok Mehta: https://www.libarts.colostate.edu/scholarship/alok-mehta-scholarship/

Lynn Edwards Angell: https://www.bhamwiki.com/w/Lynn_Edwards_Angell

Eddie Dillard was born in Alabama but family moved to Chicago months after his birth: He was not included in the Al story about the nine who died on 9/11.
https://pentagonmemorial.org/biographies/eddie-a-dillard/

Procedure:

1. Provide Chromebooks or other technology for accessing materials.

2. Divide students into 9 small groups. Tell students that each group will receive a name of someone from Alabama who died in the 9/11 attacks.

3. Assign individual Alabamians to each small group. The names listed below are of the people with ties to Alabama who died in 9/11 attacks. These names are referenced in the news article listed above *Al.com story on Alabama Victims*: Lynn Edwards Angell, Alok Mehta, Carl Max Hammond, Jimmy Ira Holly, Terry Lynch, Operations Specialist 2nd Class Nehamon Lyons IV, Information Systems Technician 1st Class Marsha Ratchford, Sgt. Tamara Thurman, Major Dwayne Williams, Eddie Dillard (only lived a few months in Alabama and was not mentioned in the news story of people from Alabama)

4. Distribute to each student the handout "Notetaking Graphic Organizer." Tell students that they will use this tool to record information learned while reading news reports. The group will discuss the answers but each student will complete their own handout. Tell students that they will be using this information later to create a poster and a presentation commemorating the life of their assigned Alabamian.

5. Remind students that there may be links imbedded in news articles which they can follow to read further information.

6. Give students time to read and record.

7. Hand out poster board to each group or ask students to open a virtual poster creator. The group will make a poster board together for a presentation, using the information they learned and recorded.

9. Provide time to work on the poster presentations.

10. Display the "Graph Template" and a large Alabama state map for presentations.

11. Ask students to find on the map the location associated with their Alabamian. If possible, put push pins in the map.

12. Ask students to use their new knowledge to fill in the information on the displayed "Graph Template."

13. Ask students if there is anything that they notice about the map or the graph. Are there trends?

14. Each group will show their poster and give a presentation to the class.

Additional Teacher Resources:

The War on Terror: Lesson 8 Part C

A Social Studies Lesson Plan Developed for Upper Elementary (4-6) and Middle School (7-8)

Created by Kelly Russell, Ph.D. and Louanne Jacobs, Ed. D.

Birmingham-Southern College

Lesson Title: The President Addresses the Nation

Curriculum Area: Social Studies

Grade Level: 4-8

Estimated Time: Two Class Periods

Alabama Courses of Study Social Studies Standards:

Grade 4:

15. Identify major world events that influenced Alabama since 1950, including the Korean Conflict, the Cold War, the Vietnam War, the Persian Gulf War, and the War on Terrorism.

Grade 6:

12. Explaining how conflict in the Middle East impacted life in the United States since World War II Examples: oil embargoes; Iranian hostage situation; Camp David Accords; Persian Gulf Wars; 1993 World Trade Center bombing; terrorist attacks on September 11, 2001; War on Terrorism; homeland security

Objectives:

1. Students will identify text information, use inferencing skills, and use supporting text evidence to answer questions about President George W. Bush's "War on Terror" speech to Congress and the Nation on September 20, 2001.

Evaluation of Student Learning:

Students will use reading comprehension skills to answer RIGHT THERE, INFERENCING, and TEXT EVIDENCE questions on the "Identify, Infer, and Read for Evidence Handout."

Learning Design/Activity Plans:

Materials:

Chromebooks or another computer

Items to be Printed

Transcript of President Bush's September 20, 2001 speech to Congress and the Nation – one per group
Identify, Infer and Read for Evidence Handout **-one for each student**
L/Q/P Graphic Organizer – one for teacher to record responses (unless the teacher wants each student to have copy and answer individually or as small group)

Links for Use in Presentation

President George W. Bush's address to Congress and the Nation: September 20, 2001 –
https://www.youtube.com/watch?v=ZF7cPvaKFXM

Procedure:

1. Tell students that they are going to watch a video of President George W. Bush as he addresses Congress and the nation 9 days after the September 11 attacks. Tell them that they will then read the transcript of the speech.

2. Play the YouTube video of President George W. Bush's address to Congress and the Nation: September 20, 2001

https://www.youtube.com/watch?v=ZF7cPvaKFXM

2. Place students in pairs or small groups.

3. Distribute copies of the handout "Transcript of President Bush's September 20, 2001, speech to Congress and the Nation" and the "Identify, Infer, and Read for Evidence Handout."

4. Tell students that some of the answers will be RIGHT THERE in the text, some will require students to INFER, and some will ask students to find EVIDENCE to support an answer.

5. Provide time for reading and re-reading the text to answer the questions on the handout. The group works together to answer questions but each student puts those answers on their own handout.

6. Ask students to share their answers. Record any dissonance. Ask students to return to the text to support incorrect or incomplete responses.

7. Ask students what NEW information they now KNOW (learned) from these activities. Ask them what they still don't understand and WANT to know. Ask them how they might go about answering what they WANT to know.

8. Use the *L/Q/P Graphic Organizer* to record responses. Teacher decides if this is to be one organizer for entire classroom, individual student, or group .

9. Provide an additional day for research if possible.

Additional Teacher Resources:

The War on Terror: Lesson D

A Social Studies Lesson Plan Developed for Upper Elementary (4-6) and Middle School (7-8)

Created by Kelly Russell, Ph.D. and Louanne Jacobs, Ed. D.

Birmingham-Southern College

Lesson Title: Look for the Helpers

Curriculum Area: Social Studies

Grade Level: 4-8

Estimated Time: Two Class Periods

Alabama Courses of Study Social Studies Standards:

Grade 4:

15. Identify major world events that influenced Alabama since 1950, including the Korean Conflict, the Cold War, the Vietnam War, the Persian Gulf War, and the War on Terrorism.

Grade 6:

12. Explaining how conflict in the Middle East impacted life in the United States since World War II Examples: oil embargoes; Iranian hostage situation; Camp David Accords; Persian Gulf Wars; 1993 World Trade Center bombing; terrorist attacks on September 11, 2001; War on Terrorism; homeland security

Objectives:

Students will define the term "first responder."

Students will identify some occupations that are considered "first responders."

Students will read to infer some of the character traits of people who become first responders.

Students will read to infer some of the anticipated/expected risks associated with being a first responder.

Students will read to infer some of the unanticipated/unexpected risks associated with being a first responder.

Students will read to infer the motivation behind the actions of Alabama 9/11 first responders.

Students will listen to/read the book, *The Little Chapel that Stood*, to find text evidence for how the chapel became a source of comfort and solidarity for first responders.

Evaluation of Student Learning:

Students will complete the **First Responder Graphic Organizer** Before and After Reading using text evidence

Students will complete the ***Little Chapel*** **Graphic Organizer** using text evidence

Teachers may choose to have students present their learning using oral presentations

Learning Design/Activity Plans:

Materials:

Chromebooks or another computer
Pens or pencils in four different colors

Items to be Printed
First Responders Graphic Organizer – one per student
Little Chapel Graphic Organizer – one per student
Etowah County First Responders Handout – one per group

Links for Use in Presentation

Mr. Rogers "Look for the Helpers" video clip: https://www.youtube.com/watch?v=-LGHtc_D328
WVTM Channel 13 - Phil Brassaele story: https://www.wvtm13.com/article/local-volunteer-remembers-9-11/37551025#
WBRC -https://www.wbrc.com/2021/09/09/alabama-911-responders-share-message-about-world-trade-center-health-program/
The Little Chapel that Stood A B Curtiss YouTube - https://www.youtube.com/watch?v=6nQlB6SGZek
The Story of Saint Paul's Chapel: A 9/11 Sanctuary - https://911groundzero.com/blog/5-facts-about-st-pauls-chapel/
9/11, The Chapel that Stood | Trinity Church Wall Street St. Paul's Chapel - https://trinitywallstreet.org/visit/st-pauls-chapel/911

Procedure:

1. Write the words *First Responder* on the board. Ask students to tell what they think the term means. Do they know anyone who is a first responder? What types of occupations might be considered as first responders?

2. Tell them that they are going to be reading and watching some video clips about first responders and 9/11.

3. Watch the Mr. Rogers clip together. https://www.youtube.com/watch?v=-LGHtc_D328

4. Ask students if they have anything to add to their definition of a first responder

5. Place students in pairs or small groups. Show the *First Responder Graphic Organizer Handout* on a Smart Board or other projection device. Tell students that they are going to be working with their partner/team members to complete the graphic organizer. Give each student a handout but they work as a group to get answers.

6. Ask them to write everything that they *think* they know in each boxes using ONE color pen/pencil.

7. Distribute a copy of the Etowah County First Responders news story to each group. Ask students to read it and then add to their graphic organizer using a DIFFERENT color pen/pencil.

8.. Watch the Phil Brassaele video clip from WVTM. Again, ask students to add to their graphic organizer using a DIFFERENT color pen/pencil.

WVTM Channel 13 - Phil Brassaele story: https://www.wvtm13.com/article/local-volunteer-remembers-9-11/37551025#

9. Watch the WBRC video clip. Again, ask students to add to their graphic organizer using a DIFFERENT color pen/pencil.

WVRC - https://www.wbrc.com/2021/09/09/alabama-911-responders-share-message-about-world-trade-center-health-program/

10. Ask students to report, either in writing or as a class presentation, what they FIRST thought about first responders and 9/11 and what they NOW know/think about first responders and 9/11.

DAY TWO

1. Tell students that there are also people and places that help and shelter first responders; that today they are going to be reading about one of those places.

2. Watch the Phil Brassaele video clip once again.

WVTM Channel 13 - Phil Brassaele story: https://www.wvtm13.com/article/local-volunteer-remembers-9-11/37551025#

3. Tell students they are now going to hear a story/poem about the chapel that Mr. Brassaele talked about in the video.

4. Distribute *the Little Chapel Graphic Organizer Handout.* Tell students that you will be stopping a few times during the reading of the story for them to record what they NOTICE and what they WONDER about the story.

5. Play the YouTube video of The *Little Chapel that Stood*. The Little Chapel that Stood A B Curtiss YouTube - https://www.youtube.com/watch?v=6nQIB6SGZek

Stop 3-4 times for students to record their responses.

6. Place students in pairs or small groups. Tell students that they are going to be reading two passages about the chapel. They can add to the *Little Chapel Graphic Organizer* as they read.

7. Distribute the links to the two St. Paul's stories listed below. (The teacher may prefer to print copies of the article of the first link below so each group can read together). Ask students to read and add to the *Little Chapel Graphic Organizer*. The teacher may want to ask students to cite the source of new information. https://911groundzero.com/blog/5-facts-about-st-pauls-chapel/, https://trinitywallstreet.org/visit/st-pauls-chapel/911

8. Ask students to write or present their findings, paying particular attention for evidence on how the chapel came to be a symbol and a source of comfort for first responders.

Additional Teacher Resources:

https://www.france24.com/en/americas/20210911-the-little-chapel-that-stood-a-hub-for-9-11-relief-twenty-years-later

https://birminghamwatch.org/climbing-110-flights-to-remember-first-responders-of-9-11/

The War on Terror: Lesson Plan 8 Part E

A Social Studies Lesson Plan Developed for Upper Elementary (4-6) and Middle School (7-8)

Created by Kelly Russell, Ph.D. and Louanne Jacobs, Ed. D.

Birmingham-Southern College

Lesson Title: War on Terrorism From 9/11 to 9/11 (Twenty Years)

Curriculum Area: Social Studies

Grade Level: 4-8

Estimated Time: Three +

Alabama Courses of Study Social Studies Standards:

Grade 4:

15. Identify major world events that influenced Alabama since 1950, including the Korean Conflict, the Cold War, the Vietnam War, the Persian Gulf War, and the War on Terrorism.

Grade 6:

12. Explaining how conflict in the Middle East impacted life in the United States since World War II Examples: oil embargoes; Iranian hostage situation; Camp David Accords; Persian Gulf Wars; 1993 World Trade Center bombing; terrorist attacks on September 11, 2001; War on Terrorism; homeland security

Objectives:

Students will collaborate to create a timeline of the War on Terror from 2001 – 2021.

Students will read critically to identify the major events of each of the twenty years of the war from 2001 – 2021.

Students will read critically to determine on the 5 most important events of the war from 2001 – 2021.

Students will read a newspaper story about the Alabama service men and women who died during the War on Terrorism.

Students will use the *Alabamians Who Died Graphic Organizer* to investigate and draw conclusions about the Alabamians who died during the War on Terror.

Students will use a map of the state of Alabama to represent the hometown locations of the Alabamians who died during the War on Terrorism.

Evaluation of Student Learning:

Completion of assigned section of the two handouts – *Twenty-Year Graphic Organizer for Afghanistan* and the *Eight-Year Graphic Organizer for Iraq*

Completion of the handout - *Alabamians Who Died Graphic Organizer*

Learning Design/Activity Plans:

Materials:

Large Alabama map
Push pins
Large world map
Chromebooks or another computer per group

Items to be Printed

Twenty-Year Graphic Organizer for Afghanistan - one for each student
Eight-Year Graphic Organizer for Iraq – *one for each student*
Alabamians Who Died Graphic Organizer – one for each student
Alabama List of Casualties Handout - Teacher may decide to provide the following link for students instead of printing this list. The names listed in the *Alabama List of Casualties Handout* are the same as those listed in the link: https://www.al.com/news/birmingham/2021/09/911-20th-anniversary-remembering-140-of-alabamas-fallen-soldiers.html

Links for Use in Presentation

Timeline of US Involvement in Afghanistan: https://www.cfr.org/timeline/us-war-afghanistan
Timeline of US involvement in Iraq: https://www.cfr.org/timeline/iraq-war
List of Alabama soldiers killed in War on Terror: https://www.al.com/news/birmingham/2021/09/911-20th-anniversary-remembering-140-of-alabamas-fallen-soldiers.html
Alabama Veterans Memorial Park in Birmingham: www.alabamaveterans.org

Procedure: (You may want to do AT LEAST Lesson A in this Lesson 8 War on Terror series as a prelude to this lesson)

1. Write 2001 and 2021 on opposite sides of the board.

2. Ask students to think about those two dates and about all the things that they know or think they know that happened with the War on Terror during this time period. Ask students to share what they remember.

3. Remind students of what happened on September 11, 2001 if they do not mention it.

4. Locate Afghanistan and Iraq on the world map.

5. Locate the United States and Alabama on the world map.

6. Tell students that after the events of 9/11, service people from the United States including service people from Alabama were deployed to Afghanistan and Iraq as part of the War on Terror.

7. Tell students that over the next two days they will be reading about that war and thinking about the years between the two dates on the board.

8. Hand out the *Twenty-Year Graphic Organizer for Afghanistan*. Tell students that our troops were deployed to Afghanistan in 2001

9. Place students into pairs or small groups. Assign one or more of the twenty years (2001 – 2021) to each pair or group.

10. Have students go to the timeline website listed in Materials https://www.cfr.org/timeline/us-war-afghanistan

11. Do the year 2001 as a model. Ask students to read the section on 2001 and determine one or more most important things that happened that year. Ask them to write the events on their timeline.

12. Tell them that they will be working with their partner/team to read and determine the most important events for each of their assigned years. Each student completes their own timeline with the group's decisions.

13. Provide time to read and work.

14. Open a blank timeline that can be projected for the class. Ask each group to add their "important events" to the blank timeline providing the rationale for choosing each. Students can add the information to their own timeline.

DAY TWO

1 -14 Hand out the *Eight-Year Graphic Organizer for Iraq*: Repeat the process as on # 9-14 above; tell students that the US became involved in Iraq in 2003; Go to the timeline website https://www.cfr.org/timeline/iraq-war

DAY THREE

1. Refer to the Alabama state map. Tell students that there were many Alabamians who sacrificed their lives during the War on Terror. Tell them that they will be reading about those individuals and drawing some conclusions about them from a data chart.

2. Hand out the *Alabamians Who Died Graphic Organizer*

3. Place students into pairs or small groups.

4. Ask students to open the *Birmingham News* article: https://www.al.com/news/birmingham/2021/09/911-20th-anniversary-remembering-140-of-alabamas-fallen-soldiers.html or if the teacher decided to print the list of names from the *Alabama List of Casualties* Handout, give one copy to each group.

5. Ask students to look over the entire list and think about what the list says about each person. Ask students what are the two main countries where the deaths occurred? Soldiers in some other countries were also killed during this time period. Ask students to name some of these countries. Also ask what branches of the Armed Services (Army, Navy, Marines, Coast Guard, or Air Force) had more Alabamians listed. Tell students to use their *Alabamians Who Died Graphic Organizer* to record information about people from Birmingham and the towns that are close. (Pelham, Irondale, Trussville, Hoover, and Pinson). Teachers may want to categorize these 140 names differently for use on the *Graphic Organizer*. For instance, list the soldiers who were 22 or younger; or the names could be divided between the groups and each group could take a different list of names to use for the Alabamians Who Died *Graphic Organizer*.

7. When students are finished, ask them to look at the data collected on the Alabamians Who Died *Graphic Organizer*. Are there patterns? What can be said about the data? What do you notice? What do you wonder?

8. Ask students to share their thinking.

9. Ask students to look again at the entire list of names: the teacher can call out the names of several Alabama towns that are represented and have groups put push pins on the Alabama map.

10. Tell students that Birmingham has a park called the Alabama Veterans Memorial Park which is located just off I-459 at the Liberty Parkway Exit. The park has a beautiful wooded trail that leads to a Memorial Plaza where the names of the Alabamians who died are engraved on the walls in the Hall of Honor. They can learn more about the Park by visiting www.alabamaveterans.org.

Seeing Ourselves in the Children We Teach: Using Contemporary Young Adult fiction to Prepare Preservice Teachers' Growth in Knowledge and Understanding of Students with Autism Spectrum Disorder

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Abstract

This quantitative research study questioned if the inclusion of contemporary young adult fiction within an introductory-level special education survey course increases both cognitive and affective learning about students with Autism Spectrum Disorder (ASD). Researchers collected data from 101 undergraduate students enrolled in the class between the fall of 2016 and spring of 2020. Participants completed a questionnaire consisting of four open-ended questions and a student survey including six statements scored with a I -5 Likert scale. I)Data were analyzed using quantitative measures- Inclusion of contemporary young adult fiction featuring an individual with ASD resulted in participants' increased knowledge and empathetic understanding.

Keywords

Autism Spectrum Disorder, inclusion, collaborative education, teacher preparation, transactional reading, young adult literature

Seeing Ourselves in the Children We Teach: Using Contemporary Young Adult Fiction to Prepare Preservice Teachers' Growth in Knowledge and Understanding of Students with Autism Spectrum Disorder

Introduction

Across the globe, many barriers stand in the way of providing an inclusive education to all children with exceptionalities. These barriers often include physical accessibility 'within schools, but equally damaging are the barriers that include low expectations, ostracizing individuals with exceptionalities, and negative attitudes towards individuals with exceptionalities. The United Nations Convention on the Rights of Persons with Disabilities (CRPD) Article 24, the Universal Right to Education, supports that children with disabilities across the globe should not only have access to the general education system (United Nations, 2016), but that this education should happen in a nondiscriminatory environment (De Beco, 2017), Further, Article 24 supports the goal of removing barriers to an education that will allow people with disabilities a sense of dignity and a greater opportunity to be full members of society (Kanter, 2019), Progress towards this aim has been made, but much work is yet to be done.

Little research is available about the education of individuals with Autism Spectrum Disorder (ASD) globally (Wei et al., 2014). ASD is a developmental disability that impacts social communication and behavior. Characteristics of those with ASL), including difficulties with social interaction and restrictive behaviors, can make functioning in a classroom difficult (Wei et al., 2014). The rate of autism has risen dramatically in the last 40 years (Fommbonne, 2003). According to the Center for Disease Control (CDC), (Data and statistics on autism spectrum disorder, 2020) the rate of ASD in the United

States is 1 in 45 individuals with 1 in 160 individuals diagnosed worldwide (Elsabbagh et al, 2012). International initiatives such as the Inclusive Education Initiative (IEI) (Inclusive Education Initiative, 2019) work to support countries in making education more inclusive. Preparing teachers who are equipped to teach all children with disabilities, such as ASD, is a critical part of ensuring classrooms are equitable, accessible spaces that provide quality education experiences for all learners (Teachers, 2021).

Inclusion of all learners in educational settings remains a global challenge for general classroom teachers, special educators, and the teacher educators who prepare them (Cook, 2002; Shade & Stewart, 2001), Andrews (1998) noted that many researchers have found that the key to successful inclusion is the teacher's attitude toward learners with exceptionalities. Robertson et al. (2003) also noted that when teachers perceived they had a positive relationship with students with autism, students exhibited stronger relationships within the classroom and had fewer behavior problems, Teaching to ensure equity, demands deep cognitive knowledge, an understanding of child-first pedagogy, and enthusiasm for teaching within inclusive settings.

This study sought to explore the effects of using contemporary Young Adult (YA) literature, coupled with more traditional instructional strategies, on undergraduates' understanding of ASD and empathy for students with ASD. Results suggest that strategic and purposeful use of YA literature interwoven within a preservice education course can meet both of these demands, The research sought to answer two questions: I , Does the use of contemporary YA literature featuring characters with ASD result in increased cognitive knowledge? and 2. Does the use of contemporary YA literature featuring characters with ASD result in increased empathetic understanding'?

Theoretical Framework

This study is situated within the framework of transactional literacy theory. Transactional literacy theory suggests that a dynamic transformation occurs when the efferent stance taken during reading nonfiction and the aesthetic stance taken by a reader while reading fiction intersects with purposeful and intentionally mediated classroom instructional practices (Rosenblatt, 2005). This framework supports the use of purposeful and intentional teaching practices combined with carefully chosen fiction texts that can lead students beyond either cognitive knowledge or empathetic understanding to a nexus where both reading stances coincide. The design of this study included elements vital to making meaning through multifaceted, dynamic transactions with text. Those elements included carefully selected literature in which the protagonist the setting, and the plot elements mirrored those of post-adolescent readers and offered accurate portrayals of persons with exceptionalities. The instructional design incorporated purposefully constructed opportunities for social interaction surrounding connected text) focused lectures, readings, and discussions. This design supported readers as they applied, reorganized, revised, and extended elements of individual schemata to better understand ASD and to have empathy for students' with ASD

Portal (1987, as cited in Louie 2005) asserted that "students must not simply hold beliefs and values in mind as inert knowledge but work with them in order to understand and to explain what other people do (p. 568). 't Undergraduate students were provided opportunities to refine and define their thinking about ASD through readings of a contemporary YA book, textbook and class discussions. Rosenblatt (2005) anticipated that classrooms would be the central location in which the negotiation process would occur and that these negotiated processes would need to be guided by a knowledgeable other. This investigation embodied the tenets of transactional literacy in that after reading the text and interacting with the characters, the student interacts with others beginning a critical evaluation of the perspectives of

the other readers. This allows for their personal readings to be challenged and changed (Connell, 2008). Therefore, learning was grounded in a social context — the context of classroom, community, and conversation.

Disabilities and Young Adult Literature

Undergraduate special education courses commonly use textbooks to deliver course information. While textbooks provide factual information about the history, process, and delivery of special education as well as the types, causes, and characteristics of specific disabilities, they have been criticized for their one-dimensional perspective (Hughes et al., 2014; Jones, 2001). Supplementing textbooks with fiction literature allows the student to connect the dense information taught from the textbook with real life in a less technical ancl more enjoyable way. Students must understand disabilities in a way that goes beyond the textbook definition and more toward the understanding and acceptance of the student with exceptionalities (Ford et al., 2001). Educators must embody the acceptance of the student with exceptionalities. This embodiment becomes the intersection of knowledge and understanding- I do not just know and do, but I am.

Many researchers (Andrews, 1998; Fein & Ginsberg, 1978; Marlowe & Maycock, 2001; Dyches & Prater, 2000, Prater et al., 2006) have noted that the use of literature by or about individuals with exceptionalities can be useful in promoting awareness, understanding, and acceptance of persons with exceptionalities and can assist in creating positive attitudes towards them, Marlowe and Maycock (2001) found that literary texts were effective at promoting a positive attitude toward those with disabilities when used in teacher education, Hughes et al. (2014) used fiction literature as a supplement to textbooks with preservice teachers to increase their knowledge and attitudes about autism. They found that the students who read the fiction literature along with the textbook indicated increased knowledge and a

greater perspective of the complexities of ASD. For these reasons, the researchers limited our book choice to modern realistic fiction.

Modern realistic fiction is often cited as the most popular genre of YA literature by the American Library Association because its subject matter is closest to the reader's real lived experiences (Darigan et al., 2002). This genre encourages disbelief, meaningful vicarious interactions with the protagonist, and a window into character motivation through internal dialogue. Lewis and Johnson (1982) noted that contemporary YA fiction provides another perspective from which to consider disabilities that one cannot get from textbooks, field trips, or even observations of people who are disabled. This genre offers a unique opportunity for future exceptional and disabled students to step out of the pages of the novel and introduce themselves to future teachers. Louie (2005) notes that "Stories tend to present characters as living and breathing individuals, not as faceless masses of people (p. 566)."

Contemporary realistic YA fiction also encourages decentering, Decentering builds on the assumption that people have different life experiences that impact the lens through which they see the world. To step away from a self-centered approach of interpretation requires a person to look through a different lens to consider a new way to interpret new information (Barlund & Nomura, 1985), Decentering demands an empathetic response to a fictional character. Davis (1994) noted that empathy suggests an active effort to understand another by seeing the world through their eyes.

The literature included in this study was limited to YA realistic fiction for several additional reasons. Contemporary realistic YA fiction includes settings and plot elements that are accessible, accurate, and believable. Contemporary YA fiction also includes protagonists who could be contemporaries of the study's readers, encouraging understanding and empathy- Many undergraduate students become fascinated with specific exceptionalities and their characteristics at the expense of

understanding the person who exhibits those exceptionalities. The researchers chose to exclude firstperson accounts and memoir and rely solely on YA fiction for its ability to foster vicarious identification with and through the protagonist.

The researchers chose the text Rain, Reign (Martin, 2014) for this study. The main character of this text is Rose who has a diagnosis of high-functioning autism, and the story is told from her point of view. The story explores the difficulties Rose has learning in a general education classroom and the complexities of her relationship with her father who exhibits little understanding or acceptance of Rose's differences. Students get to know the main character through her lived experiences as a person with ASD without ever encountering explicit definitions or descriptions of the characteristics of individuals with ASD-

Methods

Setting and Participants

The study was conducted at a liberal arts college in the southeastern United States. The college offers a degree in Collaborative Education which prepares graduates to be dually certified in Special Education and Elementary Education K„6.

All participants in this project were students recruited from a course designed to survey the role and scope of educational programs for exceptional children, including etiology, identification, and incidence. Researchers collected data from 101 participants who were enrolled in this course between Fall 2016 and Spring 2020. Data was collected from five terms in the four academic years. The majority of participants were Caucasian (83%) and/or female (76%).

Procedures

Researchers investigated the purposeful combination of independent reading of Rain) Reign, assigned textbook readings, classroom discussions, and class lectures and instruction on undergraduate students' knowledge and understanding of persons with exceptionalities. Students completed one questionnaire at three different points during the 14-week term. This questionnaire served as the pre.,,, mid-, and post assessment. Research met IRB approval and participant protections were followed.

During the first class, students completed the pre-assessment questionnaire to collect data regarding their knowledge about ASD. At this time, students were assigned to read Rain, Reign before the third week of class. After completing the assigned reading but prior to any formal classroom instruction related specifically to ASD, students completed the mid-assessment questionnaire. The student satisfaction survey was also completed at the time of mid-assessment. Students were asked to rate their agreement or disagreement with specific statements concerning their attitudes and perceived growth related to the reading. Subsequently, academic, textbook readings and Rain, Reign were discussed during class meeting times in both small "literature circle" groups and large groups. Class lectures and instruction specific to the topic of ASD were provided. Participants completed the post-assessment during the seventh week of class.

Instruments

Questionnaire

The researchers developed a questionnaire to determine the participants) understanding of, and empathy for individuals with ASD. The questionnaire included the following four open-ended questions:

1) How would you define autism?

2) How many people have autism, and what are the probable causes?

3) What are the symptoms of autism and their implications?

4) How do you feel about autism?

Questionnaire Rubric

The open-ended questions were scored on a rubric created by the researchers based on work by Hughes and Hunt-Baron (2010). Two additional domains were added to provide more specific information about student knowledge of ASD. The rubric (Appendix A) was used to evaluate changes in students' understanding and empathy toward individuals with ASD in seven domains. These Domains are listed in

Figure l .

.....Place Figure I about here....
.....

Student Satisfaction Survey

At the mid-assessment, participants were given the student satisfaction survey based on work by Hughes and Hunt-Baron (2010). Students rated the following statements using a 5-point Likert scale (l -strongly disagree, 2-disagree, 3-neutral, 4-agree, and 5-strongly agree):

1) I enjoyed this book.
2) By reading this book, I learned more about individuals with disabilities.
3) By reading this book, I am more empathetic to the needs of individuals with disabilities.
4) The reading assignment contributed to my learning.
5) Reading this book contributed to my understanding of individuals with disabilities.

Data Collection and Analysis

Responses to the questionnaire were scored using the questionnaire rubric (see Appendix A). The questionnaire rubric used a 0-2 rating scale with 0 being least knowledgeable/empathetic and 2 being most knowledgeable/empathetic. If a student did not complete all three questionnaires (pre-, mid-3 and post-assessment) their responses were not used for this research. Paired t-tests were used to determine the growth between pre- and mid-assessment (following reading fiction text) and mid- and post assessment (following academic learning in the course). Alpha for variables was set at .05 (see Tables 1, 2, and 3). Inter-rater reliability of rubric scoring was established through independent grading and comparison of rubric scores across several sample responses. Descriptive statistics were used to analyze student satisfaction survey data.

Findings

Data analysis showed that participants improved in their cognitive knowledge and empathetic understanding of ASD. The quantitative analysis of the open-ended questionnaire indicated that students improved their knowledge and understanding of ASD when the typical college instructional strategies (whole group discussions, literature circles, academic articles, and textbook readings) were used and preceded by the reading of a YA fiction text with a main character who had ASL). Furthermore, the analysis of the student satisfaction survey corroborated these findings.

Quantitative Findings

Comparison of Pre-Assessment and Post-Assessment Data

As shown in Table l , significant differences were seen in all seven domains and the rubric average score between pre- and post-assessment. Data indicates significant growth in cognitive learning and empathetic understanding between the pre-assessments and post-assessments. The highest t-values were in Domain 2:

Student Knowledge of Causes, Domain 3: Student Knowledge of Characteristics, and Domain 7: Student Empathy. This information suggests that students grew in all domains following ALL instructional strategies (YA fiction, and other traditional coursework). All instructional strategies implemented contributed to the students' overall learning,

In order to understand which intervention was more influential in impacting the identified domains, researchers also compared data collected from pre-assessment to mid-assessment data, and from mid-assessment to post-assessment data,

.....Place Table 1 about here.....

Comparison d Pre-Assessment and Mid-Assessment Data

Comparison of pre-assessment data and mid-assessment data indicated significant differences in six domains (See Table 2). The highest t-values were in Domain 3: Student Knowledge of Characteristics, and Domain 7: Empathy. This suggests that the reading of Rain, Reign allowed students to grow in their knowledge of ASD characteristics and their understanding of those with ASD. There was no significant difference in Domain 4: Student Interest and Knowledge Gap. This data indicates that students did not grow in their recognition of a knowledge gap within themselves regarding ASD.

.....Place Table 2 about here.....

Comparison of Mid-Assessment and Post-Assessment Data

Significant differences between mid- and post-assessment were found in five domains (Table 3). The highest t values were in Domain l : Student Assumptions, Domain 2: Student Knowledge of Causes, and Domain 3: Student Knowledge of Characteristics. This suggests that student assumptions of those with ASD were challenged. Furthermore, students grew in the knowledge of causes and characteristics of those with ASD It is also important to point out that both Domain 6: Student Recognition of the

Possible Strengths of Those with ASD and Domain 7: Student Empathy were found to be significantly different between mid- and post assessments. This indicates that students also grew in their ability to see strengths in those with ASD and their empathy for those with ASD. There was no significant difference in Domain 4: Student Interest and Knowledge Gap. This data indicates that students did not acknowledge a growing interest in ASD or gains or gaps in knowledge regarding ASI). This was consistent with data from pre- and mid-assessment analysis. There was also no significant difference in Domain 5: Student Knowledge Based on Reliable Sources of Information. This indicates that students did not refer to a reliable source in post assessment. This finding was inconsistent with data from pre- and mid-assessment.

..... - .....Place Table 3 about here.....

Student Satisfaction Survey

Students completed the student satisfaction surveys at mid-assessment. A Likert scale, using I as Strongly Disagree and 5 as Strongly Agree was used. Data was analyzed for descriptive data. The majority of answers were in the positive (87%), 4 as Agree and 5 as Strongly Agree. Students agreed that they enjoyed the book (mean=4.27) and they would recommend it to a friend (mean=4.28). Students believed that the assignment contributed to their learning of ASD (mean=4.22) and that by reading the book, they learned more about individuals with ASD (mean=3.82). Students also agreed that the book contributed to their empathy (mean=3.97) and their understanding of individuals with ASD (mean=4.26). These data are consistent with findings from the quantitative analysis of the questionnaire.

Discussion

Researchers questioned if the inclusion of YA fiction literature within an introductory level special education course would increase both cognitive knowledge and empathetic understanding about

individuals with ASD. It was anticipated that the gains in participants' cognitive knowledge of ASD would be seen primarily between the mid- and post-assessment. This assumption was grounded in the premise that students would gain more technical information regarding ASD through interactions with academic information provided through traditional college coursework.

Funher, researchers anticipated that gains in participants' empathy for students with ASD would be seen primarily between the pre-assessment and the mid-assessment. This assumption was grounded in the premise that students would gain more empathy for individuals with ASD after reading the fiction text, Rain, Reign.

Both of these assumptions were found to be true. Additionally, significant gains in cognitive knowledge were noted after reading the YA fiction text (between the pre- and mid-assessment). Unexpectedly, researchers found an increase in Domain 3, Student Knowledge of Characteristics, after reading Rain, Reign and between mid-assessment and post-assessment. In Domain 3: Student Knowledge of Characteristics, the increase between pre- and mid-assessment (t Value -7.694) and mid- and post assessment (t Value -7.026) indicated similar gains. Comparable increases were also noted in Domain 1 : Student Assumptions, and Domain 2: Student Knowledge of Possible Causes. These findings were supported by the results of the student survey. Participants reported their agreement and strong agreement that the reading of the nonfiction text increased their cognitive understanding of those with ASD. One possible explanation for this finding is that college students are proficient readers and able to make inferences from their reading. While the fiction book does not explicitly define ASD, students were able to construct a working definition of ASD and understand characteristics of individuals with ASD prior to interactions with the course textbooks, academic articles, and lectures. Having constructed a definition and considered characteristics of those with ASD provided the students with a broader schema with which to refine their knowledge of ASD.

Furthermore, researchers also found a significant increase in Domain 7: Student Empathy between the pre- and mid- assessment (Domain 7: Student Empathy- t-Value4.763) and mid- and post assessment (Domain 7: Student Empathy- t Value 4.068) (See Figure 2). Unexpectedly researchers found the increase in empathy continued between mid-assessment and post-assessment. According to the student satisfaction survey, students agreed and strongly agreed that the fiction text increased their empathy for and understanding of those with ASD. One possible explanation for the continued growth in empathetic understanding across all assessments is that through reading the YA text, students developed a relationship with Rose, the main character with ASD. Students were able to filter the academic information in subsequent readings and class discussions through Rose's point of view.

.. . .Place Figure 2 about here.... . . . . .

This research offers evidence that using fiction literature in the college classroom effectively provides students the opportunity to grow in their knowledge and understanding of individuals with ASI). One limitation of the study may be response bias. Because the study is situated in the context of a college course, participants may have provided responses they believed were expected by the professor. To counter this perception, students were reminded at each administration that questionnaire responses were not a part of the course requirements. Another limitation of this study may be the choice of text. Researchers used a YA fiction book with a protagonist with a diagnosis of ASD. These results may not be generalizable to growth of knowledge and empathy by undergraduate students to children with other exceptionalities. One implication for future study may be the use of YA texts whose protagonist has a different exceptionality to see if the gains in knowledge and empathy are similar, Another implication for future study may be empathy as a construct. The concept of empathy is difficult to measure. This study explored empathy in a general manner. Future research employing more specific questions regarding the expression of empathy and the impact on teaching dispositions is needed,

Conclusion

Future teachers around the world need to know the students they will encounter if they are to be both intellectually prepared to teach in inclusive or resource settings and enthusiastic and comfortable doing so. This study describes one way to combine the use of YA literature with more traditional instructional approaches to increase knowledge and empathy towards individuals with ASD. There is a plethora of YA fiction that is available for use in college classrooms. Contemporary YA fiction allows those future students to step out of the pages of a book and introduce themselves long before young teachers begin their careers. Teaching at the intersection of knowledge and understanding demands purposeful instruction that connects future teachers to their future students.

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Appendix A

Rubric, Updated Spring 2019

(Based on Hughes & Hunt-Baron (2010) and Special Education Department Standards)

Domain 1 Student Assumptions and Understanding of ASD

O scoring — clearly incorrect generalization/information. (For example, "ASD is a learning disability, possible treatment includes a gluten free diet, or "ASD is caused by vaccinations")

1 scoring — Limited understanding of ASD information. (For example, "ASD is a developmental disorder," student lists some correct symptoms, or student provides an example of best practices like ABA)

2 scoring — Definition of ASD as part of a spectrum of' disorders, wide variation between cases in symptoms - difficult social interactions, language delays, unusual repetitive behaviors, possible intellectual disabilities.

Domain 2 Student Knowledge of Possible Causes and Prevalence of ASD

0 scoring — clearly inconect generalization/information. (For example, "treatment for ASD includes a gluten free diet", or "ASD is caused by vaccinations", or "ASD is a rare disease")

1 scoring — limited information about the causes of ASD. (For example, "prevalence is increasing" and listing a possible cause

)2 scoring — understanding of the mechanism as a multi-factorial system including genetic, environmental, and developmental causes. Prevalence between 1 and 1:100, or I %-4%individuals worldwide, or 4 million in U.S.

Domain 3 Student Knowledge of Characteristics of ASD and the Implications

O scoring provides clearly incorrect generalization/information. (For example, "all persons with ASD have mental retardation, autistic students cannot talk or write")

I scoring — lists one or two symptoms like difficult social interactions, language delays, unusual repetitive behaviors, intellectual disabilities

2 scoring — provides a complete description of cognitive, academic, social, behavioral, and emotional characteristics

Domain 4 Student Interest in ASD and Recognition of One's Gaps in Knowledge

0 scoring statement of lack of knowledge and no statement of particular interest

I scoring — statement of gained knowledge and some interest

2 scoring — direct statement of gained knowledge, gaps in knowledge, and interested in future study with a plan

Domain 5 Student Knowledge Based on Reliable Source of Information

0 scoring — secondary personal anecdotes (For example, "my 5 th grade friend's brother had ASD and , .."or no description of information source)

I scoring personal anecdotes (For example, "I had a class with an autistic student and" . . or" I worked with student who has ASD... " or reliance on public news and media)

2 scoring — Authoritative source such as 'textbook, fiction work, or lecture for information

Domain 6 Student Recognition of the Possible Strengths of Those with ASD

0 scoring Only description of disability and or negative view of outcomes

I scoring — Recognition of both disability and possible positive outcomes

2 scoring Recognition of disability, possible positive outcomes, and exceptionalities as a strength — i.e., "unique viewpoint can help when Temple Grandin designed... "

Domain 7 Student Empathy for Those with ASD

0 scoring Lack of empathy. Shows no understanding of the feelings of others. (For example, "autistic students cannot participate in normal classes" etc.,)

I scoring Limited empathy. Shows some understanding of the feelings of others, For example, "autistic students need some help")

2 scoring — Empathy and understanding of the feelings of others. (For example, " [In my opinion,] it's more like a different way of thinking and reacting compared to most students,)

Figure 1

Domains Related to Evaluating Student Understanding and Empathy

Domain 1	Student Assumptions and Understanding of ASD This domain focuses on the information the student knew about ASD. (Based on the first theme of the Hughes and Hunt-Baron (2010) work)
Domain 2	Student Knowledge of Possible Causes and Prevalence of ASD This domain focuses on the understanding of the causes and prevalence of ASD
Domain 3	Student Knowledge of Characteristics of ASD and the Implications This domain focuses on the understanding of the characteristics of ASD and the implication.
Domain 4	Student Interest in ASD and Recognition of One's Gaps in Knowledge This domain focuses on students' growing interest in ASD and an understanding of their own gaps in knowledge. (Based on the second theme of Hughes and HuntBaron (2010) work).
Domain 5	Student Knowledge Based on Reliable Source of Information This domain focuses on students' growing knowledge base of ASD based more on knowledge from literature than experience. (Based on the third theme of Hughes and Hunt-Baron (2010) work)
Domain 6	Student Recognition of the Possible Strengths of Those with ASD This domain focuses on the students' growing understanding that those with ASD can have the characteristics of ASD and also have exceptional strengths. (Based on the fourth theme of Hughes and Hunt-Baron (2010) work)
Domain 7	Student Empathy Toward Those with ASD This domain focuses on the students' growing compassion for those with ASD and an understanding of the complexity of ASD (Based on the fifth theme of Hughes and Hunt-Baron (2010) work).

Figure 2

Growth of Means from Pre-Assessment, Mid4ssessment to Post-Assessment

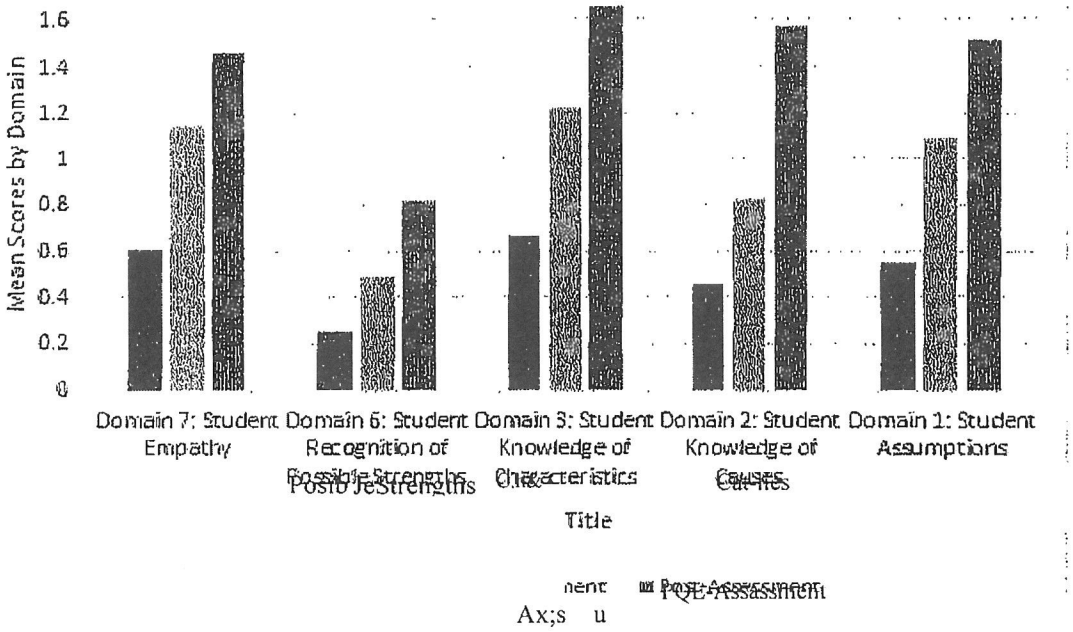

Table 1

Pre-Assessment 10 Post-Assessment Means, T Value, and P Value by Rubric Domains

Rubric Domains	Pre-Assessment Means	Posi-Assessment Means	I value	p value (.005)
Domain 1: Student Assumptions	.65	1.51	-10.733	.000
Domain 2: Student Knowledge of Possible Causes	.46	1.57	-15.81 1	.ooo
Domain 3: Student Knowledge of Characteristics	.67	1.66	*14.835	.000
Domain 4: Student Interest and Knowledge Gap	.16	.51	—4.580	.ooo
Domain 5: Student Knowledge Based on Reliable	.26	.50	-3.588	.001
Domain 6: Student Recognition of Possible Strengths of Those with ASD	.25	.82	-7.533	,ooo
Domain 7: Student Empathy	.61	6	*11.790	4000

SEEING OURSELVES IN THE CHILDREN WE TEACH

Table 2

Pre-Assessmenl to Mid-Assessment Means, T Value, P Value by Rubric Domains

Rubric Domains	Pre-Assessment Means	Assessment Means	t value	P value (.005)
Domain I : Student Assumptions	.65	1.03	-5.066	.ooo
Domain 2: Student Knowledge of Causes	.46	.83	-4.978	-000
Domain 3: Student Knowledge Characteristics	.67	1.23	-7.964	*000
Domain 4: Student Interest and Knowledge Gap	.16	.32	-2.673	.009
Domain 5: Student Knowledge Based on Reliable Sources of Information	.26	.52	-3.086	.003
Domain 6: Student Recognition of Possible Strengths of Those with ASD	.25	.49	-3.367	*001
Domain 7: Student Empathy	.61	1.15	-6.763	

SEEING OURSELVES IN THE CHILDREN WE TEACH

Table 3

.Mid"Assessment to .Posl=Assessment Means, t Value, p Value by Rubric Domains

Rubric Domains	MidAssessment Means	PostAssessment Means	t value	p value (.005)
Domain I : Student Assumptions	.03	1.51	-6.944	.ooo
Domain 2: Student Knowledge of Causes	.83	1.57	-9.531	.ooo
Domain 3: Student Knowledge of Characteristics	1.23	I .66	-7.026	.000
Domain 4: Student Interest and Knowledge Gap	.32	.51	-2.253	.026
Domain 5: Student Knowledge Based on Reliable Sources of Information	.52	.50	.345	.731
Domain 6: Student Recognition of Possible Strengths of Those with ASD	.49 1.15	.82 I .46	-4.086 4,068	.000 .000
Domain 7: Student Empathy				

Children's Judgments of Durations: A Modified Replication of Piaget's Study

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One hundred students, 25 each in grades 2, 4, 6, and 8, were individually interviewed. A cylindrical beaker with five equidistant levels marked on it was presented first, and a pear-shaped separation funnel was also presented. The funnel had a "faucet" at the bottom that allowed water to start and stop running into the beaker. The interviewer asked the child to mark the water levels on the funnel when the water had run to the first level in the beaker, to the second level, to the third level, and so on. The levels on the funnel thus varied a great deal depending on its diameter. The interviewer then asked, "Did the water take the same amount of time to go down from this level to the next in the funnel as it did to go up from this level to the next in the beaker?" It was found that correct judgments about durations were not made before eighth grade (the criterion being 75% of the eighth graders giving correct answers). This grade level was considerably later than the age of 7 or 8 (second grade) that Piaget reported.

Piaget (1946, 1969) made a distinction between intuitive (preoperational) time and concrete-operational time. Intuitive time can be seen in the following interview he conducted with ROM, a four-year-old:

> ROM . . . has a small sister called Erica: How old is she? *Don't know*. Is she a baby? *No, she can walk*. Who is the older of you two? *Me*. Why? *Because I'm the bigger one*. Who will be older when she starts going to school? *Don't know*. When you are grown up, will one of you be older than the other? *Yes*. Which one? *Don't know*. (p. 221)

ROM based her judgments of age on size, which was observable. She could tell that she was older than her sister because she was bigger but did not know who would be older when she started going to school. When her thinking about time became concrete-operational, she became able to *deduce logico-mathematically* that the age difference between Erica and her would always remain the same.

Three Kinds of Knowledge

According to our search of the research literature, the distinction Piaget (1946, 1969) made between intuitive (preoperational) time and concrete-operational time has not been understood by English-speaking researchers. To explain this statement, it is necessary to review the fundamental distinction Piaget (1950, 1945, 1951, 1967, 1971) made among three kinds of knowledge according to their ultimate sources—physical knowledge, logico-mathematical knowledge, and social-conventional knowledge.

Physical knowledge is knowledge of objects in the external world such as their size, shape, weight, and color. The fact that marbles roll (but blocks do not) is an example of physical knowledge, which is observable. ROM said in the preceding interview that Erica could walk, and that she was bigger than Erika. These were also examples of physical knowledge, which was observable.

The ultimate source of *social-conventional knowledge* is conventions that people make. Examples of social-conventional knowledge are languages such as English and Spanish and holidays like the Fourth of July. When to say "Good morning" is also an example of social-conventional knowledge. The fact that there are 60 minutes in an hour and 24 hours in a day is likewise social-conventional knowledge.

While physical and social-conventional knowledge have sources in the external world, *logico-mathematical knowledge* consists of mental relationships that all human beings construct, or make, from within. For instance, if we are presented with two sheets of paper, both of which are $8\frac{1}{2}'' \times 11''$ but one is white and the other, blue, we can say that the two sheets are *different*. We can also say that the two sheets are *similar*. If we think numerically about the two sheets, we can say that there are *two*. "Different," "similar," and "two" are mental relationships we make that do not have an existence in the external world. The whiteness and blueness of the sheets are physical knowledge, which is observable. But the difference, similarity, and two-ness are *mental* relationships we *make*, or *construct*, and are not observable.

Within logico-mathematical knowledge, Piaget (1947, 1950) identified five main kinds of mental relationships—classification, seriation (Inhelder & Piaget,

1959, 1964), and number (Piaget & Szeminska, 1941, 1965), which are relationships among discrete objects, and spatial and temporal relationships (Piaget, 1946, 1969; Piaget & Inhelder, 1948, 1967), which are both continuous. Because everybody thus creates logico-mathematical temporal relationships, it is possible for human beings to become able to measure time even if time is not empirically observable. ROM at age 4 had not constructed logico-mathematical (concrete-operational) time, but Piaget (1946, 1969) showed with many experiments that children construct it during the concrete-operational period at about age 7 or 8.

Piaget (1947, 1950) explained children's construction of concrete operations by arguing that, around the age of 7 or 8, children "group" various kinds of mental relationships. They "group" together into a coherent system the classificatory relationships they have been making (such as "same" and "different"). Likewise, they "group" together the seriational relationships they have been making (such as "different" and "more different") and the numerical relationships they have been making. In the spatial realm, they "group" spatial relationships together, and also "group" temporal relationships together. Classificatory, seriational, numerical, spatial, and temporal relationships thus become differentiated into separate structures, each of which becoming coherent during the concrete-operational period.

Speaking of intuitive time, Piaget (1947, 1950) made the following statements that showed not only the incoherence of preoperational children's temporal reasoning but also the lack of differentiation between temporal and spatial relationships:

> Intuitive time is a time which is tied to particular objects or movements and which has no homogeneity or uniform flow. When two moving objects leave the *same point A and arrive at two different places*, B and B' [at the same time], the 4–5 year-old child acknowledges the simultaneity of the departures but usually contests that of the arrivals, although this is easily perceptible. He recognizes that one of the objects ceased to move when the other stopped, but he refuses to grant that the movement ceased "at the same time," because there simply is as yet no time common to different speeds. (p. 136)

Piaget (1947, 1950) went on to say that after a transitional period of articulated intuition, children "group" temporal relationships and separate them from spatial relationships.

> At the age of about 8, the relations of temporal order (before and after) are coordinated with duration (longer or shorter length of time), whereas the two systems of ideas were still independent at the intuitive level; as soon as they become joined in a single whole they engender the notion of a time common to various movements . . . there are also constituted at the age of about 7 or 8 the qualitative operations that structure space. . . (p. 145)

Logico-mathematical, concrete-operational time is thus the result of children's construction of logico-mathematical thinking. However, English-speaking psychologists (Levin, 1982; Murray, 1969; Siegler & Richards, 1979; Weinreb & Brainerd, 1975) are generally unaware of the distinction Piaget made among the three kinds of knowledge and the nature of logico-mathematical knowledge.

The only references we found related to children's development of logico-mathematical, concrete-operational time are Long and Kamii (2001) about the measurement of time and Kamii and Russell (2010) about the ages of two trees, one of which was planted a year after the other.

In *The Child's Conception of Time*, Piaget (1946, 1969) identified two aspects of temporal relationships—the sequence of events and durations of events. We decided to replicate one of Piaget's experiments about children's judgments of durations for three reasons. First, Piaget presented only five examples of children who demonstrated concrete-operational judgments of durations at ages 8;7, 8;7, 8;10, and 9. This age range overlapped the range of the eight cases he presented to illustrate the preceding stage (ages 6;8, 6;10, 7.5, 7;7, 7;10, 8, 8;11, and 9). We wanted to know more precisely the age when children can be said to construct logico-mathematical time. Second, the method Piaget used in his research seemed to be too complicated, not standardized, and too long for children. In addition, his study had not been replicated according to our search of the literature. Our third reason was that children's reasoning about durations is important for school science (e.g., acceleration of speed) and mathematics (e.g., elapsed time). We thus decided to modify Piaget's method to find out at what age children become able to judge logico-mathematically that two durations are equal.

Method

Sample

One hundred children were individually interviewed consisting of 25 each from grades two, four, six, and eight

in a small town in the southern part of the United States that had one elementary school, one middle school, and one high school. There were 48 boys and 52 girls in the sample. The majority were Caucasian, but a few African American (4%), Hispanic American (2%), and Asian American (1%) were also included. This sample included the entire range of the academic spectrum, as those identified as gifted and those receiving special services for specific learning disabilities were not excluded. The average household income for the town was $42,006 (http://www.factfinder.census.gov), and an average of 38% were receiving free or reduced-price lunches according to the principals.

Grades two, four, six, and eight were selected because Long and Kamii (2001) had interviewed children in grades K, two, four, and six and found that, in the measurement of time, unit iteration became possible for 70% of the students by sixth grade.

Materials

1. A separation funnel with a valve that allowed 750 mL of blue-colored water to start and stop running (see Figure 1)
2. A 1 L beaker with five equidistant black lines drawn on it to indicate five water levels (see Figure 2)
3. 1750 mL of blue-colored water
4. 5 wet-erase markers (black, orange, green, blue, and purple)
5. 50 marbles
6. 2,500 mL bowls

Procedure

Two tasks were used in individual interviews. The purpose of the first task was to determine whether or not the child thought the water ran at the same speed regardless of the speed of his or her actions. If a child does not think that the water always runs at the same speed, it is pointless to use running water to measure durations. The ability to think that water runs at the same speed regardless of one's actions is known as the conservation of speed (Piaget, 1946, 1969).

The purpose of the second task was to determine whether or not a child could judge that two durations were equal. All the durations we asked about were equal, but some involved greater distances than others. We wanted to find out whether or not children could overcome these spatial differences and judge the durations as being equal.

Conservation-of-speed task. Each child was shown two bowls. One contained 50 red marbles, and the other was empty. We told the children that we wanted them to move the marbles one at a time from one bowl to the other while the water ran from the separation funnel into the beaker. The children were to begin moving the marbles when the water started to run from the separation funnel and stop moving them when the water stopped. The children were told that they would do this twice—as quickly as possible the first time, and as slowly as possible the second time.

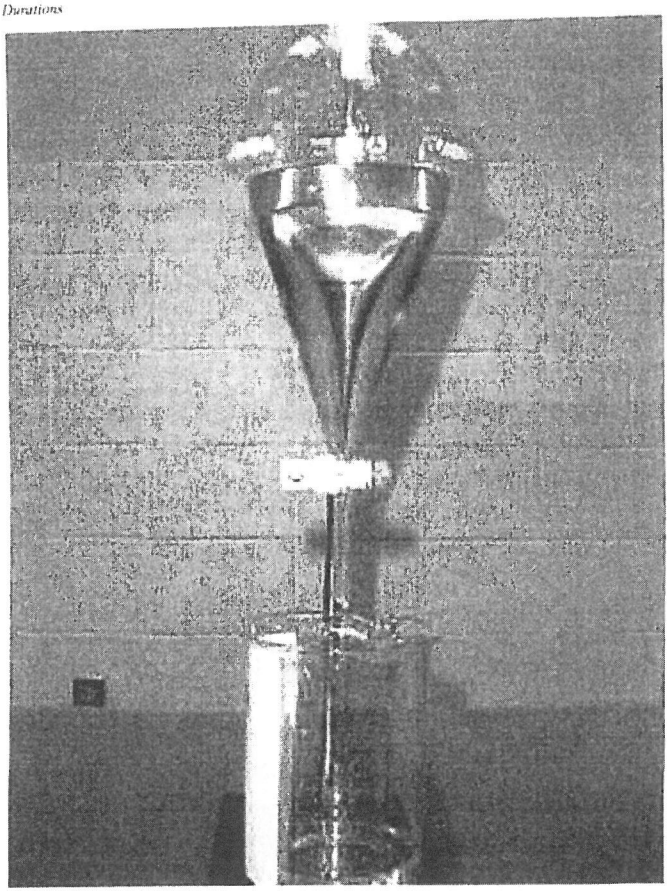

Figure 1. Separation funnel and beaker.

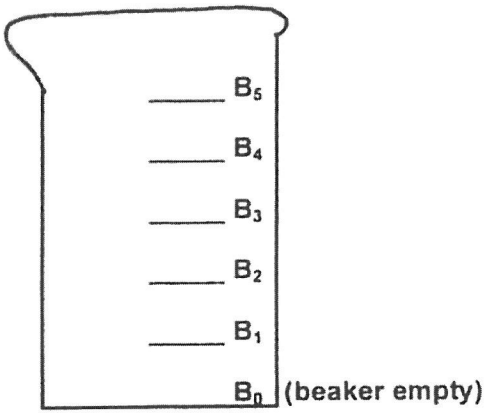

Figure 2. Beaker with intervals marked.

When a child had moved the marbles twice, quickly the first time and slowly the second time, each was asked, "Did the water move at the same speed both times, or did it move faster the first time or faster the second time?" Children who could conserve speed replied that the water moved at the same speed both times. We also asked for an explanation of the answer and, if necessary, gave a countersuggestion. An example of a countersuggestion was, "Another child said that the water moved faster the first time. Do you think you were right or he was right?" This was done to make sure they could defend their judgments logically.

Duration task. Children were first shown the beaker on which lines had been drawn with equal intervals (Figure 2). Each child was given an opportunity to redraw the lines with a black wet-erase marker if he or she did not agree that the lines were equidistant. This was done because it was important that the child be convinced that the intervals were really equal.

When the child was satisfied that the lines were equidistant, we asked if the *amount of water* in one interval and another would be equal, or if one interval would have more water than the other (e.g., the interval between B_1 and B_2 compared with the interval between B_3 and B_4). If the child stated that the lines on the beaker were equidistant and that each increment would hold the same amount of water, he or she was asked the following question about two durations:

> Question 1: Will it take the same *amount of time* for the water to rise from B_1 to B_2 (Figure 2) as it will take to rise from B_4 to B_5?

"B_1" and "B_2" are our designations in this article. The words actually used were "from this line to this line" as the interviewer touched the lines with a pen. "B_1" stands for "the first line in the bottom container," and "T_1" stands for "the first line the child drew on the top container."

After thus finding out about the child's belief about two separate intervals in the beaker, we poured 750 mL of blue-colored water into the unmarked separation funnel (Figure 1). The interviewer demonstrated with a black wet-erase marker how the water level could be marked on the funnel. The water was then allowed to flow into the beaker, stopping at each one of the marks on the beaker (Figure 2). Each time the water was stopped, the child was instructed to mark the water level on the funnel using a marker of a different color. The order of colors used was the same for all the children (black, orange, green, blue, and purple) so that we could refer to the colors during the interview (e.g., from the black mark to the orange mark). When the child had marked each level of water, the funnel had markings with unequal distances between them (Figure 3).

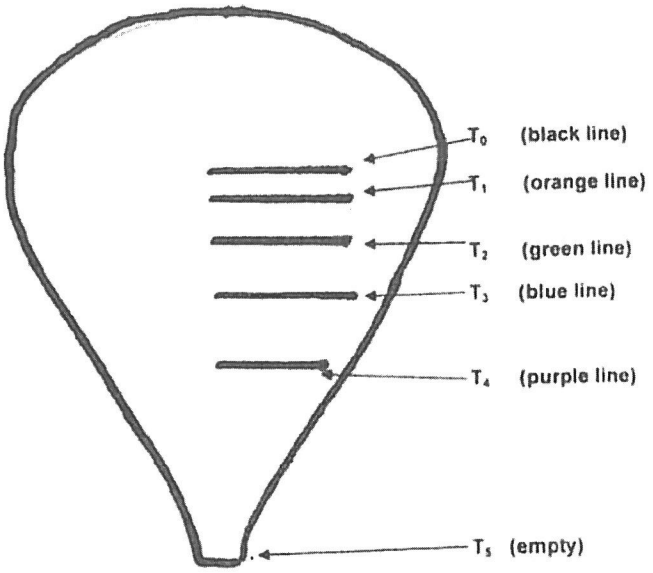

Figure 3. Separation funnel with intervals marked.

When all markings were made on the funnel, the child was asked four more questions that were similar in form to Question 1. In Questions 2–5, we asked, "Did it take the same *amount of time* for the water to go from this line to this line as it did to go from this line to this line, or did one take *more time* than the other?" These questions were worded to ensure that the child focused on time and not on space. We did not ask if one interval took "a longer time" because "longer" could have implied distance.

> Question 2: from T_1 to T_2 compared with T_3 to T_4 (similar distances in one container)
> Question 3: from T_0 to T_1 compared with T_4 to T_5 (dissimilar distances in one container)
> Question 4: from T_0 to T_1 compared with B_3 to B_4 (similar distances in two containers)
> Question 5: from T_4 to T_5 compared with B_2 to B_3 (dissimilar distances in two containers)

As stated earlier, our method was a modification of Piaget's because his method seemed too complicated, too long for children, and not standardized. Three of the major modifications we made are the following. First, we decided to focus only on durations and not to ask about the sequence of events (e.g., whether B_3 took place before, after, or at the same time as T_2). Second, we decided to ask questions about the speed of running water as a separate task rather than inserting them from time to time. Third,

we decided to ask about the duration of only one interval (instead of one, two, or three intervals as Piaget did) because, in a pilot study, some children told us that it took the same amount of time for the water to go from T_1 to T_3 as to go from B_1 to B_3 because both had a line in the middle of the intervals.

Data Analysis

The first author scored each response during the interviews. All interviews were videotaped, and the videotapes were reviewed by a group of two to four people that included both authors. Each person scored the interviews independently, and the scores were compared. If a disagreement occurred, the answer of the majority of the group was taken to be the score. The reliability was found to be .96.

Criteria for categorizing children in the conservation-of-speed task. Children scored a "+" in the conservation-of-speed task if they stated that the water moved at the same speed both times they moved the marbles. To score a "+" the children also had to give a logical justification for their answer, such as "It was the same water both times, and you did the same thing with it" or "It doesn't matter how fast I move, the water moves the same."

Children scored a "–" if they stated that the water moved faster either the first or second time. If they said the water moved at the same speed but could not explain their answer or were easily swayed by the countersuggestion, they were also given a score of "–."

Criteria for categorizing children in the duration task. A "+" was given when children said that the two durations were equal and gave an explanation that clearly showed they were focusing on the amount of time and not on any perceptual factor, such as distance. Children who said one of the durations was longer than the other were given a score of "–." Those who stated that the intervals took the same amount of time but based their justification on intuition ("It felt the same") or the distances between two lines were also given a "–."

Some children stated at first that the durations were not equal but, in the course of discussion, decided that the durations were equal. These children were given a score of "±" if they could offer a reasonably logical reason for the new answer. The "±" was given because the child was influenced by the interviewer's probes.

Results

The results for both tasks are summarized in Table 1 concerning children who received a score of "+." The findings from each task are discussed in the following.

Table 1
Number and Percentage of Children Who Scored "+" for Each Question by Grade Level

Question	Grade Level			
	2nd (%)	4th (%)	6th (%)	8th (%)
Speed	4 (16)	9 (36)	14 (56)	23 (92)
Question 1	11 (44)	21 (84)	25 (100)	25 (100)
Question 2	1 (4)	2 (8)	5 (20)	9 (36)
Question 3	1 (4)	3 (12)	2 (8)	12 (48)
Question 4	1 (4)	2 (8)	8 (32)	16 (64)
Question 5	1 (4)	2 (8)	4 (16)	15 (60)

Note. Speed = conservation of speed.
Q1 = One container (beaker).
Q2 = One container (funnel) (similar distances).
Q3 = One container (funnel) (dissimilar distances).
Q4 = Two containers (similar distances).
Q5 = Two containers (dissimilar distances).

Conservation-of-Speed Task

It can be seen in Table 1 that the percentage of children who demonstrated conservation of speed increased with age. There is a steady increase from 16% in second grade to 36% in fourth grade, 56% in sixth grade, and 92% in eighth grade. The criterion of 75% correct was reached between the sixth and eighth grades. According to the Genevan criterion, if 75% or more of an age group correctly answers a question, the question is said to be "passed" at that age level (Piaget & Inhelder, 1941, 1974).

Duration Task

Question 1 was asked to find out whether or not children thought that the durations of two intervals in the beaker took the same amount of time. It can be seen in Table 1 that almost half (44%) of the second graders judged that the two intervals would take the same amount of time. By fourth grade, the proportion increased to 84%, and 100% was attained in both sixth and eighth grades.

Question 2 required children to compare two durations with similar spatial intervals within the pear-shaped funnel. All the percentages decreased dramatically from Question 1 to Question 2, and only 4 and 8%, respectively, of the second and fourth graders judged that the two intervals took the same amount of time. In sixth and eighth grades, only 20% and 36%, respectively, of the students were able to state that the durations in the funnel were equal.

Question 3 was found to be even harder than Question 2 in sixth grade. This was a hard question for sixth graders because it involved the first and last intervals within the pear-shaped funnel. It was found to be easier for the eighth graders. This difference will be discussed shortly in the Discussion.

Question 4 asked children to compare the durations in two containers (whether it took the same amount of time for the water to descend from T_0 to T_1 in the funnel [Figure 3] as it did to rise from B_3 to B_4). Although these intervals were in separate containers, the distances between the lines that marked them were similar. It can be seen in Table 1 that only 4 and 8%, respectively, in second and fourth grades judged that the water took the same amount of time to move. By sixth grade, 32% of the children thought the durations were equal, but by eighth grade, as many as 64% answered this question correctly.

Question 5 asked children to compare the greatest distance in the funnel (T_4 to T_5) with one of the intervals in the beaker. The percentages getting the correct answer were negligible in second, fourth, and sixth grades (4, 8, and 16%, respectively), but it rose dramatically to 60% in eighth grade.

Discussion

The findings from the five questions in Table 1 can be summarized by grouping the questions into the following three categories:

The easiest question: Question 1
The harder questions: Questions 4 and 5
The hardest questions: Questions 2 and 3

The easiest question (Question 1) involved only the beaker, and more than 75% of the students in grades four to eight answered it correctly. In second grade, however, only 44% said that it took the same amount of time for the water to rise from B_1 to B_2 as it did to rise from B_4 to B_5. This low percentage indicates that equal distances on the beaker (which were empirically observable) did not automatically mean equal durations for the youngest group of children. Question 1 can thus be said to demonstrate that temporal units must, and can be, mentally constructed by each child.

Questions 4 and 5 were found to be much harder than Question 1. These questions were harder because they involved the funnel that had marks with unequal distances between them. They were nevertheless easy enough for two-thirds of the eighth graders to answer correctly because they involved the beaker.

Questions 2 and 3 in the hardest category involved only the funnel, and less than half of the eighth graders answered them correctly. It must be noted that Question 3 was harder than Question 2 for the sixth graders, but in eighth grade Question 3 was slightly easier than Question 2. This improvement in eighth grade cannot be attributed to a practice effect because there was no practice effect in sixth grade. This difference between the sixth and eighth graders highlights the eighth graders' power of logico-mathematical reasoning.

If we again take the Genevan criterion of 75% giving the correct answer (Piaget & Inhelder, 1941, 1974), we can conclude from the present study that children become able to judge the equality of two durations logico-mathematically during or after eighth grade (age 13–14). This is considerably later than the age of seven to eight that Piaget reported.

Conservation of Speed

The question about speed was more complicated than the preceding five questions because the former involved not only time but also the dynamic movements of water and of the child's own actions. If we again take the Geneva criterion of 75% giving the correct answer, we can say that conservation of speed appears between sixth and eighth grades. This is slightly later than Long and Kamii's (2001) findings showing that conservation of speed becomes possible between grade four and grade six.

Mathematics educators are not aware of the nature and development of logico-mathematical knowledge. The *Principles and Standards for School Mathematics* (National Council of Teachers of Mathematics, 2000) introduces the measurement of time by teaching first graders to read a clock (which involves numerical quantification and social-conventional knowledge but not logico-mathematical knowledge). The Common Core State Standards for Mathematics (Common Core State Standards Initiative, 2010) also refers to the ability to read a clock, without any awareness of children's development of logico-mathematical knowledge.

All logico-mathematical knowledge develops when children think (Piaget, 1971, 1974; Inhelder, Sinclair, & Bovet, 1974), and it seems desirable for educators to encourage children to think about time. However, in school, children are now seldom asked to think about time and are constantly told, "You have 5 minutes to get ready for lunch," and "You have 5 minutes until it's time to go to P.E." The educational implication of the present study is that we must encourage children to think more about time.

In science, the teacher may ask if a ball rolls down an incline twice as fast when an incline measures 70° rather than 35°. A similar question is whether or not a small ball-bearing rolls down at the same speed as a tennis ball. Another question may involve evaporation. The teacher can ask if the small amount of water poured into a saucer will evaporate faster than the same mount poured into a vial.

In mathematics, when cans are collected to give to needy people at Thanksgiving time, the teacher may ask which way takes less time to count them: counting them by ones or counting them by tens. When an oral book report had to be presented by each member of the class, the teacher asked how many minutes each report should take. In one third-grade classroom, the consensus was 10 minutes, but when they calculated the total amount of time, the class agreed that four hours was much too long ($22 \times 10 = 220$, and $220 \div 60 =$ more than three hours). When they reduced the limit to five minutes per person, the class still thought that almost two hours was too long. The class finally agreed on three minutes per person, which turned out to be long enough if everybody prepared a well-organized, well-conceptualized report.

In conclusion, time is not observable, and it is not difficult to become convinced that it cannot become known empirically. Children must construct their own ideas about time, and this is done through making logico-mathematical relationships in their own heads. For this reason, teachers should provide opportunities such as those described in order to give children opportunities to mentally grapple with ideas about time.

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Elapsed Time: Why Is It So Difficult to Teach?

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Based on Piaget's theory of logico-mathematical knowledge, 126 students in grades 2–5 were asked 6 questions about elapsed time. The main reason found for difficulty with elapsed time is children's inability to coordinate hierarchical units (hours and minutes). For example, many students answered that the duration between 8:30 and 11:00 was 3 hours 30 minutes (because from 8:00 to 11:00 is 3 hours, and 30 more minutes is 3 hours 30 minutes). Coordination was found to begin among logico-mathematically advanced students, through reflective (constructive) abstraction from within. The educational implications drawn are that students must be encouraged to think about durations in daily living and to do their own thinking rather than being taught procedures for producing correct answers to elapsed-time questions.

Key words: Constructivism; Curriculum; Elementary K–8; Piaget

When we ask teachers in graduate courses on primary mathematics what is especially difficult for them to teach, the answer they often give is *elapsed time*. If we ask what makes elapsed time so difficult to teach, the teachers become unsure. We searched the literature to find out what is known about this difficulty but found no pertinent research.

Although we did not find any reference to children's difficulty with elapsed time, publications about children's concept of *time* are numerous. For example, Friedman (1982) studied children's ideas about conventional time (e.g., days, weeks, and months). Fivush and Mandler (1985) examined children's ability to sequence events forward and backward. French (1989) studied how students sequence events using the word *before* or *after*. She found that when pictures of three sequential events (A, B, and C) were presented, children had a strong preference for saying that B took place *after* A rather than saying that B took place *before* C.

Many studies have been inspired by Piaget's research (1969, 1970) but not by his theory about logico-mathematical knowledge. For example, Murray (1969) investigated the conservation aspects of durations by showing a drawing of two pennies labeled A and B, and telling the respondent that the pennies were made at the same time. Coin A looked older because it was dropped in an acid, and coin B looked new. The children were asked if A was as old as B, or whether one of them was older. Siegler and Richards (1979) examined children's judgments of duration,

speed, and distance. Their tasks were designed to find out on what children base their judgments: the end point, the end time, the beginning point, the beginning time, duration, speed, and/or distance. Levin (1982), too, studied children's judgments of duration, speed, distance, and end points without awareness of the nature of logico-mathematical knowledge.

Piaget (1971, 1951) made a fundamental distinction among three kinds of knowledge according to their ultimate sources: physical, logico-mathematical, and social-conventional knowledge. In his conceptualization, temporal relationships are part of logico-mathematical knowledge.

Physical knowledge is knowledge of objects in the external world. The knowledge that a penny is made of metal is an example of physical knowledge. Knowing that a watch is made with metal and glass and that glass breaks when it is dropped is also an example of physical knowledge. By contrast, the fact that there are 60 minutes in an hour and 24 hours in a day is *social-conventional knowledge*. Having to use one's right hand for handshakes is likewise an example of social knowledge, for which the ultimate source is conventions that people establish. Social-conventional and physical knowledge are similar in that their ultimate sources are outside the individual.

Logico-mathematical knowledge is different in that it consists of mental relationships that each individual creates in his or her mind. For example, if one is presented with a man's watch and a woman's watch, one can say that they are *different*. One also can say that the two watches are *similar*, and it is just as true to say that the two watches are similar as it is to say that they are different. The difference and similarity are *mental relationships* that each person makes (constructs) in his or her mind and are examples of logico-mathematical knowledge that each individual creates starting in infancy (Piaget, 1954). *Bigger than, later than*, and *two* are also examples of logico-mathematical knowledge.

Piaget studied five kinds of logico-mathematical relationships: classificatory, seriational (Inhelder & Piaget, 1964), numerical (Piaget & Szeminska, 1952), spatial (Piaget, Inhelder, & Szeminska, 1960), and temporal (Piaget, 1969) relationships. In *The Child's Conception of Time*, Piaget (1969) made an important distinction between *intuitive* (preoperational) time and *operational* (logico-mathematical) time. Children begin by thinking intuitively about time, and construct operational time between 7 and 8 years of age, according to Piaget, during the concrete-operational period. Intuitive time is based on what children experience and observe empirically, as can be seen in the following example from an interview Piaget conducted with a 4-year-old:

> ROM . . . has a small sister called Erica: How old is she? *Don't know*. Is she a baby? *No, she can walk*. Who is the older of you two? *Me*. Why? *Because I'm the bigger one*. Who will be older when she starts going to school? *Don't know*. When you are grown up, will one of you be older than the other? *Yes*. Which one? *Don't know*. (p. 203)

ROM based her judgments of age on size, which was observable. She could tell that she was older than her sister because she was bigger, but she could not deduce

logico-mathematically that she would always be older than Erica. She did not know who would be older when she went to school or became a grownup, because she did not know who would be bigger.

When ROM becomes 7 or 8, according to Piaget, she is likely to "group" (coordinate) the temporal relationships she constructed before, such as durations and the order of events, and construct an operational organization of time. When time becomes operational, children become able to fit objects and events within a temporal framework and deduce logico-mathematically that if ROM is older than Erica now, ROM will always be older than Erica.

Kamii and Russell (2010) replicated one of Piaget's (1969) tasks involving a pear tree that was planted 1 year later than an apple tree but grew to be larger than the apple tree. Based on results from this task, they concluded that children generally construct operational time by third grade.

The questions asked in both Piaget's and Kamii and Russell's interviews involved qualitative quantification. Qualitative quantification involves only three categories such as *the same age, older than*, and *younger than*. Numerical quantification is more precise and develops later. A question asking for numerical quantification would have been, "By how many years will you be older than Erica when you start going to school?"

Elapsed time involves numerical quantification, and Long and Kamii (2001) investigated children's ability to measure time with unit iteration within a Piagetian framework. One of their findings was that children generally become able to iterate units of time late in sixth grade. Because questions about elapsed time always involve units, we can expect elapsed time to remain difficult until sixth grade.

In questions about elapsed time, units occur at two hierarchical levels. For example, to determine the duration between 8:30 and 11:00, children have to know that 8 is one kind of number (at a higher hierarchical level) and that 30 is another kind of number (at a lower level), as illustrated in Figure 1(a). The knowledge that there are 60 minutes in an hour is social-conventional knowledge, but the thinking required to coordinate hours and minutes simultaneously is logico-mathematical knowledge. This hierarchical thinking has the same structure as the thinking necessary to deal with 10s and 1s (see Figure 1(b)). This hierarchical structure is also required for multiplicative thinking, as we will explain later.

Children have long been known to have trouble with the coordination of 10s and 1s (e.g., Fuson, 1990, 1992). For example, Labinowicz (1985) individually asked 29 third-grade students to count the blocks shown on the left side of Figure 2a. He then took the cover off to reveal all the blocks, as shown on the right side of Figure 2a, and asked each child to "count how many cubes there are on the board altogether (p. 255)." Figure 2b shows that Zoya counted either by 10s (incorrectly) or by 1s (incorrectly). Apparently, she could not shift from counting by 10s to counting by 1s, or vice versa, because she could think at only one hierarchical level at a time.

Ross (1985) asked children to put 10 beans into each cup as illustrated in Figure 3a and asked them how many beans there were altogether. Twenty-seven percent of the second-grade and third-grade students counted them as shown in Figure 3b and announced that there were 80. (Some second-grade students were at an even lower

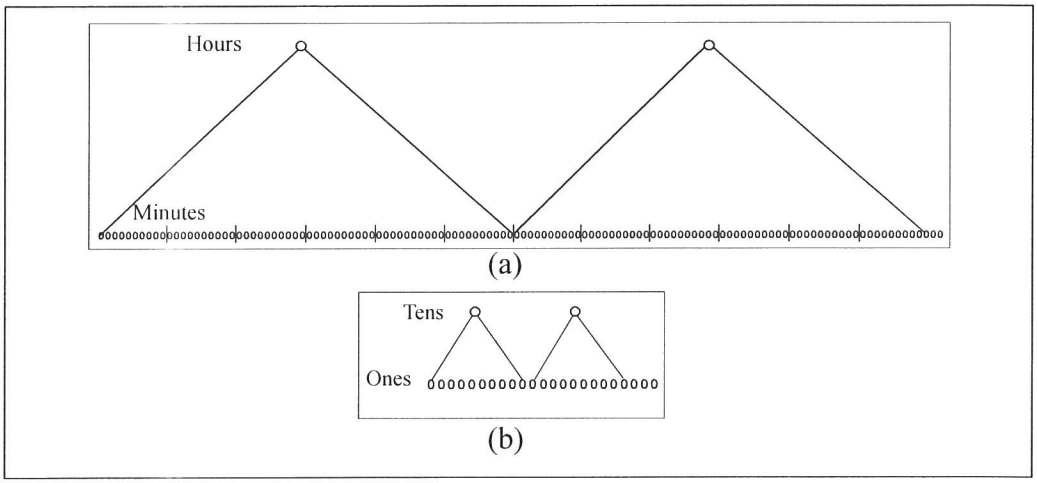

Figure 1. The hierarchical thinking involved in coordinating hours and minutes (a) and 10s and 1s (b).

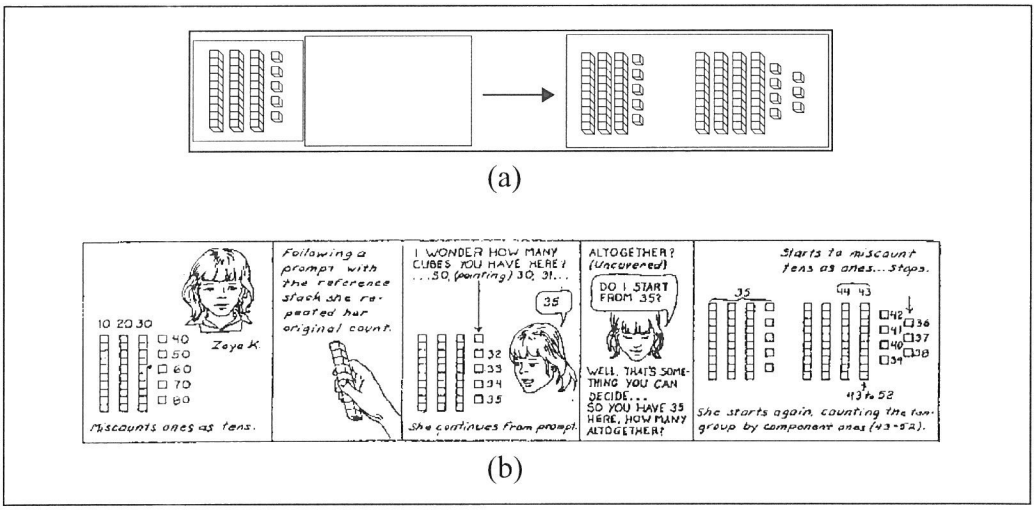

Figure 2. A counting board (a) and a Zoya's response to a counting board task (b) from *Learning From Children: New Beginnings for Teaching Numerical Thinking: A Piagetian Approach* by E. Labinowicz, 1985, p. 255. Copyright 1985 by Addison-Wesley Publishing Company.

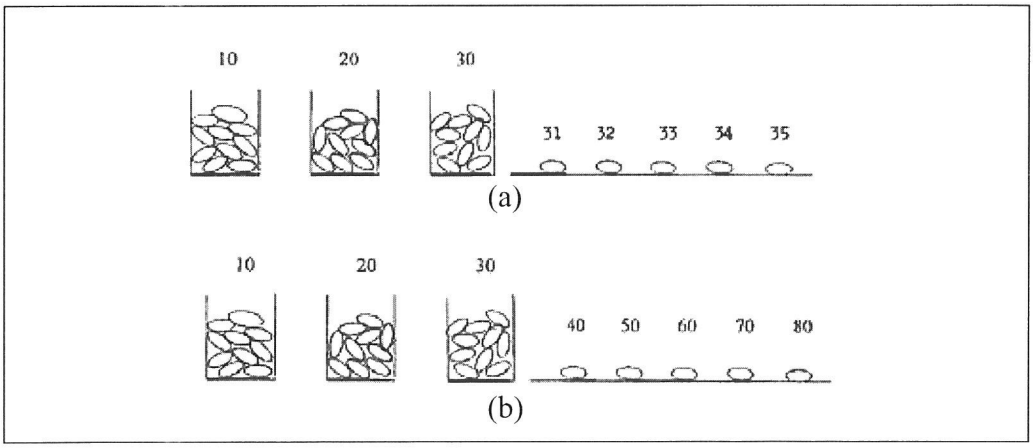

Figure 3. Two ways of counting by 10s.

level.) Adults and logico-mathematically more advanced children can shift to 1s (see Figure 3a) because they can think about the 1s while counting by 10s. Otherwise, they would continue to count by 10s as illustrated in Figure 3b.

More recently, Chandler and Kamii (2009) found that 25% of the second graders in their sample insisted that a dime could not be used to pay for 6 cents worth of candy in a store game. The children all knew verbally that a dime was worth 10 pennies, and that 10 pennies was "too much" for a 6-cent purchase. Yet, for them, a dime was one thing, and 10 pennies was something else. Adding a few pennies to a dime was easy for these second graders because addition allowed them to keep "one 10" intact, as shown in Figure 4a. However, subtracting pennies from a dime was impossible because a dime was a unit that could not be separated into 10 lower order units (see Figure 4b).

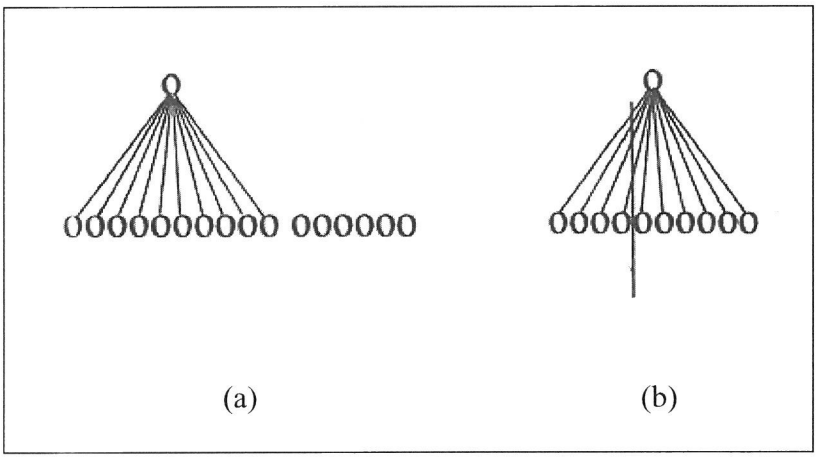

Figure 4. Adding 6 cents to a dime (a) compared with subtracting 6 cents from a dime (b).

The primary research that explains how children become able to coordinate 10s and 1s is that of Steffe and colleagues (Steffe, 1992; Steffe & Cobb, 1988). By analyzing the ways children count objects to solve problems, Steffe (1992) brought to light how children constructed *iterable composite units*. Composite units are higher order units of two or more lower order units. For example, when adults count by 2s, they are making composite units of 2. When they count by 10s, likewise, adults are making composite units of 10. First-grade students can usually count only by 1s, but they gradually construct higher order composite units and become able to count by 2s, 5s, and 10s. When children have solidly constructed these higher order units, the higher order units are said to have become *explicitly iterable composite units*.

Steffe explained children's construction of 1s as well as of composite units by referring to *reflective* (or *constructive*) *abstraction*. Piaget and colleagues (e.g., Beth & Piaget, 1961/1966) distinguished between *empirical* abstraction and *reflective* (or *constructive*) abstraction. In empirical abstraction, we focus on one or more observable properties of objects (such as color) and ignore the others. When we

sort 10 red and blue circles by color, we engage in empirical abstraction. By contrast, when we *make* (construct) mental relationships such as *different, similar,* and *two* between a red circle and a blue one, we engage in reflective (or construct ive) abstraction. All logico-mathematical relationships, including lower order and higher order units, are constructed by each individual by reflective (constructive) abstraction, through his or her own mental actions (thinking).

More recently, Steffe and Olive (2010) extended their work about the coordination of units to the realm of fractions. For example, when asked to cut up a 1/4 stick so that each piece will be 1/20 of a whole stick, children have to coordinate three levels of units: the levels of 1s, fourths, and twentieths. Only by coordinating the three levels can a child determine that the 1/4 stick must be cut into 5 pieces. Steffe and Olive cited many examples of children's efforts leading to successful and unsuccessful responses that illustrated the difficulty of this coordination. Not surprisingly, in the realm of fractions, too, they explained the construction and coordination of iterable composite units as resulting from reflective abstraction.

Steffe (1992) and Clark and Kamii (1996) have used the concept of reflective abstraction to explain students' construction of multiplicative thinking. Most mathematics educators view multiplication as only a faster way to do repeated addition (see Figure 5a). However, Steffe as well as Clark and Kamii showed that multiplication involves the two hierarchical levels apparent in Figure 5b. It can be noted in this figure that the *4* in 4×5 is not the same kind of number as the *5*. The *4* is a higher order number that refers to "4 groups" (of 5 objects). According to Clark and Kamii (1996), children typically begin to understand these higher order numbers by Grade 4, and only 49% of the fifth-grade students they interviewed immediately understood terms such as *two times* and *three times*.

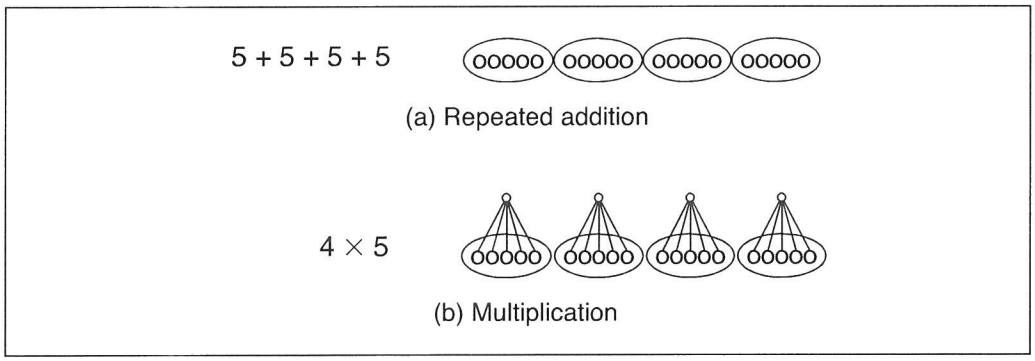

Figure 5. The thinking involved in repeated addition (a) and in multiplication (b).

Reynolds and Wheatley (Reynolds & Wheatley, 1996; Wheatley & Reynolds, 1996) studied fourth-grade students' coordination of numerical and spatial units. By asking "How many 3-by-5 cards are needed to cover a sheet of paper 12 by 30?" (Reynolds & Wheatley, 1996, p. 567), for example, they found out how the children coordinated numerical units (3, 5, 12, and 30) and spatial units (3 by 5 and 12 by 30) at the same time. They concluded that when a student constructs and coordinates

higher order units in the numerical realm, he or she also constructs and coordinates higher order units in the spatial realm, by reflective abstraction.

The literature on how to teach elapsed time suggests that textbooks first show children how to count hours on an analog clock, and then how to count minutes, *separately*. Some textbooks then show how to get elapsed time by using the social-conventional rule of "borrowing" 60 minutes, as illustrated in Figure 6a.

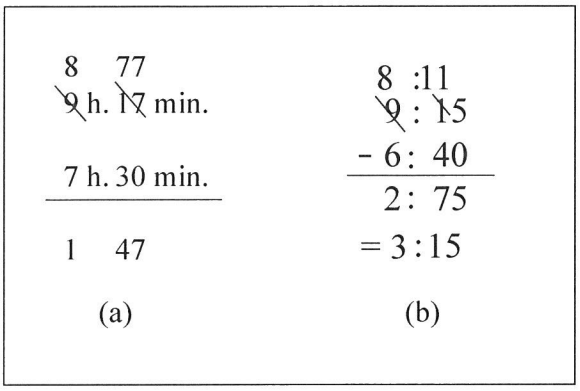

Figure 6. "Borrowing" shown in a textbook (a) and carried out by a student (b).

Countless articles have been published giving advice to teachers on how to teach elapsed time. For example, Moone and de Groot (2005) recommended instructing children to draw empty number lines, with large "jumps" for hours and small "jumps" for minutes. According to the authors, this activity was "intended as a scaffold toward" an algorithm such as the one in Figure 6a involving regrouping.

To summarize what is known from the research literature about children's logico-mathematical development of the concept of elapsed time, it is known first of all that children become able to deduce elapsed time qualitatively by Grade 3 (Kamii & Russell, 2010). It is also known that children become able to measure time with unit iteration in Grade 6 (Long & Kamii, 2001). Because elapsed time involves hierarchical units of time, we can expect it to remain difficult until at least Grade 6.

In response to the total absence of research attempting to explain why elapsed time is so difficult for children, we decided to ask children questions that are similar to those found in textbooks. We decided to begin with an easy question involving only whole hours and to add increasingly difficult minutes, as do textbooks. In other words, the research reported in this article was exploratory. We thought that a good way of beginning to explain the difficulty of elapsed time was to determine what kinds of questions are more difficult than others.

METHOD

In individual interviews, we asked a total of 126 students in Grades 2–5 six questions about elapsed time. The students (29 in second grade, 29 in third grade, 33 in fourth grade, and 35 in fifth grade) were members of two classes at each grade level

whose parents gave permission for the interview. The school was in an upper-middle-class, suburban neighborhood near a large city in the South. The racial composition of the school was 69% Caucasian, 18% African American, 9% Asian, and 4% Hispanic. The interviews took place in January and February.

Grades 2–5 were selected because textbooks typically show how to teach elapsed time in third and fourth grade, and second graders would show a "floor" with respect to elapsed time. In fifth grade, elapsed time typically no longer appears in textbooks, presumably because children are believed to have mastered it.

The second-grade teachers in the school did not teach elapsed time because previous experience convinced them that such attempts were not fruitful. In grades 3–5, by contrast, the teachers taught elapsed time in the context of daily living. For example, they sometimes asked the class how much time they had before lunch, recess, and/or dismissal time, and whether the amount of time available was enough to play a mathematics game.

The six interview questions were based on findings from a pilot study. In the pilot study, we asked the 10 questions that appear in Table 1.

As illustrated in Table 2, Question 1 was an easy one by third grade, with 78% to 92% of students answering correctly. We decided to retain this question for the present study because it served as a "floor."

Questions 2 through 5—involving 30 minutes—yielded percentages of correct answers that were similar but much lower than those for Question 1. Whether the 30 minutes came at the beginning or the end of a duration, the percentages were similar, especially in Grades 3 and 4. We therefore decided to ask only one question involving 30 minutes in the present study. This question became Question 2 in the present study, with the 30 minutes appearing at the beginning of the interval.

Questions 6 and 7 involved more precise minutes that made them more difficult than Questions 2–5, especially in Grades 3 and 4. We decided to retain these questions for the present study but changed their order. Question 3 of the present study thus involved only quarter-hours, and Question 4 of the present study involved more precise minutes.

Because Questions 8 and 9 of the pilot study yielded percentages that were similar to Questions 6 and 7, we decided to omit them in the present study to avoid useless repetition. Question 10 of the pilot study was much too difficult, even for fifth-grade students. We therefore decided to replace it with an easier question that became Question 5 of the present study.

The present study thus used the six questions in Table 3. We hypothesized that Questions 2–6, which involved the coordination of hours and minutes, would be much more difficult than Question 1, which dealt with whole hours.

In each interview, the child and interviewer each had a copy of the six questions, and the child was asked to read each question aloud before answering it. The interviewer wrote the answer the child gave to each question and often asked how he or she figured it out. The explanation and occasional self-corrections were recorded as well as responses to other probes. When the child sat for a long time without responding, he or she was asked if a pencil might help. The answer was usually "No," and the child was asked if a picture of clocks might be useful.

Table 1
Questions Asked in the Pilot Study

Question	Purpose
1. To go "trick or treat" on Halloween night, I left the house at 7:00 and came home at 9:00. How long was I gone?	To determine how the child dealt with whole hours
2. The swim meet will start at 10 o'clock and end at 12:30. How long will it take?	To determine how the child dealt with 30 minutes at the end of the interval
3. My father dropped me off at the movie theater at 11 o'clock, and my mother picked me up at 1:30. How long was I in the movie theater?	To determine how the child dealt with 30 minutes at the end of an interval that spans 12:00
4. I have a friend whose parents say it takes 3 hours to drive to Nashville. If they get going at 7:30 in the morning, what time will they get to Nashville?	To determine how the child dealt with 30 minutes at the beginning of the interval
5. I have another friend whose parents like to get going later in the day. If they get going at 10:30 in the morning and expect to take 4 hours, what time will they be in Nashville?	To determine how the child dealt with 30 minutes at the beginning of an interval that spans 12:00
6. I started working on my homework at 8:15 and finished at 9:10. How long did it take?	To determine how the child dealt with an interval less than an hour and with minutes more precise than quarter-hours at one end point
7. The swimming pool is open from 9:15 in the morning to 11:30 every morning during the summer vacation. How long is it open every day?	To determine how the child dealt with 15 minutes and multiples of 15 minutes at both end points of the interval
8. We had company last night and started to eat at 6:10. When we finished, it was 7:45. How long did we sit at the dinner table?	To determine how the child dealt with minutes more precise than quarter-hours at one end point
9. I started working on a test at 9:05 and finished at 11:00. How long did I work on this test?	To determine how the child dealt with minutes more precise than quarter-hours at one end point
10. My mother volunteers at the animal shelter every Tuesday from 9:30 in the morning to 2:20 in the afternoon. How much time does she volunteer on Tuesdays?	To determine how the child dealt with many hours and precise minutes that span 12:00

Table 2
Percent of Children in the Pilot Study at Each of Grades 2–5 That Gave Correct Answers

Questions	Grade level			
	2 $n = 33$	3 $n = 32$	4 $n = 37$	5 $n = 38$
1. (7:00–9:00)	39	78	87	92
2. (10:00–12:30)	39	63	59	79
3. (11:00–1:30)	30	56	59	66
4. (3 hrs. after 7:30)	15	56	54	58
5. (4 hrs. after 10:30)	24	56	51	71
6. (8:15–9:10)	12	31	28	58
7. (9:15 to 11:30)	15	28	30	55
8. (6:10–7:45)	9	31	32	47
9. (9:05–11:00)	12	25	22	58
10. (9:30 am to 2:20 pm)	3	19	14	34

RESULTS

Data analysis began by counting the number of correct answers the children gave to each question at each grade level. These frequencies were changed to the percentages in Table 4.

Question 1 (7:00–9:00)

This question was easy, even for second graders. Sixty-nine percent of the students in Grade 2 gave the correct answer of 2 hours, and the percentages quickly rose to 93%, 97%, and 97%, for Grades 3, 4, and 5, respectively.

The most frequently given incorrect answer in second grade was 1 hour. This answer was given by 28% of the second graders, who explained that there was only one number between 7 and 9. For them, 7:00 and 9:00 may have been mere numbers rather than two end points of a time interval.

Question 2 (8:30–11:00)

The percentages of students giving the correct answer to this question (see Table 4) were dramatically lower than those for Question 1. Only 28%, 45%, 61%, and 60%, respectively, of those in Grades 2, 3, 4, and 5 gave the correct answer. According to the sign test for paired samples (Siegel & Castellan, 1988), the decrease in percentage correct from Question 1 to Question 2 was statistically significant ($p < .001$) at each grade level. These decreases revealed that even the coordination of hours and half-hours was difficult for children in Grades 2–5.

Table 3
Six Questions Used in the Present Study

Question	Purpose
1. To go "trick or treat" on Halloween night, I left the house at 7:00 and came home at 9:00. How long was I gone?	To determine how the child dealt with whole hours
2. To drive to Nashville, we left the house at 8:30 in the morning and got there at 11:00. How long did it take to drive to Nashville?	To determine how the child dealt with 30 minutes at the beginning of an interval
3. The swimming pool is open from 9:15 to 11:30 every morning during the summer vacation. How long is it open every day?	To determine how the child dealt with 15 minutes and multiples of 15 minutes
4. I started doing my homework at 8:15 and finished at 9:10 last night. How long did it take?	To determine whether the child could coordinate hours and minutes more precise than quarter-hours
5. I went to Chicago by plane. We left Birmingham at 6:40 and arrived in Chicago at 9:15. How long did the flight take?	To determine whether the child could coordinate hours and minutes and deal with minutes greater than 30. For example, the 40 minutes in 6:40 had to be recognized as 20 minutes before 7:00.
6. When my mother drives, it takes 2 hours and 20 minutes to get to Atlanta. If we want to be in Atlanta by 4:00 in the afternoon, what time should we get started?	To determine whether the child could think about elapsed time in reverse, with nonzero minutes at only one end point of the interval

Table 4
Percent of Children at Each Grade Level That Gave the Correct Answer to Questions 1–6

Questions	Grade level			
	2	3	4	5
	$n = 29$	$n = 29$	$n = 33$	$n = 35$
1. (7:00–9:00)	69	93	97	97
2. (8:30–11:00)	28	45	61	60
3. (9:15 –11:30)	21	34	52	69
4. (8:15–9:10)	21	24	52	40
5. (6:40–9:15)	17	10	30	31
6. (By 4:00)	28	41	52	54

Table 5 lists the most frequently given incorrect answers to Questions 2–5. Note that the most frequent incorrect answer to Question 2 was 3 hours and 30 minutes. The percentages giving this answer were 34, 38, 33, and 31 for Grades 2–5, respectively—about one third at each grade level. This answer was obtained by counting 3 hours from 8:00 to 11:00 and adding 30 minutes to the 3 hours. If these children had reasoned that the duration started 30 minutes after 8:00, they would have subtracted 30 minutes from the 3 hours instead of adding them. Most of the other incorrect answers to Question 2 were distributed as shown in Table 6. This table is presented to indicate that no pattern could be observed from the other incorrect answers given. Likewise, we observed no patterns in the incorrect answers to Questions 3–6.

Question 3 (9:15–11:30)

This question was formulated to determine how children dealt with durations beginning and ending with quarter-hours. It was the only one of the six questions that yielded steady growth from Grade 2 to Grade 5 (21%, 34%, 52%, and 69%). About the same percentage of students in Grades 2–5 added the minutes (from 9:00 to 11:00 is 2 hours, and 15 + 30 = 45 minutes).

Table 5
Percent of Children at Each Grade Level That Gave the Most Frequent Incorrect Answers to Questions 2–5

	Grade level			
	2 $n = 29$	3 $n = 29$	4 $n = 33$	5 $n = 35$
Question 2 (8:30–11:00)				
3 hours 30 minutes	34	38	33	31
Question 3 (9:15–11:30)				
2 hours 45 minutes (15 + 30)	17	28	18	17
Question 4 (8:15–9:10)				
1 hour or more	76	62	48	54
1 hour 25 minutes (15 + 10)	24	17	18	14
1 hour 5 minutes (15 – 10)	3	10	21	34
Question 5 (6:40–9:15)				
3 hours 55 minutes (40 + 15)	28	31	21	20
2 or 3 hours and 25 minutes (40 – 15)	3	7	15	23
3 hours 35 minutes (40 – 15)	3	3	6	17

Table 6
Frequencies of Incorrect Answers Other Than the Ones Reported in Table 5 Given by Children at Each Grade Level to Question 2 (8:30–11:00)

	Grade level			
	2 $n = 29$	3 $n = 29$	4 $n = 33$	5 $n = 35$
1 1/2 hours	0	1	0	2
2 hours	1	2	0	0
3 hours	6	2	0	0
4 hours	1	1	1	0
4 1/2 hours	1	1	1	1

Question 4 (8:15–9:10)

Questions 4 and 5 especially showed the difficulty of coordinating hours and minutes. To answer Question 4 correctly, the child had to coordinate hours and minutes and notice that the duration was less than 1 hour. As illustrated in Table 4, the percentages of students giving the correct answer were low in Grades 2 and 3 (21% and 24%), and a little higher in Grades 4 and 5 (52% and 40%).

In Table 5, it can be noted that half or more of the students in Grades 2–5 (76%, 62% 48%, and 54%) gave an answer of 1 or more hours to Question 4. The answer of 1 hour 25 minutes, given by indiscriminately adding the minutes, decreased slightly from 24% in second grade to 14% in fifth grade, but the answer of 1 hour 5 minutes, given by indiscriminately subtracting the smaller number from the larger number increased from 3% in second grade to 34% in fifth grade.

Question 5 (6:40–9:15)

The purpose of this question was to find out whether the child could not only coordinate hours and minutes but also recognize the 40 minutes after 6:00 as 20 minutes before 7:00. The percentages in Table 4 show that Question 5 was the most difficult of all six questions. Only 17%, 10%, 30%, and 31%, respectively, answered correctly in Grades 2–5.

The most frequently given incorrect answer to Question 5 was 3 hours 55 minutes, according to Table 5, obtained by dealing with the hours first (from 6:00 to 9:00 is 3 hours) and mechanically adding the minutes. Other students simply subtracted the smaller number of minutes from the larger number of minutes (40 – 15 = 25 or 40 – 15 = 35). The latter, 40 – 15 = 35, is a common error found among students whose mental arithmetic is poor.

Question 6 (by 4:00)

This question was different from the other five in that the child had to think back to know when to get started to arrive in Atlanta by 4:00. This question was intended

to be relatively easy, with only one end of the interval involving nonzero minutes. As can be seen in Table 4, the percentages giving the correct answer increased steadily from 28% in second grade to 41%, 52%, and 54%, respectively, in the subsequent grades. These percentages were similar to those for Question 2, in which only one end of the interval involved nonzero minutes. It was easy for most children to think back from 4:00 to 2:00, but hard to decide what to do with the 20 minutes. The most frequently given incorrect answers were 2:00, 2:20, 2:40, and 1:20. We realized, in retrospect, that it was a mistake to include only one question of this kind because analysis is very difficult when there is only one question requiring thinking back.

When a child remained silent for a long time, a pencil and picture of clocks without hands were offered. Almost all children declined these offers, saying that the tools would not help. Among the negligible few who accepted this offer, not a single child was helped by the tools. The two who accepted the offer of a pencil used an "algorithm" similar to the one in Figure 6b. The child who used this "algorithm" clearly knew that there are 60 minutes in an hour, but this isolated bit of knowledge did not help him. The three who accepted the offer of a picture of clocks tried to draw the hands but were unsuccessful. (A digital clock was not offered because the questions the children read had numerals that looked exactly like those on a digital clock.)

Finally, a frequently observed problem was children's poor mental computation. For example, a surprising number of children made errors such as 40 – 15 = 35. The interviews were conducted orally, and the children did not seem to notice such errors.

DISCUSSION

The major finding of the present study is that the difficulty of elapsed time is due mainly to children's inability to coordinate hierarchical units. In this study, the higher order units involved hours, and the lower order units involved minutes. When a question concerned only whole hours, as in Question 1, the percentages giving the correct answer were high (69%, 93%, 97%, and 97%, respectively, in Grades 2–5). However, when a question involved 30 minutes, as in Question 2, the percentages giving the correct answer decreased dramatically to 28%, 45%, 61%, and 60%, respectively, in Grades 2–5. These decreases were statistically significant ($p < .001$) at all grade levels. The most frequently occurring incorrect answer to Question 2 (8:30–11:00) was 3 hours 30 minutes, obtained by counting 3 hours from 8:00 to 11:00 and adding 30 minutes. The large proportion of students who gave this incorrect answer to such an easy question at all the grade levels 2–5 (34%, 38%, 33%, and 31%, respectively) was surprising.

Generally speaking, children's inability to coordinate hours and minutes was demonstrated in two ways. One was their separate treatment of hours and minutes, which was described previously. The other was their treatment of minutes. They sometimes added the minutes when addition made no logical sense, and sometimes subtracted one number from the other when subtraction made no sense. In

Question 4, for example, neither 15 + 10 minutes nor 15 – 10 minutes made sense after saying that more than an hour elapsed between 8:15 and 9:10. Likewise in Question 5, neither 40 + 15 minutes nor 40 – 15 minutes made sense. The only exception to this was Question 3, for which 30 – 15 minutes made logical sense but 15 + 30 minutes did not.

A general point that can be made from Table 5 is that the proportion of children who indiscriminately added the minutes remained relatively constant from Grade 2 to Grade 5, but the proportion using subtraction increased across those grades. As children progress through school, they may come to associate elapsed time with a "difference," which is usually computed by using subtraction. The fifth graders did exceptionally well on Question 3 (69% according to Table 4) and very poorly on Question 4 (40%). These percentages require an explanation. Question 3 was formulated to determine how children dealt with 15 minutes and multiples of 15 minutes. However, it turned out to be very easy for fourth and fifth graders for two reasons: (a) The correct answer could be obtained by dealing with hours and minutes separately, and (b) 15 and 30 are "friendly numbers" that easily combined with older students' growing intuition to use subtraction.

Why did the fifth graders do so poorly (40%) on Question 4 (8:15–9:10)? A possible explanation is that the fifth graders, who had demonstrated a strong tendency (69%) to subtract 15 from 30 in Question 3, jumped at the possibility of subtracting 10 from 15. According to Table 5, 34% of the fifth graders calculated 15–10. If these fifth graders had thought more carefully about the beginning and end points of the interval, they may have noticed that the duration was less than 1 hour.

On the positive side, a major result from this study was that 17% of the second graders invented a sequential way of coordinating hours and minutes in response to Question 5 (6:40 to 9:15)—the most difficult of the six questions. These second graders were not taught how to determine elapsed time because their teachers were convinced of the futility of such instruction. The second graders' invention can thus be said to be truly a construction from within. As can be seen in Figure 7a, these second graders said that there are 20 minutes from 6:40 to 7:00, 2 hours from 7:00 to 9:00, and 15 minutes after 9:00, making a total of 2 hours and 35 minutes.

According to Table 4, similar percentages of second graders also answered Questions 2, 3, 4, and 6 correctly without any instruction—28%, 21%, 21%, and 28%, respectively. Those who answered Question 5 correctly were generally the same children who answered Questions 2, 3, 4, and 6 correctly.

These inventions by approximately 20% of the second graders highlight the role of reflective (constructive) abstraction in the coordination of hours and minutes. As stated earlier, all logico-mathematical relationships are mental relationships that children construct from within. Reflective abstraction explains the construction and coordination of hierarchical units with respect not only to time but also to 10s and 1s (Chandler & Kamii, 2009; Steffe, & Cobb, 1988), multiplicative thinking (Clark & Kamii, 1996; Steffe, 1992), fractions (Steffe & Olive, 2010), and spatial units of units (Reynolds & Wheatley, 1996; Wheatley & Reynolds, 1996).

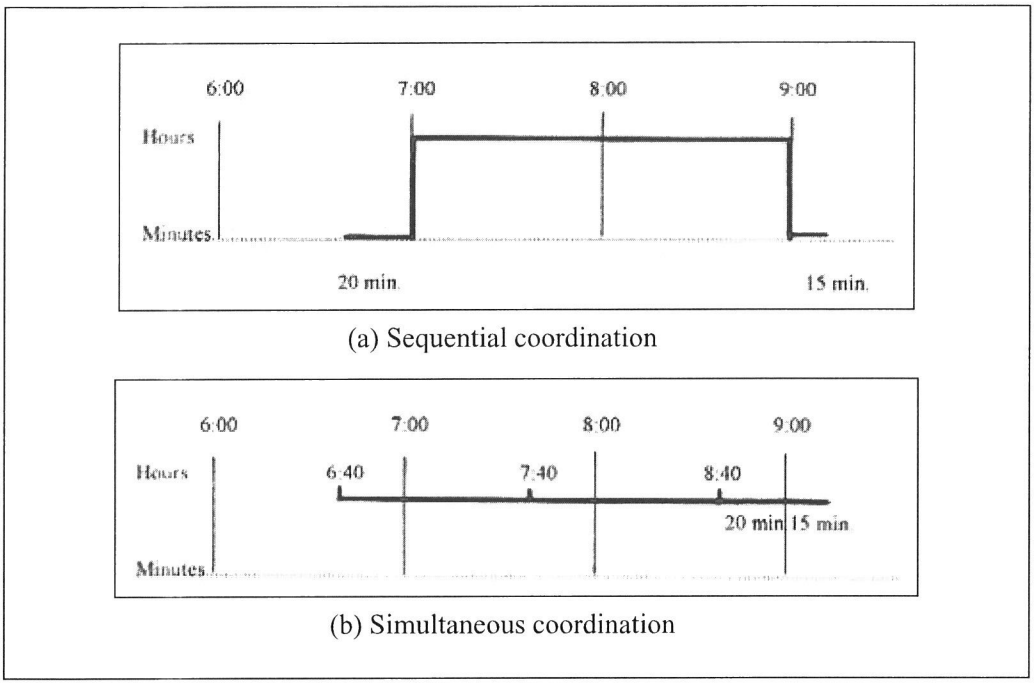

Figure 7. Two ways of coordinating hours and minutes.

In contrast with the sequential way of coordinating hours and minutes, a second way we observed was the simultaneous coordination illustrated in Figure 7b. In this coordination, the student said "7:40" and "8:40" as s/he counted on two fingers, and went on to say "20 minutes and 15 minutes is 35 minutes." This simultaneous counting of hours and minutes appeared for the first time in third grade, but only 39% of the fourth graders and 18% of the fifth graders used this simultaneous method at least once during the interview. One of the third-grade teachers remarked that she never tried to teach this simultaneous method and added that those who doggedly practiced this method were the cognitively more advanced and more creative students. Generally speaking, most of the older students seemed to prefer sequential coordination, but this impression must be verified systematically by future research.

Educational Implications

Two educational implications can be drawn from our study. These differ from the conceptualization of time conveyed in the recently published *Common Core State Standards* (CCSS) in the United States (Common Core State Standards Initiative, 2010). CCSS requires children to "tell and write time in hours and half-hours using analog and digital clocks" (p. 16) in first grade, to tell time to the nearest 5 minutes in second grade (p. 20), and to tell time to the nearest minute in third grade (p. 24). In third grade, CCSS also requires students to "solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram" (p. 24). In fourth grade, children are required

to "use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money" (p. 31). Temporal relationships thus quickly become part of mathematics in third and fourth grades, without first becoming logico-mathematized qualitatively. In fifth grade, time is no longer mentioned, presumably because it has been mastered.

The logico-mathematical nature of time is thus completely overlooked in CCSS. CCSS does not account for the fact that temporal relationships must first be constructed (created) qualitatively from within, by reflective (constructive) abstraction. It also does not reflect an awareness that a major problem—even as late as fifth grade—is the coordination of hierarchical units (hours and minutes). Furthermore, CCSS refers to representations (such as the hours and minutes on clocks and number-line diagrams) but does not take into account that when children use these representations, they must have concepts (mental relationships) to represent.

The educational implications we draw from our study center around children's construction of logico-mathematical relationships, by reflective (constructive) abstraction. Another way of saying *by reflective* (*constructive*) *abstraction* is to say *by thinking* or *by doing one's own thinking*. This means that we must encourage children (a) to think about time in many situations throughout the day, and (b) to do their own thinking when we try to teach elapsed time more specifically.

Encouraging children to think about time in many situations throughout the day. In school, children are often given directives such as "It is time to (go to lunch)" and "You have 5 minutes (to finish what you are doing)." Children who are thus never encouraged to think about durations cannot be expected to become able to reason about it. It therefore seems desirable to conduct research to test the hypothesis that encouraging them to think about durations throughout the day results in higher percentages of correct answers than those presented in Table 4. To encourage them to think about durations, it seems desirable to ask questions such as the following and to encourage debate among students:

- Do we have enough time to read a story before lunch? (If it is 10:45 now, and the class must leave for lunch at 11:17, this question may stimulate a fruitful discussion.)
- What time does the bus come? How many minutes do we need to get ready for it?
- If each person gets 10 minutes to give a book report, how much time will the class need for all the reports?

Encouraging children to do their own thinking when we try to teach elapsed time. The use of a time line is recommended by the authors of CCSS (Common Core State Standards Initiative, p. 24) as well as of many books and articles. However, authors differ in the advice they give to teachers, and it seems desirable to conduct research to determine which approach produces higher percentages of correct answers than those reported in Table 4.

Van de Walle (2007), for example, recommends children's use of an empty time

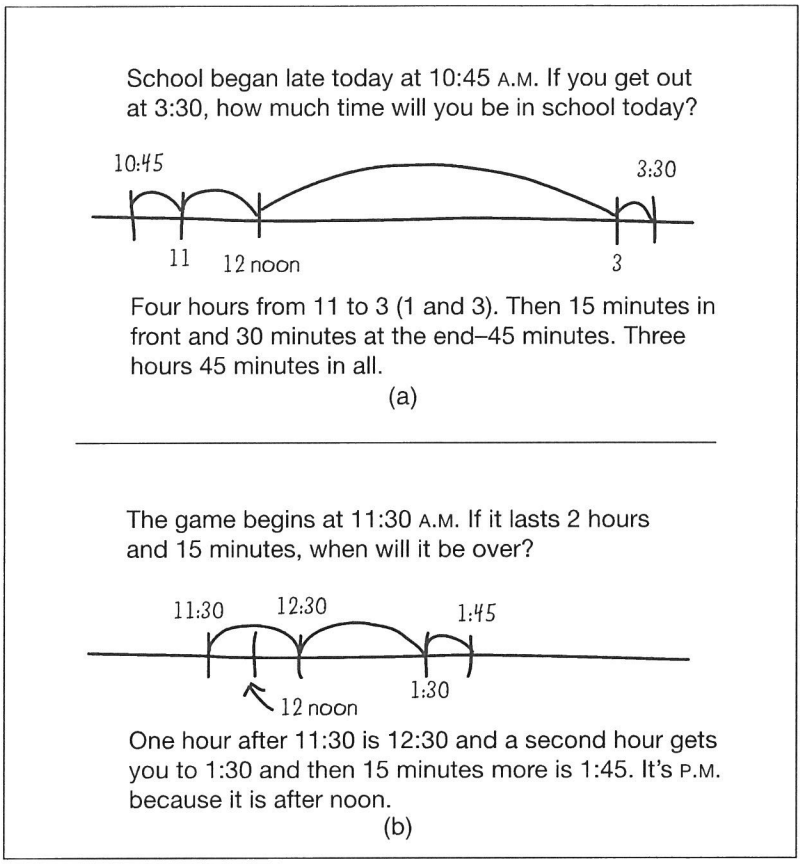

Figure 8. Two ways of using an empty time line from *Elementary and Middle School Mathematics,* 6th ed., by John Van de Walle (2007), p. 392. Copyright 2007 by Pearson Education, Inc.

line that permits them to use it as they wish. He presents the two examples shown in Figure 8 to illustrate two different ways in which an empty time line was used. (The answer of 3 hours 45 minutes in Figure 8a should have been 4 hours 45 minutes.)

By contrast, Moone and de Groot (2005) make many specific recommendations such as drawing large jumps for hours and small jumps for minutes so that time lines will serve as scaffolds toward the conventional algorithm involving regrouping (see Figure 6a). We believe that these specific instructions prevent children from doing their own thinking. In fact, we believe that the algorithm of subtraction may interfere with children's additive way of thinking. As can be seen In Figures 7a and 7b, as well as in Figures 8a and 8b, children think additively. We think that children do not become logical thinkers by being told what to draw and what to write, but this is a hypothesis yet to be tested by pedagogical research.

More research is necessary to answer the specific questions raised by our study. We nevertheless hope that our study will be helpful to teachers who have had no assistance from the research literature about why elapsed time is so difficult to teach.

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A Brief Report

The Older of Two Trees: Young Children's Development of Operational Time

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Piaget (1971) made a distinction between intuitive (preoperational) time and operational (logico-mathematical) time. According to Piaget, operational time develops around 7–8 years of age and is characterized by children's ability to deduce, for example, that if A was born before B, A will always be older than B. When time is still intuitive, children base their judgments of age on what is observable (e.g., people's height). With the aid of 11 pictures of an apple tree and a pear tree taken on 6 consecutive birthdays, 184 children in grades K–5 were individually asked, at a specific time, if two trees were the same age or if one was older than the other. Operational time was demonstrated by 79% of these children by grade 3.

Key words: Cognitive development; Conceptual knowledge; Constructivism; Curriculum; Early childhood, K–4; Epistemology; Piaget

Piaget (1946/1971) made a distinction between intuitive, preoperational time and operational time. The characteristic of operational time is that it is a deductive, logico-mathematical system. By contrast, intuitive, preoperational judgments are based on what is observable. An example of intuitive time can be seen in the following interview Piaget conducted with a 4-year-old.

> ROM . . . has a small sister called Erica: How old is she? *Don't know*. Is she a baby? *No, she can walk*. Who is the older of you two? *Me*. Why? *Because I'm the bigger one*. Who will be older when she starts going to school? *Don't know*. When you are grown up, will one of you be older than the other? *Yes*. Which one? *Don't know*. (p. 221)

ROM based her judgments of age on size, which was observable. She could tell that she was older than her sister because she was bigger, but she could not deduce logico-mathematically that she would always be older than Erica. She did not know who would be older when she went to school or became a grownup because she did not know who would be bigger.

Around the age of 7 or 8, according to Piaget (1946/1971), children "group" the temporal relationships they constructed before, such as the order of events and duration, and construct operational time. When time becomes operational, children become able to deduce logico-mathematically that the age difference between two people always remains the same.

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A search for more recent research on the development of operational, logico-mathematical time from intuitive time yielded almost no research reports. The references found related to time addressed such topics as the conservation of time (Murray, 1969); whether or not "speed and time concepts" emerge synchronously (Weinreb & Brainerd, 1975); children's ability to judge durations when "interfering cues" are introduced (Levin, 1982); the development and differentiation of duration, speed, and distance (Siegler & Richards, 1979); and topics related to conventional time such as weeks and months (Friedman, 1982). The only references directly related to operational time dealt with the measurement of time (Kamii & Long, 2003; Long & Kamii, 2001).

One of the simplest and most convincing experiments conducted by Piaget (1946/1971) concerning the development of operational time from intuitive time deals with the age differences between an apple tree and a pear tree. However, he presented only three examples of level III responses to the apple tree and pear tree task (an operational level illustrated with only three children who were 7 years 2 months, 7 years 9 months, and 9 years old). Because Piaget did not give age norms for children's construction of operational time, we decided to replicate this experiment systematically. Children are now required to tell time starting in grade 1, but clocks can make sense to them only if they have constructed operational time.

METHOD

The participants were a sample of 184 children in grades K–5 from a much larger population of students in one school. The school was in an upper-middle-class, suburban neighborhood near a large city in the South. The racial composition of the school was 69% Caucasian, 18% African American, 9% Asian, and 4% Hispanic. The interviews took place in January through March.

Materials

Eleven cards measuring 10 cm × 15 cm were used. Six of them had drawings of an apple tree, and five had drawings of a pear tree. The cards for the apple tree are designated A_1, A_2, A_3, A_4, A_5, and A_6 in Figure 1a, and those for the pear tree are designated P_1, P_2, P_3, P_4, and P_5 in Figure 1b. Their dimensions (see Table 1) were the same as those described by Piaget (1971, p. 238). Note that the pear tree (P_1) at the beginning of the (pear) sequence was smaller than the apple tree (A_2) at that time, but the pear tree (P_5) at the end of the sequence was larger than the apple tree (A_6). Note also that P_3 and A_4 had exactly the same dimensions and number of fruit. Two brown envelopes measuring 9 in × 12 in were also used.

Procedure

For the most part, the procedure was the same as Piaget's. In individual interviews, each child was told, when A_1 was placed on the table in front of him or her, "Let's say that this is the picture I took of an apple tree when I planted it, and it was

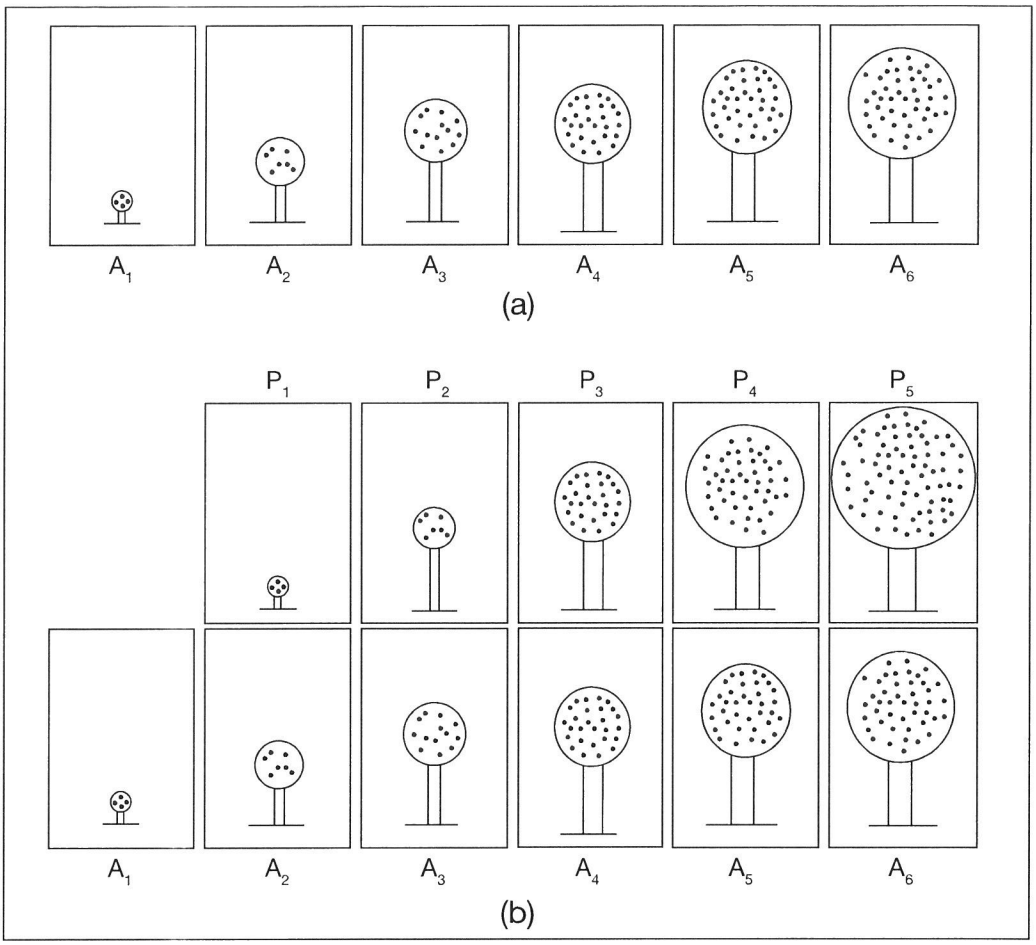

Figure 1. The arrangement of cards (a) for the apple trees and (b) for both trees.

Table 1
Characteristics of Each Card Showing an Apple or Pear Tree

Card	Height of tree	Diameter of circle	Number of fruit
A_1	1.5 cm	1.3 cm	4 (red circles)
A_2	4.5	3	7
A_3	6	4	13
A_4	9	6	27
A_5	10.5	7	36
A_6	12	8	44
P_1	1.5	1.3	4 (yellow circles)
P_2	4	2.8	7
P_3	9	6	27
P_4	13	8.7	46
P_5	15	9.9	74

1 year old." As the interviewer then placed A_2 next to A_1 (see Figure 1a), she said, "I took a picture of the apple tree every year on its birthday, and this is the one I took when it became 2 years old." As she then placed A_3, A_4, A_5, and A_6, one by one, she said to the child, "On its next birthday, I took this picture, and the tree had become bigger."

When all the cards for the apple tree were thus aligned, P_1 was brought out and placed above A_2 (see Figure 1b). The child was told, "When the apple tree was 2 years old, I planted a pear tree that was 1 year old. And this is the picture I took of the pear tree on its first birthday." The interviewer went on to place P_2 next to P_1 (and above A_3) saying, "The pear tree and apple tree had birthdays on the same day every year, and I took these two pictures (P_2 and A_3) on the same day." All the other pictures of the pear tree were then placed, one by one, as shown in Figure 1b, and the child was told each time, "On the pear tree's next birthday, I took these two pictures (P_3 and A_4), . . . and these two pictures (P_4 and A_5), . . . and these two pictures (P_5 and A_6)."

Piaget's procedure was changed at this point, and the interviewer hid the first seven cards (P_1, P_2, P_3, A_1, A_2, A_3, and A_4) with the two brown envelopes (Figure 2a) so that the child would not be able to count the cards. With only P_4, P_5, A_5, and A_6 visible, the interviewer asked, "When I took these two pictures (pointing to P_4 and A_5), was this tree (P_4) as old as this tree (A_5), or was this one (P_4) older, or was this one (A_5) older?" The child's response was recorded, and he or she was asked, "How do you know (whatever the child had said)?" Note that P_4 was bigger than A_5, but A_5 was older.

Children in grades K–1 who answered that P_4 was older than A_5 because it (P_4) was larger were asked additional questions to determine whether they would change their minds. (Those in grades 2–5 were not asked the additional questions, because the questions were believed to be too easy for them. In retrospect, we regret having made this decision.) In the first of these additional questions, the envelope hiding the first three cards (P_1, A_1, and A_2 , see Figure 2b) was removed, and the child was asked, "Does it make a difference if I let you see these (and why)?"If the child did not change his or her mind and still thought that P_4 was older than A_5, the second envelope was removed so that all 11 cards could be seen (Figure 1b). The question then put to the child was "Does it make a difference if I let you see all the cards (and why)?"

If the child still thought that P_4 was older than A_5, he or she was asked, "How old do you think this tree (P_4) was when I took this picture? Would it help to count the cards?" and "How old do you think this tree (A_5) was when I took this picture? Would it help to count the cards?" The child's responses were recorded, and he or she was asked, "Do you still think this tree (P_4) was older than this one (A_5) when I took these two pictures (P_4 and A_5)?"

RESULTS

The first row of Table 2 shows that the percentage of children claiming that A_5 was older than P_4 increased steadily from 6% in kindergarten to 94% in grade 5.

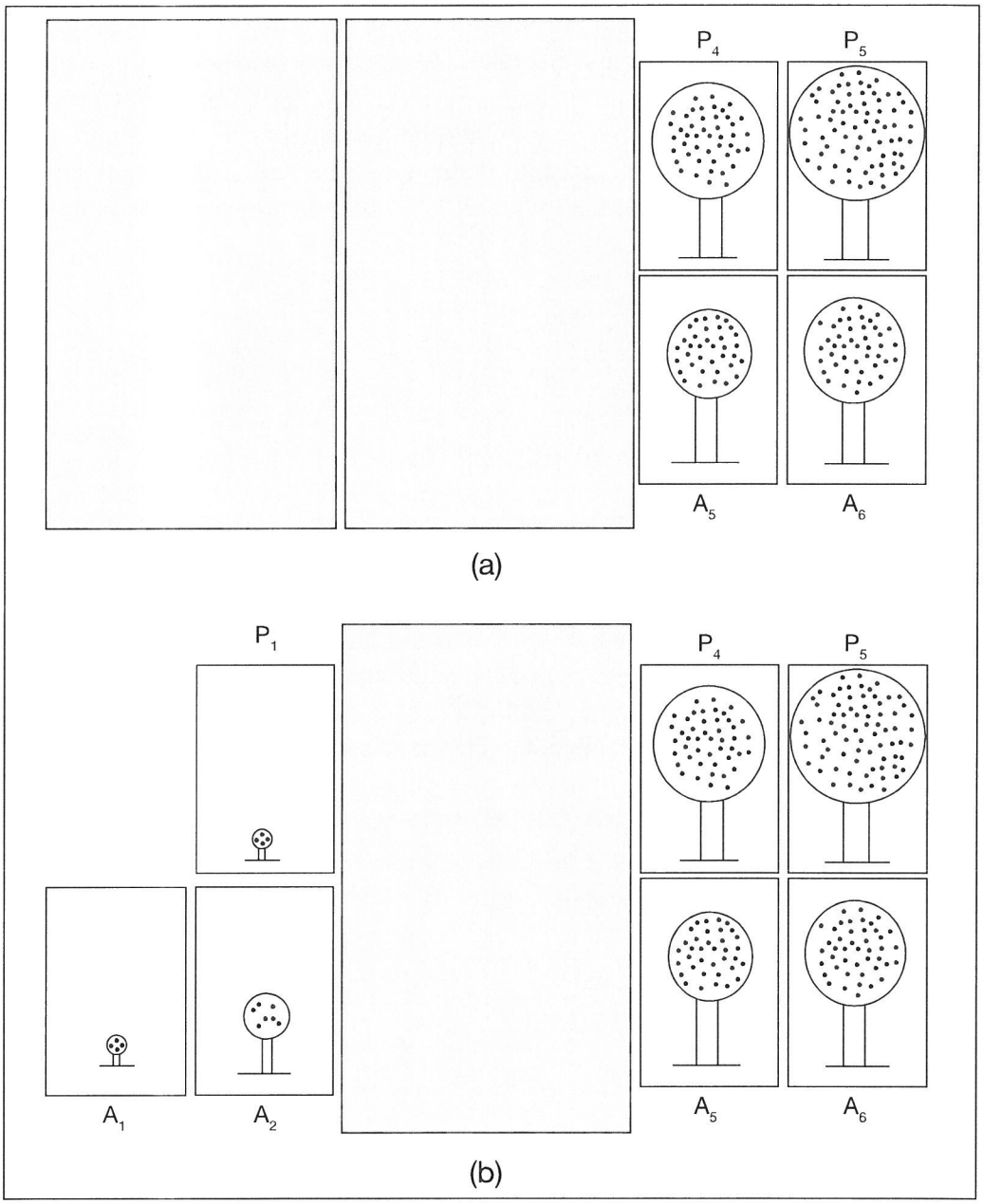

Figure 2. Cards the child could see (a) when four cards were visible and (b) when seven cards were visible.

Conversely, as can be seen in the second row, the percentage of children who said that P_4 was older decreased from 94% in kindergarten to 3% in grade 5. As indicated in the last row of Table 2, one or two children at almost every grade level said that the two trees were the same age and explained this judgment by saying "because they had the same birthdays."

In Table 2, the numbers in parentheses indicate the percentages of children explaining why they thought P_4 was older than A_5. The third row of this table indicates that almost all the children who thought P_4 was older said it (P_4) was older

Table 2
Judgments Made by Children in Grades K–5 (in Percent)

	Kdg. $n = 31$	Gr. 1 $n = 27$	Gr. 2 $n = 29$	Gr. 3 $n = 29$	Gr. 4 $n = 33$	Gr. 5 $n = 35$
A_5 is older	6	24	55	79	82	94
P_4 is older	94	72	38	21	15	3
(P_4 is bigger)	(77)	(50)	(21)	(21)	(6)	(3)
(P_4 has more fruit or P_4 has more fruit and is bigger)	(6)	(15)	(17)	(0)	(9)	(0)
The same age	0	4	7	0	3	3

because it (P_4) was larger. A few children (ranging from 0% to 17%) explained that P_4 had more fruit or that P_4 had more fruit and was bigger. Some explanations by children in grades K–1 did not explain anything (e.g., "Because it was an apple tree," and "Because you planted the pear tree right before the apple tree's birthday").

As noted previously, the children in kindergarten and first grade were given additional questions when they incorrectly stated that P_4 was older than A_5. One of the envelopes was removed, and the children were asked if it made a difference if they could see seven cards (P_1, P_4, P_5, A_1, A_2, A_5, and A_6 in Figure 2b). The first row of Table 3 indicates that being allowed to see that P_1 was planted when the apple tree was 2 years old made little difference to the children. Only one child in each of grades K–1 changed his or her mind.

If seeing 7 cards did not enable children to change their minds, the second envelope was removed so that all 11 of the cards could be seen. The second row of Table 3 shows that this change again made little difference. Only one child in each of grades K–1 changed his or her mind and gave the correct, operational answer.

Finally, the children who still thought that P_4 was older than A_5 were asked how old each tree was and whether it might help to count the cards. The third row of Table 3 shows that 25% of the children in grade K and 44% of the children in grade 1 counted the cards. (All children who counted the cards counted them correctly.) However, only 19% and 37% of the children in grades K and 1, respectively, who had stated that P_4 was older than A_5, changed their minds and explained that if the pear tree was 4 years old and the apple tree was 5 years old, the apple tree had to be older. Two children in each of grades K and 1 maintained that the pear tree was 4 years old, and the apple tree was 5 years old, but the pear tree was older!

The incorrect ages of each tree given by the children in grades K–1 are listed in the bottom half of Table 3. Although it was suggested to them that they might count the cards, many children counted the fruit (and said incorrectly, for example, that

Table 3
Reactions of Children in Grades K–1 When More Cards Were Shown[a]

	Kindergarten	Grade 1
	$n = 31$	$n = 27$
When 7 cards were shown	1 (3%)	1 (4%)
Changed judgment to A_5 is older		
When all 11 of the cards were shown	1 (3%)	1 (4%)
Changed judgment to A5 is older, without counting the cards		
Counted the cards correctly	8 (25%)	12 (44%)
Changed judgments to A_5 is older	6 (19%)	10 (37%)
Maintained that P_4 was older	2 (6%)	2 (7%)

Counted cards or fruit or guessed/invented numbers

Age of pear tree	Age of apple tree
30	12 and 10[b]
15	6
14	10
15	8 and 8
9	8
7	6, 5, 4, and 3
5	4
4	3

[a] Percentages are based on the total number of participants at each grade level.
[b] One child said that the pear tree was 30 years old, and the apple tree was 12 years old. Another child said that the pear tree was 30 years old, and the apple tree was 10 years old.

the pear tree was 30 years old, and that the apple tree was 12 years old). These children seemed not to think that they could know each tree's age by counting the cards.

DISCUSSION

The task used in the present study should have been easy because P_1 was placed above A_2, with an empty space above A_1, and the child was told, "When the apple tree was 2 years old, I decided to plant a pear tree that was 1 year old." In addition to this verbal information about which tree was planted first, the child received the spatial information that P_1 did not correspond spatially to A_1. Furthermore, the child was told that each picture was taken on each tree's birthday; this information about birthdays also should have helped the child think about operational time. In spite of all these "hints," most of the children in grades K–1 said that P_4 was older than A_5 because P_4 was bigger.

As Piaget contended, when children have constructed operational time, they can think about two sequences within the same framework. They thus become able to deduce that if A_2 is older than P_1, the age difference between A_5 and P_4 has to be the same as that between A_2 and P_1.

If we take the Genevan criterion of 75% giving the correct answer (Piaget & Inhelder, 1941/1974), we must conclude that operational time was demonstrated in grade 3, when the children were 8 to 9 years old. The present study shows that children construct operational time a year later than the 7 to 8 years of age indicated by Piaget. To be able to make curriculum recommendations, however, we need to replicate the present study with different populations. The present study was also limited to the qualitative quantification of time involving only three categories ("the same age," "older," and "younger"). More research is therefore necessary about the numerical quantification of time before recommendations can be made about instruction.

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Full Length Research Paper

Play, unity and symbols: Parallels in the works of Froebel and Jung

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Fredrich Froebel is recognized as the father of kindergarten (Wolfe, 2002), but is it possible that Froebel had a significant influence in the field of analytical psychology? The ideas of Carl Jung, who pioneered the field of analytical psychology, bear striking similarities to Froebel's ideas about play, unity and the use of symbols. The circumstances of their lives offer possible explanations for these similarities. Froebel and Jung were sons of ministers and both were criticized by traditional religious leaders. While Jung was born in Switzerland, Froebel was born in Thuringia which was a German Principality. Froebel did live in Switzerland for a time before being driven out by religious leaders of the Catholic faith. However, these simple coincidences could not possibly explain the similarities in their work. Froebel died in 1852, and Jung was not born until 1875. There is no possibility that these men could have ever conversed, but it can be argued that Froebel had a very important impact on Jung's life and beliefs about play, unity and the use of symbols. It is probable that Jung attended a Froebelian kindergarten. By 1872, kindergarten had become mandatory throughout Switzerland, and Froebel's method was the required curriculum (Stein, 1997). Because Jung was born in Switzerland in 1875, it is reasonable to assume that he would have been educated in the method of Froebel. This early influence could explain the remarkable parallels in their most fundamental ideas. This paper describes the parallels in the works of Froebel and Jung with regard to their ideas about play, unity and the use of symbols.

Key words: Play, kindergarten, unity, symbols.

IDEAS ABOUT PLAY

There are three parallels that can be drawn between Froebel and Jung with regard to play. These include; (1) role of play in development, (2) play as a spiritual expression, and (3) play as a form of artful expression. Each parallel or connection will be described.

Role of play in development

Froebel and Jung both believed that play was connected to development. Froebel suggested, "play is the highest phase of child development - of human development at this period; for it is a self-active representation of the inner representation of the inner from inner necessity and impulse" (Froebel, 1888). Jung associated play and development with regard to the drive toward activity.

According to Jung, "this urge (during development) starts functioning when other urges are satisfied; indeed, it is perhaps only called into being after this has occurred. Under this heading would come the urge to travel, love of change, restlessness and the play instinct" (Jung, 1960).

Play as spiritual expression: Another parallel related to play involves spiritual expression. Froebel believed that "play is the purest, most spiritual activity of man at this stage and at the same time, typical of human life as a whole - of the inner hidden natural life in man and all things" (Froebel, 1888). He also considered "the first impressions of the soul...come to the child in the first plays of the senses by its own activity..." (Froebel, 1895). Jung originally took a Freudian perspective on play, associating it with sexuality. This is seen in the following quote. "The puppy's playful attempts at copulation begin long before sexual maturity. We have a right to suppose that man is no exception to this rule" (Jung, 1961). Over time, however, this changed. Jung took a more Froebelian attitude that play was an expression of the soul and the re-

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presentation of spiritual activity (Jung, 1961). Still, we believe Froebel went further than Jung in the spiritual nature of play. Froebel implied that play was a spiritual pre-requisite for the work of social justice. He said, "a child that plays thoroughly, with self-active determination, perseveringly until physical fatigue forbids, will surely be a thorough and determined man, capable of self-sacrifice for the promotion of the welfare of himself and others" He also said, "the plays of childhood are the germinal leaves of all later life" (Froebel, 1888).

Play as a form of artful expression: Perhaps their greatest parallel with regard to play has to do with how play is related to art and artful expression. Froebel believed the child "wishes to make something so that his inward desire may also appear externally" (Froebel, 1899). Making something suggested creativity and art. But Froebel was even more explicit in making this connection. He made a connection between play and drawing. He found that "the drawing...is of general, universal and comprehensive importance in the training of the human being. As a complete presentation of his creative power, it renders it possible for man, by the strong impression of pure humanity, to become within himself, and by his own action, a second creator of himself, as well as a creator and outward representer of pure humanity and human nature" (Froebel, 1899). He promoted drawing as both a form of play and an art form. Froebel described, "the rudiments of drawing are therefore invariably and quite completely developed amongst the students through the study and constant practice of the various games, especially those involving construction..." (Froebel, 1891).

Similarly, Jung made found creative activity to be related to play. "Hence it is easy to regard every creative activity whose potentialities remain hidden from the multitude as play. There are, indeed, very few artists who have not been accused of playing" (Jung, 1971). Jung also suggested that "it is worth noting...the play instinct retires into the background in favour of the aesthetic mood..." Finally, Jung tied play with art through the notion of active imagination or fantasy. "It is difficult to say where...play begins - necessarily so, for an unconscious product is the creation of sportive fantasy...out of which play arises (Jung, 1961).

THE THEMES OF UNITY AND WHOLENESS

The themes of unity and of wholeness can be found throughout the writings of both Froebel and Jung (Froebel, 1974; Jung, 1954; Wolfe, 2002). From his study of botany and architecture, Froebel became interested in symmetry and in natural unity. This idea of organic unity "would affect and underline Froebel's educational theories, materials, and methods" (Wolfe, 2002). Early in his career as a teacher, Froebel was captivated by the ideas of Pestalozzi, but he became disenchanted somewhat with Pestalozzian ideas after spending time at the Pestalozzi institute in Yverdon. "Though impressed with Pestalozzi's work, he was concerned about the lack of focus on unity and interdependence" (Wolfe, 2002). Froebel spent much of his later career "searching for a theoretical basis for and an understanding of the concept of unity" (Wolfe, 2002). He felt that all of life rested on the concept of unity, sprang from unity and would return to unity (Froebel, 1889), and he felt that this idea must be expressed through every activity done with children (Wolfe, 2002).

Wholeness is a theme that permeates the work of Carl Jung. For Jung, a person's journey through life should be "a move in the direction of wholeness" (Read et al., 1954). Jung described many aspects of the psyche (Jung et al., 1970). These include the ego, the unconscious and the shadow (Read et al., 1954). Some aspects of the psyche are positive. Some are viewed as negative, but each individual must strive not to eliminate the negative aspects of the personality but to bring them "together in an – admittedly precarious – unity" (Read et al., 1954). Jung's legacy, the discipline of analytical psychology, is a formalized way of getting guidance in bringing all aspects of the psyche into a unified whole.

This theme of wholeness permeates the work of both Froebel and Jung. Each man took the idea into his own particular field of interest. Froebel sought to educate children about the interconnectedness of the world (Wolfe, 2002). Jung sought to educate individuals about the integration of all aspects of the human psyche (Read et al., 1954). The men had different objectives and perhaps different audiences, but they referred to the idea of wholeness in very similar language. In the first paragraph of Froebel's major work, The Education of Man, (Froebel, 1888) he wrote, "in all things there lives and reigns an eternal law...This all-controlling law is necessarily based on an all-pervading, energetic, living, self-conscious and hence eternal unity...This unity is God. All things have come from the Divine unity, from God and have their origin in the Divine unity, in God alone". Froebel's goal was "to bring children closer to God, to this unity" (Wolfe, 2002).

Jung's goal was also to bring people closer to a state of wholeness or of unity (Read et al., 1954; Storr, 1983) and he, too, spoke of unity as God. "This integrating factor...is named the Self; an archetype which not only signifies union between the opposites within the psyche, but is a God-image, or at least cannot be distinguished from one" (Storr, 1983).

THE USE OF SYMBOLS

Froebel and Jung both attempted to represent their ideas about unity through the use of symbols (Jung, 1968; Storr, 1983; Wolfe, 2002). This emphasis on symbols is the second major parallel to be discussed. The use of symbolism is significant both for the similarity in the representations of the concept of unity and also for the em-

phasis on symbols in general in the work of both men.

Froebel's idea of unity was expressed as a sphere (Froebel, 1888; Wolfe, 2002). The sphere can be seen in many of the "gifts" or materials which Froebel used with children. The first gift was a set of soft crocheted balls. In playing with this gift, "children would experience a sense of 'God', unity and connectedness" (Wolfe, 2002). The sphere is seen in later gifts as well. Froebel (1888) saw the sphere not only as a symbol of unity but also as an "outward manifestation of unimpeded force, diffusing itself freely and equally in all directions".

Jung's symbol for unity was the mandala. Mandalas are circular images which can be "drawn, painted, modeled or danced" (Storr, 1983). Visions of mandalas appeared to Jung, and as he drew what he envisioned, he claimed to be able to witness the integration of his psyche (Storr, 1983). Jung went through a time of prolific drawing of mandalas as he contemplated their significance and reported, "I no longer know how many mandalas I drew at this time" (Storr, 1983).

It is certainly interesting that Froebel and Jung chose similarly shaped objects as representations of their ideas of unity, but this is not the only significance of symbols in the work of both men. Each placed a great emphasis on the use of symbols. Froebel noticed that children often took objects and used them in pretend play as completely different objects, and he "felt that the process could be reversed by giving children objects that had certain cosmic truths or realities...Froebel was interested in the symbollic knowledge that the object contained" (Wolfe, 2002). In other words, Froebel observed children using sticks as horses or leaves for dinner plates, and he theorized that universal truths might lie within certain objects themselves. He believed that if the truth existed in the object, the truth might be transmitted to the child through manipulation and observation. This would explain the use of the sphere in Froebel's gifts. If children were given spheres to manipulate they "would begin to understand the underlying unity of life" (Wolfe, 2002). The sphere was not the only shape used to represent universal concepts in Froebel's educational materials. The cube was used to represent the concept of diversity. "It was an object that had many edges, many corners, and many sides" (Wolfe, 2002) and was thus the exact opposite of the sphere. Froebel used the cylinder to represent the "dynamic equilibrium or reconciliation of opposites" (Wolfe, 2002) because it could be stacked like a cube or rolled like a sphere. Jung would refer to this idea of unity existing alongside and within opposites as the "union of the opposites" (Storr, 1983).

While Froebel used symbols to attempt to transmit cosmic truths, Jung spoke of the symbolism of dreams. Dream analysis is an important tool in Jung's analytical psychology (Jung, 1963, 1968). "A key in a lock may be a sexual symbol... (or may be) intended to symbolize...the desire for God" (Jung, 1968). In his book, Man and His Symbols, Jung (1968) outlines both the possible mea-nings of symbols and the importance of symbolism in dreams.

Fredrich Froebel and Carl Jung both saw life as a quest toward wholeness. Jung thought that the human psyche was made up of many parts which must be integrated if the individual wishes to be whole (Storr, 1983). Froebel saw the universe as an interconnected whole and sought to impart this idea to children through the use of instructional materials and methods (Wolfe, 2002). Each man relied heavily on the use of symbols in his work. Froebel used symbols that he supposed might contain essential truths of the universe (Wolfe, 2002), and Jung felt that the symbolism in dreams could be used to help people move along the path to wholeness (Jung, 1963; 1968). Froebel symbolized wholeness, or God, through the use of the sphere (Froebel, 1974; Wolfe, 2002), and Jung drew countless mandalas as a way of representing the Self (Storr, 1983).

IMPLICATIONS FOR EDUCATORS TODAY

What messages do Froebel and Jung offer today's educators? Many educators speak of educating the whole child (Bredekamp and Copple, 1997), but is this the same wholeness of Froebel and Jung? There are remnants of Froebel's influence in today's schools, but these remnants do not really show the commitment to unity that Fredrich Froebel would have intended. For example, children in classrooms all over the world are gathered into circles every day, but teachers might be surprised to know that Froebel, who is credited as the originator of the practice of "circle time", intended this arrangement "to help children gain a sense of unity and interconnectedness" (Wolfe, 2002).

For Jung, the purpose of education was to help children develop their own personalities and to separate from their mothers (Jung, 1954). Parents must deal with their own psychological problems, and schools must "(guide) the child into the larger world" (Jung, 1954) and help children to become independent from their families. Surely this goal is seen in schools as parents are encouraged to leave their reluctant 5 year olds with kindergarten teachers, but crucial aspects of Jung's ideas are neglected. A child's independence is encouraged by having her leave her mother to attend school, but Jung would have educators go much further. To be true to Jung's aim of education, schools cannot merely attend to a child's intellectual and physical needs. The child must be treated as an emotional and spiritual being.

In an age of tougher academic standards and insistence on scientifically proven methods, teachers would do well to heed the voices of Fredrich Froebel and Carl Jung. If it is truly important to educate the whole child, then it is unacceptable to concentrate on isolated skills and purely quantitative methods of assessment. To educate the whole child, teachers must acknowledge all aspects of the child

and realize that "spiritual values and qualities of the soul elude purely intellectual treatment" (Jung, 1954).

Conclusions

Jung would have had the experience of working with Froebel's gifts and occupations which were rich with symbols of wholeness and unity. Froebel's aim of bringing children to recognize the powerful divine unity of God (Wolfe, 2002) could have been a large part of Jung's early education. This early influence could have caused Jung to spend his life searching for wholeness, a wholeness which he called Self (Storr, 1983). If it was, in fact, Froebel's method of kindergarten education that influenced Jung's search for wholeness, then it is altogether reasonable to state that Froebel did have a great impact on the discipline of analytical psychology.

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Sitting Down with Connie Kamii

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Those who attended the ACT conference in Virginia in October, 2003, had the opportunity to hear Dr. Constance Kamii deliver the keynote address on the first day. Dr. Kamii spoke of Piaget's unique contributions to education. Her perspective on Piaget's work is distinctive because of the years she spent in Geneva working with Piaget. Educators worldwide look to Dr. Kamii as a leading expert in the field of constructivist education. I was privileged to sit down recently and ask a few questions about her research and her ideas about the world of education today.

KR: In a constructivist classroom, the teacher bases instruction on the scientific research of Piaget. If a person spends time in a constructivist classroom and a traditional classroom, what differences would be observed? In the students? In the teacher? In the social atmosphere?

CK: In a traditional room you would probably see neatly arranged desks, neatly obedient children, probably lots of worksheets. That keeps kids very neat and quiet and well behaved. In a constructivist classroom you will probably see lots of movement, if not noise, especially when they play games. (The students) will certainly be talking a lot and arguing back and forth. Their opinions will be asked, and the kids will challenge each other. There will be lots of spontaneity and what I like to see, but it's hard to produce, children who are thinking. Thinking takes various shapes, and arguing is one way. You also see children who are deeply involved with trying things out with their hands or some other thing. You can tell when

children have an empty head and an empty expression and when they are really thinking. That's what I like to see, and that's what I often see in a constructivist classroom.

KR: After you completed your doctoral work, you went to Geneva, Switzerland. I happen to know that this was more than a trip to the place of your birth. Could you talk about that?

CK: Why did I go to Geneva? I was in preschool education. This was for compensatory education to help teach low-income children, and we knew that we were looking for a better cognitive foundation than what they usually come to school with and yet in terms of classroom education, I just could not figure out how to conceptualize objectives, so I literally spent a year going through every piece of library material I could find about preschool education methods and also psychologists' research about classification, etc., etc., and I could not come up with objectives for preschool education. I wanted to go beyond the vague objective of cognitive development, and Piaget was not directly useful, but that was the only thing that I could find that gave me some hope of finding something. That is why I started to study Piaget's theory, and then I went to Geneva to hear this guy. I was surprised that I caught his last lecture, and I could understand what he was saying whereas I had been reading his books and they were impossible to understand. That's when I found out that written Piaget is one thing, and spoken Piaget is something else. That's where I made up my mind that I wanted to study under him, so that's how I got there.

KR: How long did you stay?

CK: I stayed for a year, and then three years later I went back for another year, and that was not enough; so I stayed for another year. I ended up going back and forth for 15 years all told.

KR: If you had not made that trip to Geneva, not studied with Piaget, how would your life be different today?

CK: I was at that time very much interested in improving the educability of children of low-income African-American families. I firmly believe in public education and I think that for lower class minority kids education is the hope, and yet I also knew that education was not reaching those children, and so I would probably have stayed in that realm but with the usual fluff

that educators are doing or had been talking about. Those tend to be very specific and isolated, and that is still the battle that I'm fighting now. There are standards now for preschool mathematics, and those consist of specific things like teaching children how to count, how to sort things – the red things, the blue things the circles and the squares-- and manipulating geometric shapes, get in line first, second, in front of, in back of, etc. These are very specific things. That's how preschool math educators think, and that's not cognitive development in my opinion. Cognitive development is much richer, much deeper, much more complicated than these itty-bitty things, one thing after another. That's probably what I would be doing (had I not gone to Geneva to study with Piaget).

KR: Piaget is best known for his conceptualization of four stages of development: sensorimotor, preoperational, concrete operational, and formal operational (Campbell, 1976). What is the most misunderstood aspect of Piaget's work?

CK: I think there is a whole mystique to think of Piaget's theory as a maturationist theory. In other words, when children are seven, concrete operations are believed to kind of flower and unfold, and when they get to be sixteenish, formal operations unfold. I think that's the most misunderstood thing. It is a misinterpretation. Plus, I would say that I don't know many people who even understand conservation. (Conservation refers to "our ability to deduce, through logical reasoning, that the quantity of a collection remains the same when its spatial arrangement and empirical appearance are changed" (Kamii, 2000, p. 6). There are lots of textbooks about Piaget's theory and developmental psychology in general, and when I see a new one, I always go to conservation, and usually it is wrong. Usually the authors don't know about logico-mathematical knowledge or that there is a difference between logico-mathematical knowledge and physical knowledge. They don't even know that, so they cannot possibly understand conservation. (Piaget distinguishes between three types of knowledge. Social knowledge is knowledge that has been created by people. An example of social knowledge is the knowledge that American Independence day is celebrated on July 4th. Physical knowledge is knowledge of the physical attributes of objects. The color and weight of an object are physical knowledge. Logico-mathematical knowledge are the relationships that are formed by individuals in their own minds. Noting that there is a difference between a red ball and a blue ball is an example of logico-mathematical

knowledge. The difference does not lie in the balls. The relationship is formed mentally by the observer (Kamii, 2000).

KR: Schools of education have come under fire recently. What could be done to improve teacher education?

CK: To improve teacher education, I think the best education is to have future teachers in the classroom to begin with and to have them generate questions about certain problems and what to do with certain problems and to start reading and teaching from those questions. I think that what is wrong, at least from what I have seen, is that generally (students of education) are now stuffed with words and theory and so teachers come out thinking that theory is irrelevant and useless. They are going through these theories without relationships to the classroom situations, and so all that means nothing whereas if they generated their own questions and were then sent to theories, education would be much better. On the contrary, future teachers are often told good, useful principles, and they go into public school classrooms and see flatly contradictory, bad practices. That is the reality of teacher education. Schools of education tend to be much more theoretically advanced than the usually awful classroom situations. (Future teachers) have to be very lucky to end up in a constructivist classroom for student teaching. Those things should be improved, but that is much harder to do in reality.

KR: What words of encouragement could you offer educators in our "test happy" environment?

CK: There is just no end in capitulating. If your score gets higher, the principal is going to want higher and higher scores. All that for whom? Not the kids. My recommendation is: Do what's best for the kids.

KR: What is your latest area of research?

CK: I am doing two things. One is baby stuff – the development of logico-mathematical knowledge in physical knowledge activities. I am working with day care teachers in Japan. In playing with objects making an incline with a block and a board, and then imitating the teacher who rolls down a cylinder at age one, two and three and how they improve in this imitation. They make better and better relationships, and these relationships are interrelated. As they make progress in spatial reasoning, they make better

categories, and that is what I am trying to prove. Those categories do not come out of those stupid sorting tasks.

The other thing I am working on is why "length times width" is hard. It is now taught in fourth grade, but I can get you the data to show that it's too hard in eighth grade and ninth grade regular math sections. The only kids who can do these things are the eighth graders and ninth graders in advanced sections. All of this is related to formal operations. Piaget says, for example, if you show squares to do "length times width", that's super easy, and that is how kids are taught now.

If the rectangle has a grid inside and kids are asked what is the area of this rectangle, it is only about 60 percent of seventh graders who can give you the right answer. All they have to do is count those squares, and they can't do it in seventh grade. The question is why can't they do it, and Piaget is the only one who offers an explanation about it. He says that those squares are easy to do multiplication with, but area is not those discrete objects. Discrete objects are easy. Discrete object conservation is easier than continuous quantities, and he says that to understand area, you have to understand why one uni-dimensional continuous quantity times another uni-dimensional continuous quantity results in two dimensional space and to be able to understand how this two uni-dimensional thing results out in a surface you have to be able to understand the infinitely close parallel lines without which you just cannot think about surface area out of two linear measurements. Nobody has seen infinity. Formal operational kids can think about it, and that is why only the advanced kids can understand that stuff. That is what I am working on.

KR: What topics would you like to investigate but have not?

CK: I have an endless amount of things. I am continuing that research that showed that to get children to be fluent in subtraction, you have to get them to be fluent in addition. That is the research that I did in a constructivist school, and now I want to go to a traditional school where the teacher has demanded worksheets and "facts", and I bet we will get the same results even if you insist on memorization. That is my hypothesis. My other things that I would like to do are estimates. Kids cannot estimate, and estimates are very unnatural for kids. That is what I would like to prove. Elapsed time is very hard, teachers have told me, so I want to study that so elapsed time would not be required on tests. Kids have trouble dealing with coins, too. That is the list I have for now. I always have a list.

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STEMMing The Tide: Empowering Youth to Meet Coastal Environmental Challenges

I. **Project Team**
   a. **Project Director:** Roald Hazelhoff, Executive Director of the Southern Environmental Center
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   c. **Project Team Members:**
      i. Dr. Vincent T. Gawronski, Professor of Political Science
      ii. Dr. Kate Hayden, Associate Professor of Chemistry
      iii. Dr. Desireè Melonas, Assistant Professor of Political Science and Program Director of Black Studies
      iv. Dr. Kelly Russell, Associate Professor of Education
   d. **Applicant Overview:**

Africatown is a community within Mobile, Alabama. Africatown spans neighborhoods along the edge of the Mobile River. It was founded by freed and escaped slaves smuggled to Alabama on the Clotilda slave ship. Many descendants still reside in Africatown and now face severe poverty, pollution, and overtly racist policy. Industrial zoning laws in Mobile have surrounded Africatown with tar sand storage tanks, metal processors, chemical refineries, asphalt plants, paper mills, and high-volume truck routes. Over 50% of Africatown is zoned for industry, which many believe has led to increased illness for its residents due to extreme air and soil pollution.[1-6] There is a lack of designated greenspace within Africatown, no easily accessible healthcare clinics, no grocery stores, and one public school: Mobile County Training School (MCTS). According to the University of Wisconsin-Madison, Africatown is the most disadvantaged community in our state.[7] To simultaneously provide resources and support for the revitalization of Africatown while empowering young students to discover a passion for STEMM, we propose creating a combined Social Studies and STEMM curriculum that will be piloted at MCTS. This curriculum will leverage service-learning collaborations between students, schools, nonprofits, and community leaders in Africatown to contextualize and reinforce content learning.

Developing such a curriculum requires a diverse team of subject matter experts who teach from a liberal arts pedagogy. Birmingham-Southern College (BSC) is a private liberal arts college located in Birmingham, Alabama. It cultivates intellectual and personal development through excellence in teaching, scholarship, and community engagement. BSC is well known for is its highly qualified faculty who join BSC due to its unwavering support of evidence-based teaching and intentional cross-discipline collaboration. The BSC team members described below possess the experience and expertise to guarantee the success of this proposed project. Their field research, consulting activities, teaching, and service-learning projects range widely but are mutually reinforcing. Each member has experience working in marginalized communities affected by environmental inequities and is supported by colleagues across Biology, Black Studies, Chemistry, Economics, Education, Political Science, and Urban Environmental Studies.

Roald Hazelhoff is the Executive Director of BSC's Environmental Center (SEC) and will serve as the Project Director for this grant. He has an extensive background in working with schools, churches, and community leaders in marginalized neighborhoods. Under his leadership, the SEC transformed 14 vacant urban lots into community parks (EcoScapes), planted over 10,000 tree saplings at an abandoned strip mine, and transformed an illegal dumping site in Jefferson County into a 466-acre nature preserve. The

Diaspora and to do so in a way that encompasses immersive opportunities to learn about an area's history, culture, and environment, and the relationship between them.

Dr. Kelly Russell is an Associate Professor of Education at BSC. She specializes in STEAM education, and her publications have appeared in *The Journal of Research in Mathematics Education* and *Journal of School Science and Mathematics*. Dr. Russell's role with the team will be to ensure that the curriculum is developmentally appropriate and aligned to state and national learning standards. Dr. Russell has experience designing curriculum and leading professional development for teachers. She has worked with community partners to design workshops for parents of children in Head Start programs to give families strategies that lead to learning success.

A lack of context often causes young students to struggle with STEM in the classroom.[9] Learning formulas and procedures without understanding how that information can be used to solve real problems explains why students often disengage. Teachers can convey context through simulated problems in the laboratory, classroom demonstrations, or discussions on the historical impacts of scientific discoveries. However, ultimately, hands-on learning is the most impactful form of teaching.[10] Incorporating service-learning projects into this curriculum will provide students with localized and meaningful problems to address using the knowledge they gain from the classroom, providing both hands-on practice and context.[11] To help direct service-learning projects, the team members will partner with CHESS (Clean, Healthy, Educated, Safe & Sustainable) and the Alabama Coastal Foundation (ACF).

CHESS is a nonprofit organization established in Africatown in 2017. CHESS aims to add greenspace, address local food desert issues, develop citizen science proficiency among school children and their families, and protect air, soil, and water quality. While CHESS has made strides working within the community and other nonprofits, they lack curricular experience. Partnering with faculty from BSC would allow CHESS to expand its programming into area schools and reach a younger audience.

The Alabama Coastal Foundation (ACF) is a nonprofit organization founded in 1993. It seeks to balance coastal conservation needs with development pressures. ACF offers environmental education programs for elementary (Bay Buddies), middle school (Estuary Corps), and high school (Coastal Alabama Service Learning) students. A partnership with BSC would allow ACF to expand environmental justice programming and reach new audiences. ACF would also host curricular training workshops for MCTS faculty described below. Located less than 6 miles south of Africatown, ACF is accessible for workshop participants and provides ample space/AV support to meet the needs of this project.

While this project aims to create a novel curriculum, our ultimate intent is to enhance Africatown's community resilience by creating an enduring Community of Practice (CoP), comprised of people who come together to work on a common challenge. Experts, professionals, educators, organizations, government officials, involved citizens, and other stakeholders will join in this shared enterprise to address the environmental challenges in and around Africatown. Through consistent mutual engagement and a shared repertoire of practices, concepts, and learner-center teaching, we aim to be equal partners with community members and stakeholders in Africatown.

II. Project Details

a. Project Title:

STEMMING THE TIDE: Empowering Youth to Meet Coastal Environmental Challenges

learning component into our courses at BSC. This will allow undergraduate BSC students to create active learning modules and may even travel with faculty to work directly with Africatown students in their classrooms and community. One of the unique components of this curriculum will be the service-learning projects developed and implemented by students from MCTS in collaboration with faculty and community partners. These groups will have the opportunity to apply for financial support from this grant to implement their described projects. Guidelines, expectations, rubrics, and feedback will be provided throughout the pre-funding and funding process by project team members. We will continue to grow and tweak the curriculum as needed and host summer training workshops for primary teachers.

- **AY2023/2024:** Continue all the above describe activities while expanding to 7th-grade students. Host the first biennial STEMMing the Tide conference in Mobile focusing on coastal environmental justice & climate change.
- **AY2024/2025:** Continue the above-described activities while expanding the curriculum to 6th-grade students and those interested in summer camps and after-school programs. Continue summer training workshops.
- **AY2025/2026:** Continue the program for 6th- through 8th-grade students, pre- and post-assessments, expansion into other interested schools, and summer training workshops. Begin exploring additional funding sources to ensure program growth and sustainability. Host the second biennial STEMMing the Tide conference in Birmingham.

e. Project Description:

Description:

This project aims to create and assess a combined science and social studies curriculum for 6th-to-8th-grade students that embraces best practices in early STEMM education and tie-in principles of environmental justice. The curriculum uses various lenses of both science and social studies. It will be designed to be easily adaptable for after-school and summer camp programs and expansion into high school programs. We aim to build a modular-based curriculum comprised of active-learning lessons on a variety of topics such as:

- Alabama's ecosystems and biodiversity
- History of pollution and pollution policy in Mobile and its impact on Africatown
- Environmental impacts on human and public health
- Climate change and its impact on Alabama coasts
- Risk and hazard mapping of local areas
- Inland watershed impacts on our coastal ecosystems

These lessons could be taught in 30–60-minute sessions over 2-18 weeks, depending on the needs or goals of the adopting institution. Each lesson would come with supplemental activities to enhance learning, recommended adaptations to provide flexibility to the instructor, and specific learning outcomes aligned to Alabama State standards for science and social studies in the 6th -8th-grade curriculum (with long-term aims to expand across the K-12 curriculum). In addition to content lessons, we will develop laboratory guides to lead students on environmental monitoring practices such as

turnover and instability. Moreover, finally, students have unmet basic needs such as safety and food/housing security.[18] These unmet needs compete for students' ability to focus on education. While it is not the scope of this grant to help address all challenges directly, we hope that we will be able to provide a framework through this curriculum that will establish a community of practice that grows as the needs of Africatown evolve.

This project can potentially impact over 800 economically disadvantaged and unserved students over five years and train over 75 current and pre-service educators while helping a struggling school improve its proficiency in science scores. After piloting within the classroom, we aim to expand the project into after-school and summer-camp programs through collaborations with local nonprofits like CHESS and the ACF.

Additionally, incorporating service-learning projects and travel into undergraduate BSC courses will contextualize current environmental justice and public health challenges plaguing our communities for students at BSC. Each year, BSC produces over 30 graduates in pre-health, 13 in political science, and 16 in education who often continue to medical school, public health, nursing, law school, and other graduate programs. In addition, an average of 3-5 BSC graduates go into the Peace Corps or volunteer with Americorps each year. For example, BSC's Distinction in Black Studies program is oriented around the importance of linking scholarly pursuits with community activism and involvement. Black Studies is fundamentally concerned with understanding the array of experiences that constitute life for black people living in the United States and across the globe. We believe that this project will allow Black Studies students to more intimately understand how questions of race intersect with issues of environment, science, education, and policy. Therefore, we intend to build aspects of this project into Black Studies course offerings, particularly into the program's capstone, where BSC students are required to complete a service-learning project centered around questions relating to Black Studies.

The creation of the STEMMing the Tide biennial conference will help shed light not just on the environmental concerns of our coastal ecosystems but will also showcase the efforts of Africatown's residents; providing opportunities for community leaders, industry partners, and educators from across the state to collaborate on potential solutions to the challenges their communities face.

To train teachers at MCTS, we will provide professional development opportunities each summer at ACF in Mobile. Faculty and staff from institutions that would utilize the curriculum in the upcoming academic year would attend these workshops led by the project team and other highly trained professionals. In these workshops, participants will learn the curriculum, active and project-based learning principles, and how to facilitate and assess student service projects while earning CEU credits. Interested participants can then further collaborate with our team to develop or refine existing modules for the following year.

To help foster collaboration and virtual field trips for students, we will construct collaborative learning laboratories that feature modular furniture and interactive whiteboards at MTCS and AFC. These spaces can double as experimental laboratories and will be equipped with materials necessary to conduct basic environmental monitoring experiments. By placing a laboratory at ACF, participants from other institutions or schools in the district beyond MTCS would be able to utilize this space and its equipment for future collaborations.

Description of participants:

- Continue the above while hosting the inaugural meeting of STEMMing the Tide: A Biennial Conference on Coastal Environmental Justice and Climate Change in Mobile, Alabama. This year's meeting will focus on the challenges and history of Africatown.

- In year four, we aim to
  - Continue growing our collaborations and curriculum as described above while continuing to the above-described activities.
- In year five, we aim to
  - Host the 2nd STEMMing the Tide: Biennial Conference on Coastal Environmental Justice and Climate Change in Birmingham, Alabama. This year's meeting will focus on the impact of intentional incorporation of youth in community service as demonstrated by the projects in Africatown and how to boost industry, government, and community collaborations to create healthier communities and schools across the state.
  - Actively Seek funding to continue this work and support future student projects in Africatown while expanding to new communities and schools along the coast.

Anticipated deliverables:

Given the breadth and depth of this project over five years, we anticipate producing several intangible deliverables, which are challenging to measure, and several very tangible deliverables. The intangible deliverables would include establishing a genuine and enduring Community of Practice involving experts, professionals, educators, organizations, government officials, involved citizens, and other stakeholders. Developing relationships will foster further cooperation, collaboration, educational activities, and local-citizen community leadership and activism. There will be measurable and immeasurable value-added benefits. The tangible deliverables will include a novel curriculum containing lesson plans, learning modules, risk/hazard maps, and in-class and field learning activities. Some of the activities may be video recorded for future educational purposes.

We will organize and host conferences, workshops, and community outreach activities and facilitate expert-community contacts. The formal and informal relationships established through this project are expected to generate long-term legacies and working relationships.

By intentionally drawing media attention to this project, we expect several media outlets to cover our activities and draw attention to Africatown's challenges and historic-touristic attractions.

We expect to produce several academic, peer-reviewed articles for disciplinary journals in education, environmental science, disaster research, political science, and/or policy studies. Potential research topics stemming from this project would focus on the interrelationships of environmental justice and education, climate change, citizen science, race and ethnicity, poverty and structural violence, disaster risk reduction, and establishing a Community of Practice. The research would incorporate theories and perspectives from the various disciplines.

A comprehensive final report to be reworked into a co-authored book is expected. We would want to include local Africatown residents as co-authors.

a. Birmingham-Southern College Provost Brad Caskey
b. CHESS
c. ACF
d. Mobile Bay Keepers
e. FIU Extreme Events Institute

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PROJECT DESCRIPTION

Children in the United States receive inequitable access to STEM education. This is particularly true in elementary schools where 17% of students in grades K-3 receive science education of any kind every day of the week (Jones, 2019). In the southern United States, only 24% of schools offer computer science education, and only 20% of teachers report having received any professional development in the last three years (Jones, 2019). According to 2,783 K-5 principals interviewed, only 40% said their school offered at least one opportunity for their students to learn computer science (Gallup, 2020). Most elementary schools that do offer computer science experiences offer them once per week based on the PI's experience working with elementary schools in the Birmingham, Alabama area.

According to statistics provided by Code.org (2021), six studies show that children who study computer science perform better in other subjects, excel at problem-solving, and are 17% more likely to attend college. Computational thinking is "the mental activity for abstracting problems and formulating solutions that can be automated. In an increasingly information-based society, CT is becoming an essential skill for everyone. To ensure that students develop this ability at the K-12 level, it is important to provide teachers with an adequate knowledge about CT and how to incorporate it into their teaching" (Yadav, Mayfield, Zhou, Hambrusch, Korb, 2014). By integrating Computer Science/Computational Thinking (CS/CT) concepts into existing reading, math, science, and social studies curriculum in preK-5 classrooms, students will be exposed to CS/CT in a more consistent manner, reinforcing the material being taught not only in the standalone STEAM type classes but also the corresponding subject matter. It will also show the relationship between CS/CT and reading, math, science, or social studies, which can open career pathway ideas for these students as they continue their studies in middle and high school. The goal of the proposed project is to develop grade-level appropriate curriculum modules for PreK-5 that:

- integrate with existing reading, math, science, and social studies standards;
- are accessible to underserved populations (i.e., students with disabilities and students attending low socioeconomic schools); and
- increase student CS/CT learning in the classroom.

Over the course of the three-year project, 70 modules (10 per grade) will be developed by the PIs with the help of practitioners. All modules will be assessed by an expert on accessibility in the classroom to ensure that all students will be able to participate in the activities. The first 35 modules (5 per grade) will be evaluated in Year 2, refined, and then re-evaluated in Year 3. The other 35 modules (5 per grade) will be evaluated in Year 3. All results will be analyzed and the resulting modules will be posted online to share with the PreK-5 community.

BACKGROUND AND MOTIVATION

In 2019, the state of Alabama passed House Bill 216, which requires all high schools in the state of Alabama to offer a CS course starting 2020-2021, all middle schools starting 2021-2022, and all elementary schools should offer basics of computer science and computational thinking starting 2022-2023 (Alabama House Bill 216, 2019). The PreK-5 school day is inundated with state required material in the subjects of reading, math, science, and social studies leaving little time for the addition of CS/CT topics. Therefore, this project proposes developing modules for the foundational curriculum areas (e.g., reading, math, science, social studies) that integrate CS/CT content, which is a desired strategy identified by the state (Alabama House Bill 216, 2019). Integrating concepts from different disciplines can be very successful and reinforce learning in both subjects. For example, students who were asked to create 3–5-minute videos about neurotransmitters significantly outperformed students who learned in a more

traditional way. These students also reported that they were more confident in their understanding of the subject in future classes (Skorton & Bear, 2018). The idea of integrating CS/CT into other subjects is not novel. Jeannette Wing states the importance of including computational thinking in reading, writing, and arithmetic so that it is an analytical ability every child has (Wing, 2006). Qualls and Sherrell (2010) reiterate this argument by demonstrating the need for computational thinking to be integrated in computer science classes. Herein, lies one of the key issues: what is the difference between CS and CT?

Key Issues

There are three primary issues addressed in this proposed project:

1. Curriculum that covers CS **and** CT;
2. Providing PreK-5 teachers with curriculum that assists in meeting both the state CS/CT standards while meeting other subject-based standards (e.g., reading, math, science, social studies); and
3. Creating curriculum that is accessible to students with disabilities and in schools with in low socioeconomic areas.

Issue #1: Wing (2006) defines CT as follows: "Computational thinking involves solving problems, designing systems, and understanding human behavior, by drawing on the concepts fundamental to computer science. Computational thinking includes a range of mental tools that reflect the breadth of the field of computer science" (Wing, 2006). Armoni (2016) contrasts this definition of CT with a definition of CS: "Computer study and engineering is the systematic study of algorithmic processes that describe and transform information; their theory, analysis, design, efficiency, implementation and application" (Denning, 1989). Armoni (2016) continues to explain that CT is an extraction of CS, it is the problem-solving portion of CS that is relevant to all subjects and explains further that the teaching of CS has been diluted to merely the instruction of coding, but CS is more than coding and CT is more than CS.

CT allows children to build systems of understanding among different subject areas, which can result in increased achievement (Grover et al., 2013; Grover & Pea, 2015). The link between computational thinking and academic success is strongest in the primary/elementary years where students are more likely to be in self-contained classrooms where discrete subjects are more integrated than at the secondary level (Lie et al., 2020). The proposed project hopes to build on this literature by supporting teachers in PreK-5 classrooms intentionally integrate CT into their existing curriculum with CS specific content included in proposed curriculum modules. By incorporating problem solving and the idea of systems in other subjects (e.g., what kind of materials should the pigs use when building a house to keep safe from the big bad wolf?, learning the algorithm behind the math problem), students will be exposed to CT fundamentals. Students can then learn more specific applications of how the solutions work in a CS context (e.g., coding an algorithm, altering an algorithm for addition to work for subtraction – an argument could be made that this is CT, but based on the definition that CS is the systemic study of algorithmic process (Denning, 1989), one could argue that we are studying our addition algorithm and altering it for subtraction).

Issue #2: The existing PreK-5 strategy is to offer one "special" class per week that can potentially involve CS/CT content (i.e., a STEAM class is treated similarly to a music or art class). The PI and Co-PI have observed that some schools in the area who do have computer science as a "special" offer this to students every other week for 40 minutes. This limited exposure may not be effective in teaching the foundational concepts built into the state course of study for CS/CT. Yan et al. (2020) found that the "lone STEM teacher" was a common approach. This approach does not allow students to understand the relationship between CS/CT and reading, math, science, and social studies, nor does it allow students to benefit from CS/CT concepts that may strengthen or reinforce their knowledge in reading, math, science, or social

studies. Qualls and Sherrell (2010) highlight the importance of integrating computational thinking into "all disciplines requiring problem-solving skills." The models of teaching stand alone STEM and a single tech coach for an entire elementary school are not allowing our students to integrate CS/CT ideas into their foundational subjects (reading, math, science, and social studies).

Issue #3: Beyond minimal exposure time, two traditionally underserved groups are continuing to be left out of CS/CT instruction. Many of the tools the PIs have observed being used at elementary schools are physical tools (e.g., Dash (2021), Lego Education (2021)), which are amazing educational tools; however, they are not accessible to students with disabilities (e.g., motor impairments, visual impairments) (Ladner & Stefik, 2017), and they can be expensive, preventing schools in low socioeconomic areas from being able to provide such tools to their students. Block programming languages (e.g., Code.org Lessons (2021), Scratch (2021)) have gained significant popularity in the CS education community, especially within K-12; however, the block programming languages are not accessible to screen readers (Ladner & Israel, 2016), and they rely on the Windows Icon Mouse Pointer (WIMP) metaphor, which requires motor skills to physically move a computer mouse to some degree of specificity in order to place the mouse icon on a particular target. These issues make them inaccessible for students with visual or motor impairments.

Intellectual Merit

Students who participate in modules that are interdisciplinary and include CS are found to perform better on standardized tests, and this is especially true of students whose teachers self-reported confidence in their abilities to integrate CS (Bolkan, 2018). One standardized test used to determine students' competence is the National Assessment of Educational Progress (NAEP). The NAEP is a standardized measure of students' achievement in numerous subject areas including reading, mathematics, science, writing, U.S. history, civics, and geography. The test is congressionally mandated and administered through the National Center for Education Statistics (NCES). The NAEP test is administered every two years to students in 4th and 8th grades. This is the most comprehensive tool used to measure students' progress and achievement. The data for each state are distributed and used to make curricular decisions. In 2019, Alabama below the national NAEP average, demonstrating that students in Alabama need assistance in strengthening their reading, mathematics, science, writing, U.S. history, civics, and geography knowledge (NAEP, 2019).

Digital technologies have been shown to potentially enhance student learning in mathematics, but professional development into how to integrate such tools in the mathematics curriculum is necessary to support teachers' comfort level when teaching with technology (Thrum & Barzel, 2020). If the proposed curriculum demonstrates learning gains in reading, math, science, or social studies in addition to CS/CT, it will provide teachers with a new option for engaging their class with an effective curriculum. The proposed study will also evaluate teachers' self-efficacy in teaching CS/CT content. Professional development in CS (e.g., one day Code.org workshops) has shown to improve teachers' self-efficacy in their attitudes and content knowledge regarding CS (Roberts et al., 2018; Mason & Rich, 2019). Teachers participating in the proposed project (2 per grade) will participate in a three-day workshop. The purpose of the workshop is to present the modules created by the PIs (3 per grade), which the practitioners will critique. The PIs with the practitioners will then create 2 additional modules per grade. The practitioner may already be comfortable with the reading, math, science, or social studies standard, making the CS/CT content more approachable for the teacher, lending to higher self-efficacy gains.

Measuring teacher self-efficacy as it relates to teaching CS/CT content at the beginning of the project versus at the end of the academic year when they have taught the developed modules will demonstrate whether the integration of subjects has benefitted them. Measuring student knowledge of CS/CT content before and after the modules will demonstrate the knowledge gains in PreK-5 students. Student

knowledge gains on the individual modules will be assessed through worksheets or similar activities corresponding to the module. The evaluation and assessment plan section elaborates, describing how the proposed project will measure these outcomes.

Broader Impacts

The proposed work has the potential to positively impact two groups known to be underserved in the field of CS education: students with disabilities and students from low socioeconomic areas. All curriculum modules will be developed utilizing the Universal Design for Learning (UDL) framework as well as with the understanding that cost is a major barrier for some schools.

As of 2019, there are 7.1 million children ages 3-21 who received special education services for a disability under the Individuals with Disabilities Education Act (IDEA), which equates to 14% of public-school students (National Center for Education Statistics, 2020). Alabama had a total of 44,373 students ages 5-11 who received special education services (U.S. Department of Education, 2021). These numbers indicate that most, if not all, classrooms contain students with disabilities. When exposed to new ideas within CS/CT integrated into the core subjects of reading, math, science, or social studies, these students have an alternative way to engage with the core subjects as well as with the digital world. As a starting point to ensure the modules are accessible for all students, the curriculum modules will be developed utilizing guidelines as set forth by the UDL framework, which is comprised of three overarching principles: 1. students should engage in learning in multiple ways, 2. content should be presented in multiple ways, and 3. students should express their understanding in multiple ways (Center for Applied Special Technology, 2021). Ray et al. (2018) found that encouraging student collaboration, utilizing UDL principles, and explicit instruction in teaching CS content led to "increased engagement and motivation for all their learners, but especially for those with disabilities." The self-confidence these students had as learners also increased (Ray et al., 2018). Therefore, the modules will include multiple avenues of learning, including visual, oral, physical, and digital (where appropriate).

While little research has been conducted on "effective pedagogical approaches" regarding teaching CS/CT content to students with disabilities (Ray et al, 2018), better serving students with disabilities is an important aspect of teaching the "All" in "CS for All" (Ladner & Israel, 2016; Ladner & Stefik, 2017) and normalizing CS education accessibility rather than it being treated as an exception (Israel et al., 2019). Providing accessible curriculum modules PreK-5 teachers could easily incorporate into their classrooms immediately will ideally provide a more accessible lesson for *all* students while exposing *all* students to new ideas and ways to think through problems.

In addition to being accessible, the curriculum modules will not require expensive equipment, making them affordable to Title I schools, which only receive $1,102 to $1,466 per formula-eligible student (National Center for Education Statistics, 2021). Birmingham, Alabama consists of many Title I schools, and the proposed project with the Researcher-Practitioner Partnership would provide an excellent opportunity to share CS/CT content as alternatives to more expensive educational tools (e.g., Lego Mindstorms (2021), Dash (2021)).

SUMMARY OF PREVIOUS WORK IN THE PROPOSED AREA

"Computer Science is a liberal art: it's something that everybody should be exposed to and everyone should have a mastery of to some extent" (Jobs, 2011). Birmingham-Southern College (BSC) is a Liberal Arts institution constantly striving to intertwine subjects to provide students with the most well-rounded education possible. For the past two years, BSC has been working to integrate more computer science topics into Education curriculum and has been working to develop a specialized CS Education course for

Education majors that also meets state requirements. The PI and Co-PI have backgrounds connecting technology and education as outlined in the following subsections.

Previous Experience and Prior Research Results: Amber Wagner

In addition to being a former K-12 practitioner, the PI Amber Wagner has made previous contributions in the area of CS Education. Amber Wagner was a CS teacher for grades 7-12 at the Alabama School of Fine Arts, located in Birmingham, Alabama, from 2004 to 2007. There, she taught the state required Computer Applications course as well as introductory programming through AP CS AB. Additionally, she worked with the core teachers to develop strategies they could use to incorporate more technology into their classes.

Amber Wagner has consistently been involved in numerous CS Outreach activities, ranging from teaching summer programs to running after school robotics activities. In 2016, the student organization she mentored at Kennesaw State University was awarded $10,000 from Google igniteCS to teach a summer program to K-12 students at Girls, Inc. Because Girls, Inc. already had a planned summer program, Amber Wagner developed creative approaches to integrating the CS activities into the curriculum already being taught. As a professor, Amber Wagner has mentored several undergraduate research projects in the fields of accessible computing and CS education (Johnston, 2017; Jackson et al., 2017; Paulk & Wagner, 2017; Wang, 2019; Wang & Wagner, 2019).

Her dissertation focused on increasing the accessibility of block programming languages in the creation of Myna (Wagner & Gray, 2015), a Vocal User Interface built to run parallel to the block programming language Scratch (2021), which was supported by NSF grant IIS-1117940 with previous support from a Google Research Award. Myna allows users to control Scratch using voice similarly to how a user would control Scratch with the mouse/keyboard. Users can navigate to command menus and add blocks of code to the text editor by speaking vocal commands associated with the graphical commands on the screen (Wagner et al., 2012). To enable Myna to interface with additional block languages, Myna was built to run parallel to Scratch rather than rely on Scratch's implementation, which has allowed Myna to be expanded to control other block programming languages (e.g., Scratch 2.0 (2021), Lego Mindstorms (2021), and Code.org's Classic Maze (2021)).

The primary results revealed in all of Wagner's previous work point to a need for CS/CT content being more accessible to students with disabilities. During a United Ability (previously United Cerebral Palsy of Greater Birmingham) sponsored summer camp at which Wagner volunteered, she learned in talking to the participants that they had very limited experience with computers and had no prior exposure to CS/CT content. Their primary experience was watching YouTube videos; however, the participants were very good at procedural thought (Wagner & Gray, 2014). The work during that summer camp indicated that utilizing more "unplugged" activities would have higher success than the more computer-focused activities.

Previous Experience and Prior Research Results: Kelly Russell

In addition to teaching at the elementary level, the Co-PI Kelly Russell has a background in research related to improving school-readiness among children in situations of poverty. As the classroom curriculum coordinator for an Early Reading First grant at the University of Alabama at Birmingham, she worked directly with preschool children, their teachers, and their parents to improve students' readiness for kindergarten. The purpose of the grant was to determine the effects of quality materials, teachers' professional development, and parent education on students' success in K-3 classrooms. Kelly Russell helped to develop curriculum modules to enhance language and literacy skills through interaction with

themed studies. These modules were supplied to preschool classrooms in Bessemer, Alabama. Over the course of the grant project, these materials were modeled for teachers. Additionally, monthly meetings were held to introduce preschool children's parents to ways in which they could support students' school readiness with simple practices at home.

Kelly Russell's scholarly work has focused on children's developmental understanding of mathematics. She has studied children's logic surrounding the understanding of temporal relationships. Her dissertation focused on children's pre-numerical quantification of time. What do children need to be able to coordinate mentally in order to demonstrate an adult understanding of time? She has published works in the *Journal of Research in Math Education* and *The Journal of School Science and Mathematics*.

PROPOSED CURRICULUM DEVELOPMENT APPROACH

Starting with the Alabama Digital Literacy and Computer Science Course of Study (Alabama COS, 2018), requirements for each grade in K-5 will be highlighted and then compared to standards in math, reading, science, and social studies to identify applicable areas of integration. The state of Alabama also has a First Class Pre-K (2021) program, which ensures high quality learning occurs in the First Class designated Pre-K programs. In order to prepare students for learning CS/CT in Kindergarten, some preparation should exist in Pre-K; therefore, appropriate CS/CT activities will be identified for Pre-K programs in addition to grades K-5.

Existing Teaching Materials

While curriculum exists for high schools (e.g., Exploring Computer Science (ECS, 2021), The Beauty and Joy of Computing (BJC, 2021), Project Lead the Way (PLTW, 2021), AP CS Principles (APCSP, 2021), AP Computer Science A (APCSA, 2021)), minimal curriculum exists for elementary schools. Within the state of Alabama, A+ College Ready offers a one-day workshop to K-5 teachers where they learn Code.org's CS Fundamentals for Elementary School (Code.org Fundamentals, 2021) adapted to the Alabama Course of Study for CS. A+ College Ready also offers a one-day training follow-up that prepares teachers to integrate the Code.org curriculum into other subjects. Unless teachers participate in the A+ College Ready workshops, which are offered face-to-face and virtual, teachers do not readily have access to the curriculum except through Code.org, which is not specifically tied to the Alabama CS Course of Study, and while some modules may tie in other subjects, the curriculum as a whole is not designed to embed in reading, math, science, and social studies lessons. Work is being done to integrate CS/CT into other subjects (Israel et al., 2017; Luo et al., 2019; Rich et al., 2019; Liu et al., 2020; Luo et al., 2020; Yan et al., 2020), but these are limited to math and/or science.

The primary difference from this proposal and the existing materials is that the proposed project will map the CS/CT curriculum to both an Alabama CS Course of Study standard in addition to the core subject standard (e.g., reading, math, science, or social studies). The expectation will be that the teachers present the module during a core subject lesson tying in the CS/CT component, giving teachers more time and flexibility in the classroom in addition to more opportunities to explain a topic in multiple ways (Center for Applied Special Technology, 2021). A positive side effect of presenting CS/CT content across all four core subjects is that students will see that computing (specifically CT) is relevant to all subjects. Moreover, while the Code.org curriculum contains some unplugged activities, coding is a primary focus, which does not equate to CT as argued by Armoni (2016).

A second and significant difference is that many of the modules presented by Code.org utilize the Code.org programming environment, which, like other block programming languages, is not accessible to students with disabilities (e.g., motor impairments, visual impairments) (Ladner & Israel, 2016; Ladner & Stefik, 2017). The population of students with disabilities (15% of K-12 students (Ladner & Israel, 2016))

is often taught in the general education setting; therefore, all curriculum should be accessible (Ladner & Israel, 2016). Huff, et al. (2021) present issues faced by teachers of the visually impaired in CS and make recommendations to address accessibility, which will be included in the modules resulting from this work. Additionally, while the programming environment is free, it does require students to have access to a personal computing device with Internet access. Not all schools have enough personal computing devices for the entire class to utilize them at once. For example, some classrooms have two computers available for a classroom of 20.

Developing PreK-5 CS/CT Modules

Year I: The first phase of the proposed project is for the PIs to develop approximately 3 modules per grade to use in reading, math, science, or social studies lessons with CS/CT content embedded within the modules. Some of these modules will be "unplugged" and others will utilize programming as it has been shown that "[u]nplugged activities with programming can improve students' self-efficacy and engage a more diverse audience" (Bell, 2021). Undergraduate researchers will assist in this process by collecting the subject area standards for each grade and, working with the PIs, will identify a mapping of connected standards. Existing tools and materials will be researched before creating custom tools and materials. As an example, three ideas for integrating CS/CT standards with other subjects are outlined below.

For example, in first grade math, students are taught to make tens when adding numbers required by math content standard number three: "Apply properties of operations as strategies to add and subtract" (Alabama COS, 2019). One strategy currently taught is to ask to find the number that makes a ten, and students are often presented with an outline as follows in the example of 8 + 5:

8 + _____ = 10
5 – _____ = 3
10 + ____ = _____

At first glance, this outline can be confusing to a first grader. Students should identify that 8 plus **2** equals 10, 5 take away **2** equals **3**, and finally, 10 plus **3** equals **13**. The same process can be repeated for multiple addition problems; hence, the way to solve the problem is to use an *algorithm* to make tens. This is an excellent opportunity to include the Alabama CS Course of Study standard: "Students can [o]rder events into a logical sequence or algorithm" (Alabama COS, 2018). The module for this particular problem would include:

1. The content standards being met for both mathematics and CS/CT;
2. Instructional strategies (e.g., an explanation of the approach);
3. Tangible elements, such as blocks, to allow students to see the breakdown;
4. A worksheet to complete with a group. The group can use the blocks;
5. Cards with different actions that would allow the students to build a generic algorithm for solving these types of problems. There would be a variety of cards, and students would have to find the appropriate cards to use to find the solution; and
6. A programming option using a block programming language (i.e., Scratch) would be an optional component.

While many applications of CS/CT to math may be obvious, other opportunities for integration of subjects may not be as clear. Objective 2.9.1 for second grade social studies is to "[d]iscuss rights and responsibilities of individuals in relation to different social groups, including family, peer group, and classmates" (Alabama COS, 2016), which provides teachers with the opportunity to ask students to "[l]ist positive and negative impacts of digital communication" (Alabama COS, 2018).

A final example involves fourth grade objectives 4.7.1 to 4.7.5 of English Language Arts, which enable students to "make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text" (Alabama COS ELA, 2018). This objective could be connected to the computational thinking standard that students should be able to "[s]how that different solutions exist for the same problem or sub-problem" (Alabama COS, 2018). An approach to intertwine these two objectives would be to deliver a story to students in multiple ways: orally, visually (acted out), and in written form. After each exposure to the story, students will be asked to summarize the story they just heard, saw, or read. By learning that the same story can be expressed in multiple ways, students will gain insight into the idea that problems can be solved in multiple ways. The full activity will contain problem-solving in addition to storytelling; the storytelling component is one of multiple ways the idea of multiple solutions to the same problem will be taught as an example of meeting the UDL principles of engagement and expression (Center for Applied Special Technology, 2021).

These are three simple examples of the type of mapping planned. The purpose of the proposed project is to invest the required time to identify appropriate mappings and creatively approach lessons that would incorporate both CS/CT standards as well as foundational subject standards. All corresponding materials will be created: worksheets, group activities, teaching strategies, physical components, etc. The Researcher-Practitioner Partnership will be necessary to ensure the intertwining of material is clear, grade-level appropriate, and accessible.

During the first summer, practitioners (two per grade) will be invited to participate in a three-day workshop where the 21 created modules will be presented and evaluated. The practitioners will then work with the PIs to develop 14 additional modules (2 per grade).

Year II: The second phase of the project is to evaluate the effectiveness of the modules not only against CS/CT standards, but the foundational standards as well. As described later in the evaluation and assessment plan section, after using the developed modules, we will measure the impact to the practitioners' planning efforts, any changes in practitioner self-efficacy, student engagement, student learning, and student retention. The practitioners who participated in the summer workshop will present the five modules (per grade) to their classes throughout the academic year.

During the summer of Year II, the practitioners will be invited back to another three-day workshop where newly created modules (3 per grade created by the PIs) will be evaluated, the results of the previous year will be discussed, and the practitioners will assist in creating new modules resulting in 10 modules per grade (70 in total) at the conclusion of the project.

Year III: All of the modules created throughout the project will then be utilized in the appropriate classes during the academic year. The results of all collected assessments will be analyzed during the summer of Year III resulting in a final analysis of the work.

Utilizing the Researcher-Practitioner Partnership

After reviewing the modules internally, we will work with local practitioners to fully review the modules as well as introduce them to the classroom. A minimum of two teachers per grade will be recruited to participate in the proposed project. During the summer of 2023, The PIs will host a three-day workshop where the practitioners will come together to discuss the modules. The workshop will begin with an assessment where the practitioners will be asked questions regarding how many of the CS Alabama Course of Study standards they cover in their classes in addition to their confidence in teaching the standards. The developed modules will then be presented, and both quantitative and qualitative feedback will be collected. The modules will then be discussed and worked through to ensure the practitioners feel

comfortable with the material, and the modules are clear and grade-level appropriate. The PIs and practitioners will then work together to build 2 additional modules per grade (14 total). The workshop will conclude with setting timelines for moving forward to the 2023-2024 academic year in which the practitioners will use the modules in their classrooms. Regular update/support meetings will be scheduled.

By establishing the Researcher-Practitioner Partnership (RPP) with at least three schools, the developed curriculum will be strengthened by the variety of teachers who will be present in the proposed summer workshop. Discussions will be carried down paths not previously considered with suggested activities that may cover the topic better. The resulting modules will be more grade-level appropriate, accessible, and inclusive. For example, the practitioners may have existing modules that would be better suited or supplemental for the foundational subject standard that would also allow for CS/CT integration. By using material practitioners are already accustomed to, the project would be meeting the goal of simplifying the task of integrating the CS/CT standards into their classrooms. Discussions revolving around existing materials will be a critical component of the three-day summer workshop.

A RPP has been established with Deer Valley Elementary School (DVES) and the Hand-in-Hand Early Learning Program (HiH). DVES provides the perspective of an affluent school offering STEAM classes on a weekly basis (as scheduling permits). HiH provides the perspective of an Alabama First Class Pre-K program in addition to a school known for working with children with disabilities. One in every five students at HiH has a disability; therefore, the practitioners will have ample experience working with children with disabilities. Both DVES and HiH agreed to share the opportunity with their teachers and allow them to volunteer to participate. Four teachers from DVES have already volunteered. Alabama K-5 teachers have historically been interested in participating in CS professional development (Roberts et al., 2018).

The BSC education department has Memorandum of Agreements (MOAs) with a Title 1 school (Fultondale Elementary) as well as I^3 Academy, a charter school serving K-5 students in an impoverished community. Ensuring the modules are appropriate and effective in schools from low socioeconomic areas is critical to the success of the proposed project. More importantly, we want to share the materials with the students in those schools to increase their awareness of CS/CT topics as well as strengthen students' analytical skills across all subjects.

To further evaluate that the modules are accessible to students with disabilities, Lenor Harrison, Assistant Director of HIH, has agreed to serve as Senior Personnel on this proposed project. She has a MA in Early Childhood Special Education, and given her work at HiH, is a subject matter expert on evaluating the accessibility of curriculum. Her primary role on the proposed project will be to evaluate the accessibility of the modules as well as assist in suggesting creative and engaging approaches to teaching and reinforcing the content that are accessible to all learners.

RESEARCH AND EVALUATION PLAN

The research plan for this project and timeline as well as evaluation and assessment plans are outlined in the following subsections.

Research Plan and Proposed Timeline

There are two primary phases for this research project.

Year I: PIs develop an assessment (pre-test) to be used for each grade (explained in evaluation and assessment plan). PIs develop 21 (3 per grade) CS and CT modules (including content standards, learning outcomes, teaching strategies, teaching instruments, and assessments) to embed within existing PreK-5

math, reading, social studies, and science content. In addition to covering the CS or CT concept, the content will intertwine with the existing requirements for the corresponding subject, demonstrating to students how computing relates to all subjects. Senior Personnel, Lenor Harrison, will evaluate the modules in terms of accessibility, and the modules will be adjusted accordingly. Hold a three-day summer workshop with practitioners to share the content and teaching strategies, making appropriate changes based on practitioner feedback. Work with educational partners in PreK-5 to refine existing modules and build 14 additional modules (2 per grade).

Year II: Assist educational partners in using the modules in the classroom throughout the academic year including providing the materials and assessments. Refine existing modules based on student/classroom experience. PIs develop 21 (3 per grade) new modules. Summer workshop to be repeated resulting in 70 modules (10 per grade).

Year III: Assist educational partners in using all modules in the classroom throughout the academic year. Analyze all results from the two years of the project.

Four undergraduate researchers (two from Education and two from Applied CS) will be recruited to work on the proposed project. The undergraduate researchers will assist in the standard mapping process, curriculum module write-up (they will be provided a template and the required information for the modules), assessment, analysis, and building/posting data on the website. Throughout the entire process, undergraduate researchers working on the proposed project will document their work in essay form to allow for the easy production of research papers. Having the students write their work as it is completed will also be beneficial in the event that an undergraduate researcher leaves the project and a new undergraduate researcher joins the project in his/her place.

The planned activities have been broken up by date in the timeline below. Anticipated results of the planned activity are also described.

Date	**Activity**	**Anticipated Results**
August 2022	Recruit 2 Education majors and 2 Applied CS majors to assist with curriculum development. PIs create end of year assessment for each grade: PreK-5.	End of year assessment for each grade
September 2022 – February 2023	PIs to develop approximately 21 modules (3 per grade). Undergraduate researchers to confirm mapping of modules to state standards.	21 modules created
October 2022 – April 2023	Senior Personnel to evaluate accessibility of modules. Undergraduate researchers to evaluate modules for clarity.	21 modules assessed for accessibility and clarity

February 2023	PIs recruit practitioners from RPPs to attend workshop to review and explain the materials	At least 2 practitioners per grade
March 2023	PIs develop assessment instruments to be answered by practitioners.	Two Instruments: 1. Feedback on the modules 2. Feedback after using modules in the classroom
April 2023	PIs develop assessment instruments to be used in the classroom by practitioners (answered by students).	Tool to evaluate the success of the modules in the classroom. Some of these may be part of the module itself (e.g., quiz, worksheet)
June 2023 – July 2023	PIs hold short workshops (3 days) to share materials and recommend best usage/timing of presenting the material in the classroom. Develop additional modules with practitioner assistance.	14 additional modules All practitioners prepared to present materials. Modified modules based on practitioner assessment.
July 2023	PIs to build website dedicated to project with assistance from undergraduate researchers.	All materials shared for anyone to use. Assessment tools will also be posted so that anyone who uses the materials has the option to provide feedback.
August 2023 – May 2024	Practitioners to use materials in the classroom. PIs and Senior Personnel to support as needed. Assessments completed by students and practitioners. 21 additional modules created by PIs	21 additional modules
June 2024 – July 2024	PIs and undergraduate researchers analyze results from Year II; Co-PIs modify modules based on feedback. Hold 3-day workshops with practitioners. Develop 14 additional modules	Results of using the first 35 modules 14 additional modules

August 2024 – May 2025	Practitioners to use materials in the classroom. PIs and Senior Personnel to support as needed. Assessments completed by students and practitioners.	
June 2025 – July 2025	PIs and undergraduate researchers analyze results from Year III; PIs modify modules based on feedback.	Research results summarized; paper submitted 70 curriculum modules with corresponding assessments posted online for PreK-5 community

Evaluation and Assessment Plan

Two disparate groups will be targeted to evaluate the success of the modules: the practitioners and the students. Regarding the practitioners, we will ask for two assessments. The first assessment will occur during the proposed summer workshops and will include the following information.

1. At the beginning of the workshop, practitioners will be provided with a list of grade-level CS standards, they will be asked to assess:
    a. How much time is devoted to these standards within their classroom;
    b. How much time they foresee being able to devote to these standards within their classroom;
    c. How confident do they feel teaching these standards;
    d. How confident do they feel teaching math, reading, science, and social studies standards; and
    e. How much time on average they spend on one lesson (to better gauge student attention limits for each grade).
2. After being given the modules and discussing them, they will be asked the following:
    a. Are the modules grade appropriate?
    b. How long will the modules take to complete?
    c. Do the modules fully cover the designated standard in both CS and the identified foundational subject (math, reading, science, or social studies)?
    d. Any concerns with or suggested changes to the modules?

During the academic year, the practitioners will use the modules within their classrooms. After using each module, the practitioner will be asked to complete an assessment of that module:

1. How much prep time did the module require?
2. Any feedback regarding individual module?
3. Rate perceived student enjoyment/engagement with the module?
4. Did the module cover both the CS standard and designated foundational subject standard?

At the conclusion of the academic year, the practitioner will once again be provided with the grade-level CS standards and asked:

1. How much time was devoted to these standards within their classroom?
2. How confident they feel teaching these standards?

3. How confident they feel teaching reading, math, science, and social studies standards?
4. Would they use these modules in future academic years?

The PIs aim to learn the burden integrating CS/CT content places on teachers as well as if teacher self-efficacy in CS/CT, reading, math, science, and/or social studies increased throughout the year.

Regarding the students, the PIs hope to see retention of CS/CT content as well as performance gains in learning and/or retention of reading, math, science, and/or social studies content. To measure these outcomes, students of the participating practitioners will be given a test at the end of the academic year prior to using the modules. These students will not have had exposure to the proposed curriculum modules and will establish a baseline for the information students in each grade (PreK-5) may know at the conclusion of the year including any CS/CT content. The test will be grade level appropriate and contain questions relevant to the content required for that grade. During the following academic year, each module presented in the classroom will consist of some type of assessment that will evaluate student learning and satisfaction at that time (e.g., worksheet, quiz, product of the activity). At the conclusion of the year, students will be given the same test as the previous year to determine any changes in their knowledge. The individual activities will indicate what students learned and how the modules were perceived, but the end of year assessment will allow the PIs to gauge what students retained.

The end of year assessment of Year II will be used as a baseline for Year III. The students in Year III will be given five additional modules throughout the year for a total of ten modules. Ideally, they will perform better in the end of year assessment than their predecessors who only had five modules.

DISSEMINATION OF RESEARCH RESULTS

A primary goal of the project is to simplify the process of teaching CS/CT content in the PreK-5 classroom; therefore, all curriculum developed and all assessment results will be made publicly available. More details are provided regarding curriculum modules and assessment results are explained in the following subsections.

Curriculum Modules

Once all feedback is received and analyzed, any necessary changes will be made the individual modules, which will once again be reviewed for accessibility purposes by Senior Personnel, Lenor Harrison. Once the changes and reviews are completed, all curriculum modules, assessment tools, and recommended usage will be made available on a Birmingham-Southern College website for any educator to access. This website will be shared with the larger community through distribution lists (e.g., SIGCSE, CSTA) as well as emailed directly to local area schools. For pre-service teachers, the website will be shared with the College of Education at institutions for higher education in hopes of preparing the soon to be elementary school teachers earlier. The modules will be organized by grade and subject, making it easy for PreK-5 teachers to access the materials quickly. Teaching strategies and all corresponding materials (e.g, worksheets, activities, code) will be included on the site.

Assessment Results

Multiple assessments will occur throughout the proposed project.

1. Practitioner feedback on teaching CS/CT in the classroom as well as the modules themselves will be formally collected to include feedback from an expert on accessibility needs of PreK-5 aged children.
2. Practitioner feedback on using the modules in the classroom will be formally collected in addition to an overall assessment of teaching CS/CT in the classroom at the conclusion of the year.

3. Student feedback in the form of what was learned (individual module assessment), what was retained (end of year assessment), and how engaging the modules were (individual module assessment by teacher perception) will be collected.

Once all data is collected and anonymized (participant names will be replaced with a numeric value), the data will be analyzed and presented in a paper for publication. The summarized data applicable to each module will be included on a Birmingham-Southern College website, providing a review of the module, as well as the anonymized datasets. This review will give future users of the modules an idea of how successful the module was, where there were stumbling blocks, and the overall feedback received. Access to the anonymized datasets may be fruitful for future researchers.

BUDGET

The total budget requested for three years is $216,691. While the budget justification outlines all of the details, the three years are broken down into the corresponding categories below. Because BSC is a four-year institution, we will utilize undergraduate researchers to work with the PIs throughout the project. The bulk of the funding is for the practitioners who will be collaborating with us.

Year 1		**Year 2**		**Year 3**	
PI/Co-PI	$19,697	PI/Co-PI	$19,697	PI/Co-PI	$19,697
Senior Personnel	$5,000	Senior Personnel	$5,000	Senior Personnel	$5,000
Undergraduate Salaries	$12,800	Undergraduate Salaries	$12,800	Undergraduate Salaries	$12,800
Collaborator Compensation	$6,300	Collaborator Compensation	$21,000	Collaborator Compensation	$25,200
Workshop Costs	$1,000	Workshop Costs	$1,000	Workshop Costs	$0
Materials	$0	Materials	$5,000	Materials	$5,000
Travel (ITEST)	$4,000	Travel (ITEST)	$4,000	Travel (ITEST + Research conferences)	$12,000
Total (including 10% indirect)	**$53,677**	**Total (including 10% indirect)**	**$75,347**	**Total (including 10% indirect)**	**$87,667**

CONCLUSION

The focus of the proposed project is to assist PreK-5 teachers in covering the newly required CS standards set forth by the state of Alabama. K-5 teachers will be required to teach CS/CT concepts starting in 2022-2023. While some schools have some STEM or STEAM programs in place, the instruction time is not consistent from week-to-week, the tools are not always affordable, and the material is not accessible to all. Some elementary teacher preparation is offered by A+ College Ready, but few elementary classroom teachers have had CS/CT training. By preparing curriculum modules for teachers to use in the classroom during reading, math, science, or social studies instruction, teachers will identify with the core topic being taught and have minimal preparation in learning the required CS/CT content. The curriculum developed

will be accessible to those with disabilities as they will be reviewed and modified accordingly by Senior Personnel Lenor Harrison who is a practitioner in special education. The curriculum will also be grade-level appropriate and accessible to schools in low socioeconomic areas due to the RPP and MOAs established with surrounding schools.

Through the evaluation and assessment plan, the proposed project aims to demonstrate the benefits of integrating CS/CT content with foundational subjects not only in knowledge gains in the area of CS/CT, but also in the foundational subject. The proposed project also hopes to increase teacher self-efficacy in teaching CS/CT. While only two teachers per grade are anticipated to participate in the study, the curriculum will be made available to all teachers. A link to the curriculum will be shared with local area schools as well as schools of higher education where College of Education departments would be able to share the curriculum with their students who will soon be in the elementary classroom.

As mentioned in the introduction of this proposal, the goal of the proposed project is to create grade-level appropriate curriculum modules for PreK-5 that:

- integrate with existing reading, math, science, and social studies standards;
- are accessible to underserved populations (i.e., students with disabilities and students attending low socioeconomic schools); and
- increase student CS/CT learning in the classroom.

This goal will be accomplished by utilizing the Alabama Course of Study for CS as well as reading, math, science, and social studies constructed with feedback from practitioners, building modules based on the UDL framework with guidance from a subject matter expert, and analyzing through multiple assessments if and by how much the modules increase student CS/CT learning. There is a demonstrated need for accessible and equitable CS/CT content for the PreK-5 classroom, and the proposed project will result in additional curriculum options for PreK-5 teachers.

Overview

The proposed ***Developing and Testing Innovations*** project addresses the need to embed Computer Science (CS) and Computational Thinking (CT) modules into existing PreK-5 curriculum. Many engaging tools (e.g. Code.org, Lego Robots, micro:bit, etc.) exist to teach CS and CT in elementary and middle school classrooms; however, there are a few important limitations of these tools:

1. Many of the tools are not accessible to those with disabilities;
2. Many schools do not have the funding to purchase typical CS Education tools (e.g., tablets, robotic tools); and
3. Students' exposure to these tools is generally limited to once per week, and the content is generally taught as a separate subject from the rest of the curriculum, preventing students from seeing how computing integrates with all subjects.

In 2019, Governor Kay Ivey of Alabama signed into law (HB-216) that by the academic year 2020-2021, every high school should offer one CS course, by 2021-2022, every middle school should offer one CS course, and by 2022-2023, every elementary school should offer one CS course. There has been a vast effort to train high school teachers in the state of Alabama to be able to teach CS, but there has been less focus on elementary and middle school teachers. While some work is in progress, 2022-2023 is fast approaching; therefore, the goal of the proposed project is to create grade-level appropriate curriculum modules for preK-5 that: integrate with existing reading, math, science, and social studies standards; are accessible to students with disabilities and students attending low socioeconomic schools; and increase student CS/CT learning in the classroom.

The proposed project is for three years to both develop and test curriculum modules.

Year I: PIs develop 21 (3 per grade) CS and CT modules to embed within existing PreK-5 math, reading, social studies, and science content. In addition to covering the CS or CT concept, the content will intertwine with the existing requirements for the corresponding subject, demonstrating to students how computing relates to all subjects. Hold a summer workshop with practitioners to share the content and teaching strategies, making appropriate changes based on practitioner feedback. Work with educational partners in PreK-5 to refine existing modules and build 14 additional modules (2 per grade).

Year II: Assist educational partners in using the modules in the classroom throughout the academic year. Refine existing modules based on student/classroom experience. PIs develop 21 (3 per grade) modules. Summer workshop to be repeated resulting in 70 modules (10 per grade).

Year III: Assist educational partners in using all modules in the classroom throughout the academic year.

Intellectual Merit

The *intellectual merit* of this project is to analyze the ease at which PreK-5 teachers can integrate CS and CT content into their existing curriculum and the growth in student understanding of CS and CT concepts after completing the modules. Teachers should experience little disruption to their existing workload, and students' CS and CT knowledge should increase while strengthening their understanding of the corresponding subject.

Broader Impacts

The *broader impacts* of this work will allow PreK-5 teachers to include CS and CT content within the subjects they are already teaching. Moreover, this content will be developed with the intention of providing CS/CT experiences to the underserved population of students with disabilities and those attending schools in low socioeconomic areas. Results of this work will be disseminated through a website for anyone to utilize in addition to appropriate venues for presentation and publication.

Project Summary
The proposed ***small, PreK-8 Strand*** project addresses the need to embed Computer Science (CS) and Computational Thinking (CT) modules into existing PreK-5 curriculum. Many engaging tools (e.g. Code.org, Lego Robots, micro:bit, etc.) exist to teach CS and CT in elementary and middle school classrooms; however, there are a few important limitations of these tools:

1. Students' exposure to these tools is generally limited to once per week;
2. The content is taught so that it is a separate subject from the rest of their curriculum, which does not allow students to see how computing integrates with all subjects;
3. Some schools do not have the funding to purchase some of these tools; and
4. Many of the tools are not accessible to those with disabilities.

In 2019, Governor Kay Ivey of Alabama signed into law (HB-216) that by the academic year 2020-2021, every high school should offer one CS course, by 2021-2022, every middle school should over one CS course, and by 2022-2023, every elementary school should offer one CS course. There has been a vast effort to train high school teachers in the state of Alabama to be able to teach CS, but there has been less focus on elementary and middle school teachers. Rather that force our elementary school teachers who have already been stretched thin due to required virtual learning because of COVID-19 to learn a whole new curriculum that must be covered in an already full day, this project proposes the creation of accessible modules, which will be embedded at the intersection with subjects already taught.

Phase I - Development: Develop CS and CT modules to embed within existing PreK-5 math, reading, social studies, and science content. The content will intertwine with the existing requirements for the corresponding subject, and in addition to covering the CS or CT concept, it will demonstrate to students how computing relates to all subjects.

Phase II – Introduction and Evaluation: Through short workshops with partnering schools, share the content and teaching strategies with practitioners. Evaluate the success of the content based on usage within the PreK-5 classroom.

The ***intellectual merit*** of this project is to analyze the ease at which PreK-5 teachers can integrate CS and CT content into their existing curriculum and the growth in student understanding of CS and CT concepts after completing the modules. Teachers should experience little disruption to their existing workload, and students' CS and CT knowledge should increase while strengthening their understanding of the corresponding subject.

The ***broad impacts*** of this work will allow PreK-5 teachers to include CS and CT content within the subjects they are already teaching. Moreover, this content will be "unplugged" and accessible enabling students attending schools with lower funding and students with disabilities to have equal access to the materials. Results of this work will be disseminated through a website for anyone to utilize in addition to appropriate venues for presentation and publication.

Keywords: CS Education; Accessible Computing; Curriculum

Proposal 73861 shared with SPO/AORs

proposalprep@nsf.gov <proposalprep@nsf.gov>
Fri 8/12/2022 4:27 PM

To: Wagner, Amber <anwagner@bsc.edu>;Russell, Kelly A. <krussell@bsc.edu>;ajb@miles.edu <ajb@miles.edu>;Chandler, Joseph Francis <jchandle@bsc.edu>;pamela.hanson@furman.edu <pamela.hanson@furman.edu>

All Sponsored Project Office (SPO) and Authorized Organizational Representatives (AOR) have been given **View/Edit access** to the following proposal. Additionally, AORs now have the ability to **submit** this proposal.

Temporary ID Number: 73861
Proposal Title: Computer Science in the PreK-5 Classroom: Lesson Plans for Teachers by Teachers
Submission Type: Full Proposal
Date/Time Proposal Shared: 08/12/2022 5:27 PM EDT
Shared by: Wagner, Amber

The following users are included:

Authorized Organizational Representative (AOR)
Brigati, Arthur
Chandler, Joseph
Hanson, Pamela

This proposal can be accessed from your listing of in-progress proposals within Research.gov.

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Proposal: 2148612

Back to Results

Agency

Agency Name:	National Science Foundation

Application

Agency Tracking Number:	**2148612**
Project Title:	Integrating Computer Science and Computational Thinking into the PreK-5 Classroom
Requested Amount:	$216,691
Received Date:	08/13/2021
PI/PD:	Amber Wagner
Co-PD(s)/Co-PI(s):	Kelly Russell
Authorized Representative:	Joseph F Chandler
Submitting Institution:	Birmingham Southern College
SAM Legal Business Name:	BIRMINGHAM-SOUTHERN COLLEGE

Program

Program Title:	ITEST-Inov Tech Exp Stu & Teac
Program Code:	7227
Funding Opportunity Number:	NSF 19-583
Division/Area of Science:	Division Of Research On Learning
Program Contact Name:	Joan Walker
Program Contact Phone:	(703) 292-0000
Program Contact Email:	jowalker@nsf.gov

Application Status History

Status	Status Date
Declined	11/15/2021

Cognizant Program Officer Comments

Dear Dr. Wagner,

You have received notification that the proposed project you submitted for consideration by the Innovative Technology Experiences for Students and Teachers (ITEST) program will not be funded. I realize this is disappointing news, but I hope you find the comments of reviewers helpful as you consider next steps in pursuing your research agenda.

Three or more reviewers read your proposal and then served on a panel to consider your proposal along with others. The individual reviews provide critiques of the strengths and limitations of your proposal in terms of Intellectual Merit, Broader Impacts, and the Solicitation Specific Review Criteria associated with the ITEST program. The individual reviews may also include comments for you to consider as you further develop your ideas. Panelists discussed all proposals that had average ratings of "Good" and above, and all proposals that had any rating above a "Good." Because your proposal did not meet this average rating threshold, there is no summary of the panel's discussion.

Weaknesses in Intellectual Merit may include limitations associated with the research questions or plan, the implementation plan, the expertise or qualifications of the project team, the theoretical framework for the proposed project, or the project evaluation plan. Weaknesses in Broader Impacts may include limitations associated with the plans for recruiting or selecting participants, the dissemination plan or data management plan, or the project evaluation plan. Weaknesses in Solicitation Specific Review Criteria were also considered, and limitations may include failure to address one or more of the questions associated with the special review criteria described in the ITEST solicitation. Again, please refer to the individual reviews for specific comments regarding each of these areas.

We appreciate the effort you invested to develop your proposal and thank you for your interest in the ITEST program.

Joan Walker
EHR/DRL
10/29/21

Review Information

Please note: The Sponsored Projects Office (or equivalent) at the submitting organization is NOT given the capability to read the below review information.

Proposal Review Summary of All Reviews

Reviewer	Release Date
Proposal Review #3	10/29/2021
Proposal Review #2	10/29/2021
Proposal Review #1	10/29/2021

Process Statement

All proposals submitted to NSF are reviewed according to the two merit review criteria - intellectual merit and broader impacts - as described in the *NSF Proposal & Award Policies & Procedures Guide*. If a proposal is submitted to a specific program solicitation, additional review criteria may also have been used in the merit review of the proposal. Any additional review criteria used in the evaluation of a proposal would be described in the program solicitation to which the proposal was submitted. If the proposal was submitted in response to a funding opportunity that involved both NSF and one or more external funding organizations, then NSF staff may consult with those external organizations before finalizing a recommendation.

Your proposal received an external review, either by *ad hoc* reviewers only, by panel only, or by a mix of *ad hoc* and panel reviews. Some proposals may be considered by more than one panel. Reviewers have knowledge of the science and engineering subfields involved in the proposal as well as potential applications when relevant. The reviewers' fields of specialty are usually complementary within a reviewer group. Sometimes, reviewers with a broader scientific, technical, or management expertise are required for proposals involving substantial size or complexity, partnerships, broad multidisciplinary content, or significant national or international implications.

When a panel is used, individual reviewers, who may be panelists or *ad hoc* reviewers, are usually asked to submit written reviews to inform the panel discussions. If, after a panel has discussed a proposal, the Program Officer believes that additional expert advice would be helpful, they may request post-panel *ad hoc* reviews. During a panel meeting, written summaries of the panel's discussions of proposals are prepared. These summaries are brief synopses of the salient points emerging from the panel's discussion of each proposal, as they relate to the NSF and solicitation-specific review criteria. Copies of all the reviews and panel summaries used in the decision-making process for your proposal are available to you and your co-Principal Investigator(s), if any, on the Research.gov "Proposal Status" screen.

Proposal: 2122711

Back to Results

Agency

Agency Name: National Science Foundation

Application

Agency Tracking Number: **2122711**

Project Title: Integrating Computer Science and Computational Thinking into the PreK-5 Classroom

Requested Amount: $186,833

Received Date: 02/10/2021

PI/PD: Amber Wagner

Co-PD(s)/Co-PI(s): Kelly Russell

Authorized Representative: Joseph F Chandler

Submitting Institution: Birmingham Southern College

SAM Legal Business Name: BIRMINGHAM-SOUTHERN COLLEGE

Program

Program Title: Discovery Research K-12

Program Code: 7645

Funding Opportunity Number: NSF 20-539

Division/Area of Science: Division Of Research On Learning

Program Contact Name: Stephanie Teasley

Program Contact Phone: (703) 292-0000

Program Contact Email: steasley@nsf.gov

Application Status History

Status	Status Date
Declined	06/10/2021

Cognizant Program Officer Comments

Dear Drs. Wagner & Russell

You have received notification that the proposed project you submitted for consideration to the Computer Science for All Program (CS for All) will not be funded. I realize this is disappointing news, but I hope you find the comments of reviewers helpful as you consider next steps in pursuing your research agenda.

Qualified reviewers read each proposal and then served on panels to discuss CS for All proposals. The individual reviews provide critiques of the strengths and limitations of your proposal in terms of the two NSF Merit Review Criteria: Intellectual Merit and Broader Impacts. The reviews include comments for you to consider as you further develop your proposal. I suggest that you review the panel summary, if there is one, as you will find both a summary of the strengths found in your proposal and a discussion of concerns the panelists found most important to consider in determining their ranking of your proposal. The individual reviews generally add substance to the panel summary and will also include additional issues of concern to individual reviewers. It is useful to read all of the reviews and formulate any questions you may have about the reviews and panel summary before contacting me.

Weaknesses in Intellectual Merit may include limitations associated with the theoretical framework and overall justification for the proposed project, the relevance of the prior research that is discussed in the proposal, the clarity or importance of the research questions, the data analysis plan and related methods, or the plans to assess success of the project. Weaknesses in Broader Impacts may include limitations with respect to the potential for influencing STEM education practices beyond the given project, the promise of the project for advancing understanding of STEM learning, and the dissemination or data management plans.

Thank you for your interest in the CS for All program. If you would like to discuss the reviews, please send me an email.

Sincerely,

Stephanie Teasley, Program Director
CS for All Program
National Science Foundation
05/23/2021
steasley@nsf.gov

NOTE: DRK-12, ECR and ITEST require that proposals be submitted by Research.gov. AISL will probably require Resarch.gov These programs will not accept proposals from Fastlane. Proposers may use Grants.gov

Review Information

Please note: The Sponsored Projects Office (or equivalent) at the submitting organization is NOT given the capability to read the below review information.

Proposal Review Summary of All Reviews

Review	Release Date
Proposal Review #4	05/25/2021
Proposal Review #3	05/25/2021
Proposal Review #2	05/25/2021
Proposal Review #1	05/25/2021

Process Statement

All proposals submitted to NSF are reviewed according to the two merit review criteria - intellectual merit and broader impacts - as described in the *NSF Proposal & Award Policies & Procedures Guide*. If a proposal is submitted to a specific program solicitation, additional review criteria may also have been used in the merit review of the proposal. Any additional review criteria used in the evaluation of a proposal would be described in the program solicitation to which the proposal was submitted. If the proposal was submitted in response to a funding opportunity that involved both NSF and one or more external funding organizations, then NSF staff may consult with those external organizations before finalizing a recommendation.

Your proposal received an external review, either by *ad hoc* reviewers only, by panel only, or by a mix of *ad hoc* and panel reviews. Some proposals may be considered by more than one panel. Reviewers have knowledge of the science and engineering subfields involved in the proposal as well as potential applications when relevant. The reviewers' fields of specialty are usually complementary within a reviewer group. Sometimes, reviewers with a broader scientific, technical, or management expertise are required for proposals involving substantial size or complexity, partnerships, broad

BSC Course Evaluation for Spring-2022

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	8			16			2					
	30.8			61.5			7.7					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	3		6		8		7		0		2	
	11.5%		23.1%		30.8%		26.9%		0.0%		7.7%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	5		7		1		5		3		0	5
	19.2%		26.9%		3.8%		19.2%		11.5%		0.0%	19.2%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**19**	**4**	**1**	**0**	**0**	**0**	**2**	**26**	**1.25**	**1**	**0.52**	**62.8**
	73.1%	**15.4%**	**3.8%**	**0.0%**	**0.0%**	**0.0%**	**7.7%**					
Question-05: The course was organized in a way that enhanced my learning.	19	4	2	0	0	0	1	26	1.32	1	0.61	66.1
	73.1%	15.4%	7.7%	0.0%	0.0%	0.0%	3.8%					
Question-06: The course was intellectually stimulating.	19	4	2	0	0	0	1	26	1.32	1	0.61	64.4
	73.1%	15.4%	7.7%	0.0%	0.0%	0.0%	3.8%					
Question-07: The course improved my ability to think critically and reason effectively.	21	2	1	1	0	0	1	26	1.28	1	0.72	72.1
	80.8%	7.7%	3.8%	3.8%	0.0%	0.0%	3.8%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	21	3	1	0	0	0	1	26	1.20	1	0.49	76.3
	80.8%	11.5%	3.8%	0.0%	0.0%	0.0%	3.8%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	24	1	0	0	0	0	1	26	1.04	1	0.20	89.0
	92.3%	3.8%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-10: The instructor returned graded assignments in a timely manner.	18	4	3	0	0	0	1	26	1.40	1	0.69	53.4
	69.2%	15.4%	11.5%	0.0%	0.0%	0.0%	3.8%					
Question-11: The instructor's comments on course work were helpful.	22	2	0	1	0	0	1	26	1.20	1	0.63	81.4
	84.6%	7.7%	0.0%	3.8%	0.0%	0.0%	3.8%					
Question-12: The instructor was available for help outside of regular class times.	23	1	0	0	0	1	1	26	1.04	1	0.20	88.2
	88.5%	3.8%	0.0%	0.0%	0.0%	3.8%	3.8%					
Question-13: The instructor treated students respectfully, even when offering criticism.	24	1	0	0	0	0	1	26	1.04	1	0.20	77.9
	92.3%	3.8%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	24	0	0	1	0	0	1	26	1.12	1	0.59	78.0
	92.3%	0.0%	0.0%	3.8%	0.0%	0.0%	3.8%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	21	3	1	0	0	0	1	26	1.20	1	0.49	97.4
	80.8%	11.5%	3.8%	0.0%	0.0%	0.0%	3.8%					
Question-16: Please rate the instructor's overall teaching effectiveness.	22	2	2	0	0	0	0	26	1.23	1	0.58	71.2
	84.6%	7.7%	7.7%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2022

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	4			7			0					
	36.4			63.6			0.0					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	2		5		1		3		0		0	
	18.2%		45.5%		9.1%		27.3%		0.0%		0.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	2		2		0		4		3		0	0
	18.2%		18.2%		0.0%		36.4%		27.3%		0.0%	0.0%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	9	**1**	**1**	**0**	**0**	**0**	**0**	**11**	**1.27**	**1**	**0.62**	**49.0**
	81.8%	**9.1%**	**9.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	7	3	1	0	0	0	0	11	1.45	1	0.66	41.9
	63.6%	27.3%	9.1%	0.0%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	8	2	1	0	0	0	0	11	1.36	1	0.64	46.1
	72.7%	18.2%	9.1%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	8	1	1	1	0	0	0	11	1.55	1	0.99	36.3
	72.7%	9.1%	9.1%	9.1%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	9	1	1	0	0	0	0	11	1.27	1	0.62	46.8
	81.8%	9.1%	9.1%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	10	1	0	0	0	0	0	11	1.09	1	0.29	65.3
	90.9%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	8	2	1	0	0	0	0	11	1.36	1	0.64	48.4
	72.7%	18.2%	9.1%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	8	2	0	1	0	0	0	11	1.45	1	0.89	44.9
	72.7%	18.2%	0.0%	9.1%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	10	0	0	0	0	1	0	11	1.00	1	0.00	72.8
	90.9%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	10	1	0	0	0	0	0	11	1.09	1	0.29	50.6
	90.9%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	10	0	0	1	0	0	0	11	1.27	1	0.86	38.1
	90.9%	0.0%	0.0%	9.1%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	9	1	1	0	0	0	0	11	1.27	1	0.62	85.8
	81.8%	9.1%	9.1%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	9	1	1	0	0	0	0	11	1.27	1	0.62	53.0
	81.8%	9.1%	9.1%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2022

Course Title: Teaching Science and Health	Course Number: ED 324 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	0			6			0					
	0.0			100.0			0.0					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		0		6		0		0		0	
	0.0%		0.0%		100.0%		0.0%		0.0%		0.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		4		0		0		0		0	2
	0.0%		66.7%		0.0%		0.0%		0.0%		0.0%	33.3%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**4**	**1**	**0**	**0**	**0**	**0**	**1**	**6**	**1.20**	**1**	**0.40**	**56.5**
	66.7%	**16.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**16.7%**					
Question-05: The course was organized in a way that enhanced my learning.	4	1	1	0	0	0	0	6	1.50	1	0.76	37.6
	66.7%	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	4	1	1	0	0	0	0	6	1.50	1	0.76	34.3
	66.7%	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	5	1	0	0	0	0	0	6	1.17	1	0.37	68.9
	83.3%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	5	1	0	0	0	0	0	6	1.17	1	0.37	59.2
	83.3%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	6	0	0	0	0	0	0	6	1.00	1	0.00	68.5
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	4	0	2	0	0	0	0	6	1.67	1	0.94	29.1
	66.7%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	6	0	0	0	0	0	0	6	1.00	1	0.00	78.8
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	6	0	0	0	0	0	0	6	1.00	1	0.00	72.8
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	6	0	0	0	0	0	0	6	1.00	1	0.00	56.4
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	6	0	0	0	0	0	0	6	1.00	1	0.00	64.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	6	0	0	0	0	0	0	6	1.00	1	0.00	92.0
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	4	1	1	0	0	0	0	6	1.50	1	0.76	33.7
	66.7%	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2022

Course Title: Intro to Education	Course Number: ED 201 B	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	4			3			2					
	44.4			33.3			22.2					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	1		1		1		4		0		2	
	11.1%		11.1%		11.1%		44.4%		0.0%		22.2%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	3		1		1		1		0		0	3
	33.3%		11.1%		11.1%		11.1%		0.0%		0.0%	33.3%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**6**	**2**	**0**	**0**	**0**	**0**	**1**	**9**	**1.25**	**1**	**0.43**	**50.3**
	66.7%	**22.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**11.1%**					
Question-05: The course was organized in a way that enhanced my learning.	8	0	0	0	0	0	1	9	1.00	1	0.00	78.0
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-06: The course was intellectually stimulating.	7	1	0	0	0	0	1	9	1.13	1	0.33	66.9
	77.8%	11.1%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-07: The course improved my ability to think critically and reason effectively.	8	0	0	0	0	0	1	9	1.00	1	0.00	75.1
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	7	1	0	0	0	0	1	9	1.13	1	0.33	63.5
	77.8%	11.1%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	8	0	0	0	0	0	1	9	1.00	1	0.00	68.5
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-10: The instructor returned graded assignments in a timely manner.	6	2	0	0	0	0	1	9	1.25	1	0.43	57.4
	66.7%	22.2%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-11: The instructor's comments on course work were helpful.	8	0	0	0	0	0	1	9	1.00	1	0.00	78.8
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-12: The instructor was available for help outside of regular class times.	7	1	0	0	0	0	1	9	1.13	1	0.33	64.6
	77.8%	11.1%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-13: The instructor treated students respectfully, even when offering criticism.	8	0	0	0	0	0	1	9	1.00	1	0.00	56.4
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	8	0	0	0	0	0	1	9	1.00	1	0.00	64.3
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	6	2	0	0	0	0	1	9	1.25	1	0.43	86.1
	66.7%	22.2%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-16: Please rate the instructor's overall teaching effectiveness.	9	0	0	0	0	0	0	9	1.00	1	0.00	74.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Fall-2021

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	5			17			5					
	18.5			63.0			18.5					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	4		9		5		4		0		5	
	14.8%		33.3%		18.5%		14.8%		0.0%		18.5%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	7		7		0		7		1		0	5
	25.9%		25.9%		0.0%		25.9%		3.7%		0.0%	18.5%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**10**	**7**	**6**	**0**	**1**	**0**	**3**	**27**	**1.96**	**2**	**1.02**	**16.8**
	37.0%	**25.9%**	**22.2%**	**0.0%**	**3.7%**	**0.0%**	**11.1%**					
Question-05: The course was organized in a way that enhanced my learning.	13	7	1	2	1	0	3	27	1.79	1	1.12	29.4
	48.1%	25.9%	3.7%	7.4%	3.7%	0.0%	11.1%					
Question-06: The course was intellectually stimulating.	15	5	2	1	2	0	2	27	1.80	1	1.23	26.0
	55.6%	18.5%	7.4%	3.7%	7.4%	0.0%	7.4%					
Question-07: The course improved my ability to think critically and reason effectively.	13	6	3	1	1	0	3	27	1.79	1	1.08	33.6
	48.1%	22.2%	11.1%	3.7%	3.7%	0.0%	11.1%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	19	2	0	2	1	1	2	27	1.50	1	1.12	39.5
	70.4%	7.4%	0.0%	7.4%	3.7%	3.7%	7.4%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	18	2	0	0	3	1	3	27	1.61	1	1.34	27.7
	66.7%	7.4%	0.0%	0.0%	11.1%	3.7%	11.1%					
Question-10: The instructor returned graded assignments in a timely manner.	3	14	4	2	0	1	3	27	2.22	2	0.78	12.7
	11.1%	51.9%	14.8%	7.4%	0.0%	3.7%	11.1%					
Question-11: The instructor's comments on course work were helpful.	13	6	4	1	1	1	1	27	1.84	1	1.08	29.4
	48.1%	22.2%	14.8%	3.7%	3.7%	3.7%	3.7%					
Question-12: The instructor was available for help outside of regular class times.	14	4	5	0	2	2	0	27	1.88	1	1.21	14.3
	51.9%	14.8%	18.5%	0.0%	7.4%	7.4%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	18	2	0	0	3	1	3	27	1.61	1	1.34	16.0
	66.7%	7.4%	0.0%	0.0%	11.1%	3.7%	11.1%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	19	1	0	0	3	1	3	27	1.57	1	1.35	23.5
	70.4%	3.7%	0.0%	0.0%	11.1%	3.7%	11.1%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	4	12	7	1	1	0	2	27	2.32	2	0.93	6.7
	14.8%	44.4%	25.9%	3.7%	3.7%	0.0%	7.4%					
Question-16: Please rate the instructor's overall teaching effectiveness.	13	7	0	2	1	0	4	27	1.74	1	1.11	31.1
	48.1%	25.9%	0.0%	7.4%	3.7%	0.0%	14.8%					

BSC Course Evaluation for Fall-2021

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	0			7			3					
	0.0			70.0			30.0					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		4		3		0		0		3	
	0.0%		40.0%		30.0%		0.0%		0.0%		30.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	2		2		0		3		0		0	3
	20.0%		20.0%		0.0%		30.0%		0.0%		0.0%	30.0%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**5**	**2**	**1**	**0**	**0**	**0**	**2**	**10**	**1.50**	**1**	**0.71**	**35.7**
	50.0%	**20.0%**	**10.0%**	**0.0%**	**0.0%**	**0.0%**	**20.0%**					
Question-05: The course was organized in a way that enhanced my learning.	6	1	1	0	0	0	2	10	1.38	1	0.70	53.3
	60.0%	10.0%	10.0%	0.0%	0.0%	0.0%	20.0%					
Question-06: The course was intellectually stimulating.	6	0	2	1	0	0	1	10	1.78	1	1.13	24.0
	60.0%	0.0%	20.0%	10.0%	0.0%	0.0%	10.0%					
Question-07: The course improved my ability to think critically and reason effectively.	4	3	1	0	0	0	2	10	1.63	2	0.70	34.4
	40.0%	30.0%	10.0%	0.0%	0.0%	0.0%	20.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	6	1	0	1	0	1	1	10	1.50	1	1.00	32.3
	60.0%	10.0%	0.0%	10.0%	0.0%	10.0%	10.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	6	0	0	0	1	1	2	10	1.57	1	1.40	27.8
	60.0%	0.0%	0.0%	0.0%	10.0%	10.0%	20.0%					
Question-10: The instructor returned graded assignments in a timely manner.	1	4	2	0	0	1	2	10	2.14	2	0.64	18.8
	10.0%	40.0%	20.0%	0.0%	0.0%	10.0%	20.0%					
Question-11: The instructor's comments on course work were helpful.	3	3	2	1	0	1	0	10	2.11	2	0.99	17.5
	30.0%	30.0%	20.0%	10.0%	0.0%	10.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	5	1	2	0	0	2	0	10	1.63	1	0.86	25.3
	50.0%	10.0%	20.0%	0.0%	0.0%	20.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	6	0	0	0	1	1	2	10	1.57	1	1.40	20.7
	60.0%	0.0%	0.0%	0.0%	10.0%	10.0%	20.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	6	0	0	0	1	1	2	10	1.57	1	1.40	21.9
	60.0%	0.0%	0.0%	0.0%	10.0%	10.0%	20.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	2	4	2	0	0	0	2	10	2.00	2	0.71	34.3
	20.0%	40.0%	20.0%	0.0%	0.0%	0.0%	20.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	6	0	0	1	0	0	3	10	1.43	1	1.05	43.2
	60.0%	0.0%	0.0%	10.0%	0.0%	0.0%	30.0%					

BSC Course Evaluation for Fall-2021

Course Title: Intro to Education	Course Number: ED 201 D	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	2			5				1				
	25.0			62.5				12.5				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	2		2		1		2		0		1	
	25.0%		25.0%		12.5%		25.0%		0.0%		12.5%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	2		3		0		2		0		0	1
	25.0%		37.5%		0.0%		25.0%		0.0%		0.0%	12.5%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	2	**3**	**1**	**0**	**1**	**0**	**1**	**8**	**2.29**	**2**	**1.28**	**10.8**
	25.0%	**37.5%**	**12.5%**	**0.0%**	**12.5%**	**0.0%**	**12.5%**					
Question-05: The course was organized in a way that enhanced my learning.	3	2	0	1	1	0	1	8	2.29	2	1.48	13.5
	37.5%	25.0%	0.0%	12.5%	12.5%	0.0%	12.5%					
Question-06: The course was intellectually stimulating.	4	1	0	0	2	0	1	8	2.29	1	1.75	12.2
	50.0%	12.5%	0.0%	0.0%	25.0%	0.0%	12.5%					
Question-07: The course improved my ability to think critically and reason effectively.	5	0	0	1	1	0	1	8	2.00	1	1.60	18.7
	62.5%	0.0%	0.0%	12.5%	12.5%	0.0%	12.5%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	5	0	0	1	1	0	1	8	2.00	1	1.60	12.2
	62.5%	0.0%	0.0%	12.5%	12.5%	0.0%	12.5%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	5	0	0	0	2	0	1	8	2.14	1	1.81	8.9
	62.5%	0.0%	0.0%	0.0%	25.0%	0.0%	12.5%					
Question-10: The instructor returned graded assignments in a timely manner.	2	2	1	2	0	0	1	8	2.43	2	1.18	10.6
	25.0%	25.0%	12.5%	25.0%	0.0%	0.0%	12.5%					
Question-11: The instructor's comments on course work were helpful.	5	0	1	0	1	0	1	8	1.86	1	1.46	28.0
	62.5%	0.0%	12.5%	0.0%	12.5%	0.0%	12.5%					
Question-12: The instructor was available for help outside of regular class times.	5	0	1	0	2	0	0	8	2.25	1	1.71	7.6
	62.5%	0.0%	12.5%	0.0%	25.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	5	0	0	0	2	0	1	8	2.14	1	1.81	6.9
	62.5%	0.0%	0.0%	0.0%	25.0%	0.0%	12.5%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	5	0	0	0	2	0	1	8	2.14	1	1.81	8.9
	62.5%	0.0%	0.0%	0.0%	25.0%	0.0%	12.5%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	0	4	2	1	1	0	0	8	2.88	3	1.05	2.6
	0.0%	50.0%	25.0%	12.5%	12.5%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	4	1	0	1	1	0	1	8	2.14	1	1.55	16.4
	50.0%	12.5%	0.0%	12.5%	12.5%	0.0%	12.5%					

BSC Course Evaluation for Fall-2021

Course Title: Intro to Education	Course Number: ED 201 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male				Female				noResponse			
	3				5				1			
	33.3				55.6				11.1			
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	2		3		1		2		0		1	
	22.2%		33.3%		11.1%		22.2%		0.0%		11.1%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	3		2		0		2		1		0	1
	33.3%		22.2%		0.0%		22.2%		11.1%		0.0%	11.1%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**3**	**2**	**4**	**0**	**0**	**0**	**0**	**9**	**2.11**	**2**	**0.87**	**14.7**
	33.3%	**22.2%**	**44.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	4	4	0	1	0	0	0	9	1.78	2	0.92	27.5
	44.4%	44.4%	0.0%	11.1%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	5	4	0	0	0	0	0	9	1.44	1	0.50	42.7
	55.6%	44.4%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	4	3	2	0	0	0	0	9	1.78	2	0.79	27.5
	44.4%	33.3%	22.2%	0.0%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	8	1	0	0	0	0	0	9	1.11	1	0.31	69.7
	88.9%	11.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	7	2	0	0	0	0	0	9	1.22	1	0.42	54.3
	77.8%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	0	8	1	0	0	0	0	9	2.11	2	0.31	20.8
	0.0%	88.9%	11.1%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	5	3	1	0	0	0	0	9	1.56	1	0.68	44.8
	55.6%	33.3%	11.1%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	4	3	2	0	0	0	0	9	1.78	2	0.79	20.4
	44.4%	33.3%	22.2%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	7	2	0	0	0	0	0	9	1.22	1	0.42	40.8
	77.8%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	8	1	0	0	0	0	0	9	1.11	1	0.31	59.2
	88.9%	11.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	2	4	3	0	0	0	0	9	2.11	2	0.74	28.4
	22.2%	44.4%	33.3%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	3	6	0	0	0	0	0	9	1.67	2	0.47	30.5
	33.3%	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2021

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	3			20			6					
	10.3			69.0			20.7					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	9		2		7		4		0		7	
	31.0%		6.9%		24.1%		13.8%		0.0%		24.1%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	6		13		0		2		1		0	7
	20.7%		44.8%		0.0%		6.9%		3.4%		0.0%	24.1%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	16	**8**	**1**	**0**	**1**	**1**	**2**	**29**	**1.54**	**1**	**0.89**	**39.0**
	55.2%	**27.6%**	**3.4%**	**0.0%**	**3.4%**	**3.4%**	**6.9%**					
Question-05: The course was organized in a way that enhanced my learning.	17	5	2	2	0	0	3	29	1.58	1	0.93	48.3
	58.6%	17.2%	6.9%	6.9%	0.0%	0.0%	10.3%					
Question-06: The course was intellectually stimulating.	18	6	2	1	0	0	2	29	1.48	1	0.79	45.8
	62.1%	20.7%	6.9%	3.4%	0.0%	0.0%	6.9%					
Question-07: The course improved my ability to think critically and reason effectively.	16	6	3	1	0	0	3	29	1.58	1	0.84	46.6
	55.2%	20.7%	10.3%	3.4%	0.0%	0.0%	10.3%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	24	2	0	0	1	1	1	29	1.22	1	0.79	75.5
	82.8%	6.9%	0.0%	0.0%	3.4%	3.4%	3.4%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	25	1	0	1	0	0	2	29	1.15	1	0.59	78.0
	86.2%	3.4%	0.0%	3.4%	0.0%	0.0%	6.9%					
Question-10: The instructor returned graded assignments in a timely manner.	18	7	2	0	0	1	1	29	1.41	1	0.62	55.4
	62.1%	24.1%	6.9%	0.0%	0.0%	3.4%	3.4%					
Question-11: The instructor's comments on course work were helpful.	20	3	2	1	0	1	2	29	1.38	1	0.79	70.8
	69.0%	10.3%	6.9%	3.4%	0.0%	3.4%	6.9%					
Question-12: The instructor was available for help outside of regular class times.	19	6	1	1	0	0	2	29	1.41	1	0.73	43.5
	65.5%	20.7%	3.4%	3.4%	0.0%	0.0%	6.9%					
Question-13: The instructor treated students respectfully, even when offering criticism.	26	0	0	1	0	0	2	29	1.11	1	0.57	62.7
	89.7%	0.0%	0.0%	3.4%	0.0%	0.0%	6.9%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	25	1	0	1	0	0	2	29	1.15	1	0.59	70.3
	86.2%	3.4%	0.0%	3.4%	0.0%	0.0%	6.9%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	11	11	4	1	0	0	2	29	1.81	2	0.82	54.2
	37.9%	37.9%	13.8%	3.4%	0.0%	0.0%	6.9%					
Question-16: Please rate the instructor's overall teaching effectiveness.	19	6	1	0	1	0	2	29	1.44	1	0.87	50.9
	65.5%	20.7%	3.4%	0.0%	3.4%	0.0%	6.9%					

BSC Course Evaluation for Spring-2021

Course Title: Teaching Science and Health	Course Number: ED 324 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	0			7			0					
	0.0			100.0			0.0					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		0		7		0		0		0	
	0.0%		0.0%		100.0%		0.0%		0.0%		0.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		7		0		0		0		0	0
	0.0%		100.0%		0.0%		0.0%		0.0%		0.0%	0.0%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	2	**4**	**1**	**0**	**0**	**0**	**0**	**7**	**1.86**	**2**	**0.64**	**19.2**
	28.6%	**57.1%**	**14.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	5	1	1	0	0	0	0	7	1.43	1	0.73	53.5
	71.4%	14.3%	14.3%	0.0%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	4	3	0	0	0	0	0	7	1.43	1	0.49	46.8
	57.1%	42.9%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	5	2	0	0	0	0	0	7	1.29	1	0.45	64.5
	71.4%	28.6%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	6	1	0	0	0	0	0	7	1.14	1	0.35	65.8
	85.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	7	0	0	0	0	0	0	7	1.00	1	0.00	70.7
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	3	4	0	0	0	0	0	7	1.57	2	0.49	41.6
	42.9%	57.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	6	1	0	0	0	0	0	7	1.14	1	0.35	73.2
	85.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	4	3	0	0	0	0	0	7	1.43	1	0.49	34.1
	57.1%	42.9%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	7	0	0	0	0	0	0	7	1.00	1	0.00	58.8
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	7	0	0	0	0	0	0	7	1.00	1	0.00	69.8
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	2	5	0	0	0	0	0	7	1.71	2	0.45	59.6
	28.6%	71.4%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	5	2	0	0	0	0	0	7	1.29	1	0.45	59.9
	71.4%	28.6%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2021

Course Title: Intro to Education	Course Number: ED 201 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	3			6				3				
	25.0			50.0				25.0				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	6		2		0		1		0		3	
	50.0%		16.7%		0.0%		8.3%		0.0%		25.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	1		6		0		1		1		0	3
	8.3%		50.0%		0.0%		8.3%		8.3%		0.0%	25.0%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	7	**2**	**0**	**0**	**1**	**1**	**1**	**12**	**1.60**	**1**	**1.20**	**27.3**
	58.3%	**16.7%**	**0.0%**	**0.0%**	**8.3%**	**8.3%**	**8.3%**					
Question-05: The course was organized in a way that enhanced my learning.	5	3	0	2	0	0	2	12	1.90	2	1.14	23.3
	41.7%	25.0%	0.0%	16.7%	0.0%	0.0%	16.7%					
Question-06: The course was intellectually stimulating.	6	1	2	1	0	0	2	12	1.80	1	1.08	22.0
	50.0%	8.3%	16.7%	8.3%	0.0%	0.0%	16.7%					
Question-07: The course improved my ability to think critically and reason effectively.	5	3	1	1	0	0	2	12	1.80	2	0.98	27.3
	41.7%	25.0%	8.3%	8.3%	0.0%	0.0%	16.7%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	8	1	0	0	1	1	1	12	1.50	1	1.20	30.4
	66.7%	8.3%	0.0%	0.0%	8.3%	8.3%	8.3%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	9	0	0	1	0	0	2	12	1.30	1	0.90	47.5
	75.0%	0.0%	0.0%	8.3%	0.0%	0.0%	16.7%					
Question-10: The instructor returned graded assignments in a timely manner.	7	1	2	0	0	1	1	12	1.50	1	0.81	43.5
	58.3%	8.3%	16.7%	0.0%	0.0%	8.3%	8.3%					
Question-11: The instructor's comments on course work were helpful.	7	1	1	1	0	0	2	12	1.60	1	1.02	41.6
	58.3%	8.3%	8.3%	8.3%	0.0%	0.0%	16.7%					
Question-12: The instructor was available for help outside of regular class times.	7	2	0	1	0	0	2	12	1.50	1	0.92	27.0
	58.3%	16.7%	0.0%	8.3%	0.0%	0.0%	16.7%					
Question-13: The instructor treated students respectfully, even when offering criticism.	9	0	0	1	0	0	2	12	1.30	1	0.90	33.6
	75.0%	0.0%	0.0%	8.3%	0.0%	0.0%	16.7%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	9	0	0	1	0	0	2	12	1.30	1	0.90	44.0
	75.0%	0.0%	0.0%	8.3%	0.0%	0.0%	16.7%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	6	2	2	1	0	0	1	12	1.82	1	1.03	49.9
	50.0%	16.7%	16.7%	8.3%	0.0%	0.0%	8.3%					
Question-16: Please rate the instructor's overall teaching effectiveness.	7	2	0	0	1	0	2	12	1.60	1	1.20	34.4
	58.3%	16.7%	0.0%	0.0%	8.3%	0.0%	16.7%					

BSC Course Evaluation for Fall-2019

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	16			37				3				
	28.6			66.1				5.4				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	17		25		5		5		0		4	
	30.4%		44.6%		8.9%		8.9%		0.0%		7.1%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	20		22		1		5		2		0	6
	35.7%		39.3%		1.8%		8.9%		3.6%		0.0%	10.7%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	43	**12**	**0**	**1**	**0**	**0**	**0**	**56**	**1.27**	**1**	**0.55**	**66.3**
	76.8%	**21.4%**	**0.0%**	**1.8%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	38	15	0	2	1	0	0	56	1.45	1	0.82	58.5
	67.9%	26.8%	0.0%	3.6%	1.8%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	41	11	2	1	1	0	0	56	1.39	1	0.79	54.6
	73.2%	19.6%	3.6%	1.8%	1.8%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	42	9	2	2	1	0	0	56	1.41	1	0.86	65.5
	75.0%	16.1%	3.6%	3.6%	1.8%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	50	6	0	0	0	0	0	56	1.11	1	0.31	84.3
	89.3%	10.7%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	46	8	0	0	0	0	2	56	1.15	1	0.36	78.8
	82.1%	14.3%	0.0%	0.0%	0.0%	0.0%	3.6%					
Question-10: The instructor returned graded assignments in a timely manner.	48	7	1	0	0	0	0	56	1.16	1	0.41	81.9
	85.7%	12.5%	1.8%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	47	5	3	1	0	0	0	56	1.25	1	0.63	74.9
	83.9%	8.9%	5.4%	1.8%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	45	6	2	1	0	2	0	56	1.24	1	0.61	63.2
	80.4%	10.7%	3.6%	1.8%	0.0%	3.6%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	53	3	0	0	0	0	0	56	1.05	1	0.23	78.8
	94.6%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	55	1	0	0	0	0	0	56	1.02	1	0.13	89.8
	98.2%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	28	23	5	0	0	0	0	56	1.59	2	0.65	77.3
	50.0%	41.1%	8.9%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	46	8	2	0	0	0	0	56	1.21	1	0.49	71.8
	82.1%	14.3%	3.6%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Fall-2019

Course Title: Intro to Education	Course Number: ED 201 B	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male				Female				noResponse			
	4				13				0			
	23.5				76.5				0.0			
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	4		10		1		1		0		1	
	23.5%		58.8%		5.9%		5.9%		0.0%		5.9%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	5		8		0		3		0		0	1
	29.4%		47.1%		0.0%		17.6%		0.0%		0.0%	5.9%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	14	**3**	**0**	**0**	**0**	**0**	**0**	**17**	**1.18**	**1**	**0.38**	**67.4**
	82.4%	**17.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	12	5	0	0	0	0	0	17	1.29	1	0.46	64.9
	70.6%	29.4%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	13	3	1	0	0	0	0	17	1.29	1	0.57	57.5
	76.5%	17.6%	5.9%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	14	1	1	1	0	0	0	17	1.35	1	0.84	60.9
	82.4%	5.9%	5.9%	5.9%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	16	1	0	0	0	0	0	17	1.06	1	0.24	77.6
	94.1%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	15	2	0	0	0	0	0	17	1.12	1	0.32	69.2
	88.2%	11.8%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	15	2	0	0	0	0	0	17	1.12	1	0.32	75.7
	88.2%	11.8%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	15	2	0	0	0	0	0	17	1.12	1	0.32	81.6
	88.2%	11.8%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	14	3	0	0	0	0	0	17	1.18	1	0.38	59.2
	82.4%	17.6%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	16	1	0	0	0	0	0	17	1.06	1	0.24	66.4
	94.1%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	16	1	0	0	0	0	0	17	1.06	1	0.24	70.5
	94.1%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	8	9	0	0	0	0	0	17	1.53	2	0.50	74.2
	47.1%	52.9%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	14	3	0	0	0	0	0	17	1.18	1	0.38	67.7
	82.4%	17.6%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Fall-2019

Course Title: Intro to Education	Course Number: ED 201 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	7			11				2				
	35.0			55.0				10.0				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	3		9		4		2		0		2	
	15.0%		45.0%		20.0%		10.0%		0.0%		10.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	10		3		1		2		1		0	3
	50.0%		15.0%		5.0%		10.0%		5.0%		0.0%	15.0%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**17**	**2**	**0**	**1**	**0**	**0**	**0**	**20**	**1.25**	**1**	**0.70**	**60.0**
	85.0%	**10.0%**	**0.0%**	**5.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	15	4	0	0	1	0	0	20	1.40	1	0.92	54.4
	75.0%	20.0%	0.0%	0.0%	5.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	16	3	0	0	1	0	0	20	1.35	1	0.91	52.9
	80.0%	15.0%	0.0%	0.0%	5.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	13	6	0	0	1	0	0	20	1.50	1	0.92	47.9
	65.0%	30.0%	0.0%	0.0%	5.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	17	3	0	0	0	0	0	20	1.15	1	0.36	65.9
	85.0%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	17	1	0	0	0	0	2	20	1.06	1	0.23	74.8
	85.0%	5.0%	0.0%	0.0%	0.0%	0.0%	10.0%					
Question-10: The instructor returned graded assignments in a timely manner.	19	0	1	0	0	0	0	20	1.10	1	0.44	78.9
	95.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	19	0	1	0	0	0	0	20	1.10	1	0.44	82.9
	95.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	17	2	1	0	0	0	0	20	1.20	1	0.51	56.7
	85.0%	10.0%	5.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	20	0	0	0	0	0	0	20	1.00	1	0.00	70.1
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	20	0	0	0	0	0	0	20	1.00	1	0.00	74.2
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	11	7	2	0	0	0	0	20	1.55	1	0.67	72.6
	55.0%	35.0%	10.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	16	3	1	0	0	0	0	20	1.25	1	0.54	60.6
	80.0%	15.0%	5.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2021

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	0			7			3					
	0.0			70.0			30.0					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	3		0		0		3		0		4	
	30.0%		0.0%		0.0%		30.0%		0.0%		40.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	5		0		0		1		0		0	4
	50.0%		0.0%		0.0%		10.0%		0.0%		0.0%	40.0%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	7	**2**	**0**	**0**	**0**	**0**	**1**	**10**	**1.22**	**1**	**0.42**	**63.0**
	70.0%	**20.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**10.0%**					
Question-05: The course was organized in a way that enhanced my learning.	7	1	1	0	0	0	1	10	1.33	1	0.67	59.4
	70.0%	10.0%	10.0%	0.0%	0.0%	0.0%	10.0%					
Question-06: The course was intellectually stimulating.	8	2	0	0	0	0	0	10	1.20	1	0.40	63.9
	80.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	6	1	2	0	0	0	1	10	1.56	1	0.83	41.9
	60.0%	10.0%	20.0%	0.0%	0.0%	0.0%	10.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	10	0	0	0	0	0	0	10	1.00	1	0.00	72.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	9	1	0	0	0	0	0	10	1.10	1	0.30	65.8
	90.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	8	2	0	0	0	0	0	10	1.20	1	0.40	68.6
	80.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	7	1	1	0	0	1	0	10	1.33	1	0.67	62.0
	70.0%	10.0%	10.0%	0.0%	0.0%	10.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	8	1	1	0	0	0	0	10	1.30	1	0.64	46.2
	80.0%	10.0%	10.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	10	0	0	0	0	0	0	10	1.00	1	0.00	58.8
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	9	1	0	0	0	0	0	10	1.10	1	0.30	62.7
	90.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	3	4	2	0	0	0	1	10	1.89	2	0.74	44.4
	30.0%	40.0%	20.0%	0.0%	0.0%	0.0%	10.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	7	2	1	0	0	0	0	10	1.40	1	0.66	49.3
	70.0%	20.0%	10.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2019

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	6			18			2					
	23.1			69.2			7.7					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	5		7		10		3		0		1	
	19.2%		26.9%		38.5%		11.5%		0.0%		3.8%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	2		15		1		5		1		0	2
	7.7%		57.7%		3.8%		19.2%		3.8%		0.0%	7.7%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	16	**8**	**2**	**0**	**0**	**0**	**0**	**26**	**1.46**	**1**	**0.63**	**44.7**
	61.5%	**30.8%**	**7.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	14	7	4	1	0	0	0	26	1.69	1	0.87	37.0
	53.8%	26.9%	15.4%	3.8%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	13	8	5	0	0	0	0	26	1.69	2	0.77	34.7
	50.0%	30.8%	19.2%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	15	7	3	1	0	0	0	26	1.62	1	0.84	46.2
	57.7%	26.9%	11.5%	3.8%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	20	4	0	2	0	0	0	26	1.38	1	0.84	50.8
	76.9%	15.4%	0.0%	7.7%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	21	3	2	0	0	0	0	26	1.27	1	0.59	56.2
	80.8%	11.5%	7.7%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	12	7	5	1	1	0	0	26	1.92	2	1.07	24.1
	46.2%	26.9%	19.2%	3.8%	3.8%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	15	8	2	0	1	0	0	26	1.62	1	0.92	43.9
	57.7%	30.8%	7.7%	0.0%	3.8%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	19	3	3	0	0	1	0	26	1.36	1	0.69	53.9
	73.1%	11.5%	11.5%	0.0%	0.0%	3.8%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	22	3	1	0	0	0	0	26	1.19	1	0.48	56.2
	84.6%	11.5%	3.8%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	20	3	3	0	0	0	0	26	1.35	1	0.68	37.7
	76.9%	11.5%	11.5%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	15	7	4	0	0	0	0	26	1.58	1	0.74	70.8
	57.7%	26.9%	15.4%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	16	7	2	1	0	0	0	26	1.54	1	0.80	41.6
	61.5%	26.9%	7.7%	3.8%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2019

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	5			8			2					
	33.3			53.3			13.3					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	5		7		1		1		0		1	
	33.3%		46.7%		6.7%		6.7%		0.0%		6.7%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	2		5		1		4		1		0	2
	13.3%		33.3%		6.7%		26.7%		6.7%		0.0%	13.3%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**8**	**5**	**2**	**0**	**0**	**0**	**0**	**15**	**1.60**	**1**	**0.71**	**26.8**
	53.3%	**33.3%**	**13.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	8	2	4	1	0	0	0	15	1.87	1	1.02	24.0
	53.3%	13.3%	26.7%	6.7%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	8	3	4	0	0	0	0	15	1.73	1	0.85	29.1
	53.3%	20.0%	26.7%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	7	5	2	1	0	0	0	15	1.80	2	0.91	28.0
	46.7%	33.3%	13.3%	6.7%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	11	2	0	2	0	0	0	15	1.53	1	1.02	30.0
	73.3%	13.3%	0.0%	13.3%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	11	2	2	0	0	0	0	15	1.40	1	0.71	33.1
	73.3%	13.3%	13.3%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	6	4	3	1	1	0	0	15	2.13	2	1.20	15.7
	40.0%	26.7%	20.0%	6.7%	6.7%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	8	5	1	0	1	0	0	15	1.73	1	1.06	32.5
	53.3%	33.3%	6.7%	0.0%	6.7%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	11	1	3	0	0	0	0	15	1.47	1	0.81	31.4
	73.3%	6.7%	20.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	11	3	1	0	0	0	0	15	1.33	1	0.60	30.0
	73.3%	20.0%	6.7%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	10	2	3	0	0	0	0	15	1.53	1	0.81	21.5
	66.7%	13.3%	20.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	9	3	3	0	0	0	0	15	1.60	1	0.80	59.5
	60.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	7	5	2	1	0	0	0	15	1.80	2	0.91	20.9
	46.7%	33.3%	13.3%	6.7%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Fall-2018

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	25			33				13				
	35.2			46.5				18.3				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	25		25		2		6		0		13	
	35.2%		35.2%		2.8%		8.5%		0.0%		18.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	13		26		1		7		9		1	14
	18.3%		36.6%		1.4%		9.9%		12.7%		1.4%	19.7%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	42	**19**	**3**	**4**	**1**	**0**	**2**	71	**1.59**	**1**	**0.92**	**38.2**
	59.2%	**26.8%**	**4.2%**	**5.6%**	**1.4%**	**0.0%**	**2.8%**					
Question-05: The course was organized in a way that enhanced my learning.	40	17	8	1	3	0	2	71	1.70	1	1.03	42.6
	56.3%	23.9%	11.3%	1.4%	4.2%	0.0%	2.8%					
Question-06: The course was intellectually stimulating.	42	10	10	5	3	0	1	71	1.81	1	1.17	28.4
	59.2%	14.1%	14.1%	7.0%	4.2%	0.0%	1.4%					
Question-07: The course improved my ability to think critically and reason effectively.	44	13	6	1	3	1	3	71	1.60	1	1.02	49.4
	62.0%	18.3%	8.5%	1.4%	4.2%	1.4%	4.2%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	50	11	3	1	2	0	4	71	1.42	1	0.88	47.1
	70.4%	15.5%	4.2%	1.4%	2.8%	0.0%	5.6%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	53	8	5	1	1	0	3	71	1.37	1	0.80	44.9
	74.6%	11.3%	7.0%	1.4%	1.4%	0.0%	4.2%					
Question-10: The instructor returned graded assignments in a timely manner.	37	15	12	3	1	0	3	71	1.76	1	0.99	32.9
	52.1%	21.1%	16.9%	4.2%	1.4%	0.0%	4.2%					
Question-11: The instructor's comments on course work were helpful.	40	22	4	1	2	0	2	71	1.59	1	0.89	49.4
	56.3%	31.0%	5.6%	1.4%	2.8%	0.0%	2.8%					
Question-12: The instructor was available for help outside of regular class times.	51	12	0	0	0	4	4	71	1.19	1	0.39	78.5
	71.8%	16.9%	0.0%	0.0%	0.0%	5.6%	5.6%					
Question-13: The instructor treated students respectfully, even when offering criticism.	62	6	0	0	0	0	3	71	1.09	1	0.28	75.5
	87.3%	8.5%	0.0%	0.0%	0.0%	0.0%	4.2%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	60	7	1	0	0	0	3	71	1.13	1	0.38	74.7
	84.5%	9.9%	1.4%	0.0%	0.0%	0.0%	4.2%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	38	20	6	3	1	0	3	71	1.66	1	0.92	69.4
	53.5%	28.2%	8.5%	4.2%	1.4%	0.0%	4.2%					
Question-16: Please rate the instructor's overall teaching effectiveness.	53	11	2	1	2	0	2	71	1.38	1	0.85	62.0
	74.6%	15.5%	2.8%	1.4%	2.8%	0.0%	2.8%					

BSC Course Evaluation for Fall-2018

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male	Female	noResponse
	5	11	6
	22.7	50.0	27.3

Question-02: Class level?	FirstYear	Sophomore	Junior	Senior	Graduate	noResponse
	6	6	1	3	0	6
	27.3%	27.3%	4.5%	13.6%	0.0%	27.3%

Question-03: Reason for enrollment?	General Education	Major	Minor	Elective	Schedule Convenience	Grade Redemption	noResponse
	6	8	0	1	1	0	6
	27.3%	36.4%	0.0%	4.5%	4.5%	0.0%	27.3%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**14**	**6**	**0**	**0**	**0**	**0**	**2**	**22**	**1.30**	**1**	**0.46**	**59.5**
	63.6%	**27.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**9.1%**					
Question-05: The course was organized in a way that enhanced my learning.	17	2	1	0	0	0	2	22	1.20	1	0.51	74.7
	77.3%	9.1%	4.5%	0.0%	0.0%	0.0%	9.1%					
Question-06: The course was intellectually stimulating.	17	2	1	1	0	0	1	22	1.33	1	0.78	59.5
	77.3%	9.1%	4.5%	4.5%	0.0%	0.0%	4.5%					
Question-07: The course improved my ability to think critically and reason effectively.	18	1	0	0	0	0	3	22	1.05	1	0.22	87.8
	81.8%	4.5%	0.0%	0.0%	0.0%	0.0%	13.6%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	16	3	0	0	0	0	3	22	1.16	1	0.36	68.7
	72.7%	13.6%	0.0%	0.0%	0.0%	0.0%	13.6%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	18	0	1	0	0	0	3	22	1.11	1	0.45	72.7
	81.8%	0.0%	4.5%	0.0%	0.0%	0.0%	13.6%					
Question-10: The instructor returned graded assignments in a timely manner.	14	3	2	0	0	0	3	22	1.37	1	0.67	57.0
	63.6%	13.6%	9.1%	0.0%	0.0%	0.0%	13.6%					
Question-11: The instructor's comments on course work were helpful.	13	4	2	1	0	0	2	22	1.55	1	0.86	51.6
	59.1%	18.2%	9.1%	4.5%	0.0%	0.0%	9.1%					
Question-12: The instructor was available for help outside of regular class times.	17	2	0	0	0	1	2	22	1.11	1	0.31	77.3
	77.3%	9.1%	0.0%	0.0%	0.0%	4.5%	9.1%					
Question-13: The instructor treated students respectfully, even when offering criticism.	20	0	0	0	0	0	2	22	1.00	1	0.00	70.7
	90.9%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	20	0	0	0	0	0	2	22	1.00	1	0.00	76.7
	90.9%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	12	5	2	0	0	0	3	22	1.47	1	0.68	81.0
	54.5%	22.7%	9.1%	0.0%	0.0%	0.0%	13.6%					
Question-16: Please rate the instructor's overall teaching effectiveness.	18	2	0	0	0	0	2	22	1.10	1	0.30	80.5
	81.8%	9.1%	0.0%	0.0%	0.0%	0.0%	9.1%					

BSC Course Evaluation for Fall-2018

Course Title: Intro to Education	Course Number: ED 201 B	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male				Female				noResponse			
	6				11				5			
	27.3				50.0				22.7			
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	5		12		0		0		0		5	
	22.7%		54.5%		0.0%		0.0%		0.0%		22.7%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	3		9		0		2		2		1	5
	13.6%		40.9%		0.0%		9.1%		9.1%		4.5%	22.7%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**14**	**5**	**1**	**2**	**0**	**0**	**0**	**22**	**1.59**	**1**	**0.94**	**35.7**
	63.6%	**22.7%**	**4.5%**	**9.1%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	13	4	3	0	2	0	0	22	1.82	1	1.23	33.4
	59.1%	18.2%	13.6%	0.0%	9.1%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	13	3	4	1	1	0	0	22	1.82	1	1.15	27.3
	59.1%	13.6%	18.2%	4.5%	4.5%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	13	6	2	1	0	0	0	22	1.59	1	0.83	45.3
	59.1%	27.3%	9.1%	4.5%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	16	3	0	0	2	0	1	22	1.52	1	1.18	34.4
	72.7%	13.6%	0.0%	0.0%	9.1%	0.0%	4.5%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	15	4	1	1	1	0	0	22	1.59	1	1.07	28.4
	68.2%	18.2%	4.5%	4.5%	4.5%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	12	3	7	0	0	0	0	22	1.77	1	0.90	30.8
	54.5%	13.6%	31.8%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	13	7	1	0	1	0	0	22	1.59	1	0.94	46.3
	59.1%	31.8%	4.5%	0.0%	4.5%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	15	5	0	0	0	1	1	22	1.25	1	0.43	57.0
	68.2%	22.7%	0.0%	0.0%	0.0%	4.5%	4.5%					
Question-13: The instructor treated students respectfully, even when offering criticism.	17	4	0	0	0	0	1	22	1.19	1	0.39	48.2
	77.3%	18.2%	0.0%	0.0%	0.0%	0.0%	4.5%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	18	3	1	0	0	0	0	22	1.23	1	0.52	50.2
	81.8%	13.6%	4.5%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	12	6	2	1	1	0	0	22	1.77	1	1.08	47.8
	54.5%	27.3%	9.1%	4.5%	4.5%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	17	3	1	0	1	0	0	22	1.41	1	0.94	51.0
	77.3%	13.6%	4.5%	0.0%	4.5%	0.0%	0.0%					

BSC Course Evaluation for Fall-2018

Course Title: Intro to Education	Course Number: ED 201 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	14			11			2					
	51.9			40.7			7.4					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	14		7		1		3		0		2	
	51.9%		25.9%		3.7%		11.1%		0.0%		7.4%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	4		9		1		4		6		0	3
	14.8%		33.3%		3.7%		14.8%		22.2%		0.0%	11.1%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**14**	**8**	**2**	**2**	**1**	**0**	**0**	**27**	**1.81**	**1**	**1.09**	**21.3**
	51.9%	**29.6%**	**7.4%**	**7.4%**	**3.7%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	10	11	4	1	1	0	0	27	1.96	2	1.00	26.5
	37.0%	40.7%	14.8%	3.7%	3.7%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	12	5	5	3	2	0	0	27	2.19	2	1.31	11.5
	44.4%	18.5%	18.5%	11.1%	7.4%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	13	6	4	0	3	1	0	27	2.00	2	1.30	20.0
	48.1%	22.2%	14.8%	0.0%	11.1%	3.7%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	18	5	3	1	0	0	0	27	1.52	1	0.83	34.4
	66.7%	18.5%	11.1%	3.7%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	20	4	3	0	0	0	0	27	1.37	1	0.67	43.4
	74.1%	14.8%	11.1%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	11	9	3	3	1	0	0	27	2.04	2	1.14	20.0
	40.7%	33.3%	11.1%	11.1%	3.7%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	14	11	1	0	1	0	0	27	1.63	1	0.87	43.7
	51.9%	40.7%	3.7%	0.0%	3.7%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	19	5	0	0	0	2	1	27	1.21	1	0.41	63.7
	70.4%	18.5%	0.0%	0.0%	0.0%	7.4%	3.7%					
Question-13: The instructor treated students respectfully, even when offering criticism.	25	2	0	0	0	0	0	27	1.07	1	0.26	66.1
	92.6%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	22	4	0	0	0	0	1	27	1.15	1	0.36	60.9
	81.5%	14.8%	0.0%	0.0%	0.0%	0.0%	3.7%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	14	9	2	2	0	0	0	27	1.70	1	0.90	54.5
	51.9%	33.3%	7.4%	7.4%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	18	6	1	1	1	0	0	27	1.56	1	0.99	40.9
	66.7%	22.2%	3.7%	3.7%	3.7%	0.0%	0.0%					

BSC Course Evaluation for Spring-2018

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	8			38			8					
	14.8			70.4			14.8					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	9		3		29		8		0		5	
	16.7%		5.6%		53.7%		14.8%		0.0%		9.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	4		40		1		2		0		0	7
	7.4%		74.1%		1.9%		3.7%		0.0%		0.0%	13.0%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**41**	**9**	**1**	**1**	**0**	**0**	**2**	**54**	**1.27**	**1**	**0.59**	**72.1**
	75.9%	**16.7%**	**1.9%**	**1.9%**	**0.0%**	**0.0%**	**3.7%**					
Question-05: The course was organized in a way that enhanced my learning.	40	4	6	1	0	1	2	54	1.37	1	0.77	73.7
	74.1%	7.4%	11.1%	1.9%	0.0%	1.9%	3.7%					
Question-06: The course was intellectually stimulating.	36	13	0	2	0	1	2	54	1.37	1	0.68	71.3
	66.7%	24.1%	0.0%	3.7%	0.0%	1.9%	3.7%					
Question-07: The course improved my ability to think critically and reason effectively.	41	9	0	1	0	1	2	54	1.24	1	0.55	85.6
	75.9%	16.7%	0.0%	1.9%	0.0%	1.9%	3.7%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	46	5	0	1	0	1	1	54	1.15	1	0.50	87.2
	85.2%	9.3%	0.0%	1.9%	0.0%	1.9%	1.9%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	48	3	0	1	0	1	1	54	1.12	1	0.47	89.5
	88.9%	5.6%	0.0%	1.9%	0.0%	1.9%	1.9%					
Question-10: The instructor returned graded assignments in a timely manner.	41	9	1	1	0	1	1	54	1.27	1	0.59	75.2
	75.9%	16.7%	1.9%	1.9%	0.0%	1.9%	1.9%					
Question-11: The instructor's comments on course work were helpful.	36	9	5	2	0	0	2	54	1.48	1	0.82	62.6
	66.7%	16.7%	9.3%	3.7%	0.0%	0.0%	3.7%					
Question-12: The instructor was available for help outside of regular class times.	43	5	1	2	0	1	2	54	1.25	1	0.68	72.1
	79.6%	9.3%	1.9%	3.7%	0.0%	1.9%	3.7%					
Question-13: The instructor treated students respectfully, even when offering criticism.	50	1	0	2	0	0	1	54	1.13	1	0.58	69.7
	92.6%	1.9%	0.0%	3.7%	0.0%	0.0%	1.9%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	50	1	0	2	0	0	1	54	1.13	1	0.58	80.8
	92.6%	1.9%	0.0%	3.7%	0.0%	0.0%	1.9%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	32	16	2	3	0	0	1	54	1.55	1	0.81	80.9
	59.3%	29.6%	3.7%	5.6%	0.0%	0.0%	1.9%					
Question-16: Please rate the instructor's overall teaching effectiveness.	42	9	0	2	0	0	1	54	1.28	1	0.66	75.3
	77.8%	16.7%	0.0%	3.7%	0.0%	0.0%	1.9%					

BSC Course Evaluation for Spring-2018

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	0			15			4					
	0.0			78.9			21.1					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	9		3		0		3		0		4	
	47.4%		15.8%		0.0%		15.8%		0.0%		21.1%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	4		7		1		2		0		0	5
	21.1%		36.8%		5.3%		10.5%		0.0%		0.0%	26.3%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**15**	**2**	**0**	**1**	**0**	**0**	**1**	**19**	**1.28**	**1**	**0.73**	**58.0**
	78.9%	**10.5%**	**0.0%**	**5.3%**	**0.0%**	**0.0%**	**5.3%**					
Question-05: The course was organized in a way that enhanced my learning.	13	2	2	1	0	0	1	19	1.50	1	0.90	48.3
	68.4%	10.5%	10.5%	5.3%	0.0%	0.0%	5.3%					
Question-06: The course was intellectually stimulating.	8	8	0	2	0	0	1	19	1.78	2	0.92	24.7
	42.1%	42.1%	0.0%	10.5%	0.0%	0.0%	5.3%					
Question-07: The course improved my ability to think critically and reason effectively.	11	6	0	1	0	0	1	19	1.50	1	0.76	48.3
	57.9%	31.6%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	14	3	0	1	0	0	1	19	1.33	1	0.75	47.0
	73.7%	15.8%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	16	1	0	1	0	0	1	19	1.22	1	0.71	58.7
	84.2%	5.3%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-10: The instructor returned graded assignments in a timely manner.	11	5	1	1	0	0	1	19	1.56	1	0.83	40.6
	57.9%	26.3%	5.3%	5.3%	0.0%	0.0%	5.3%					
Question-11: The instructor's comments on course work were helpful.	7	7	2	2	0	0	1	19	1.94	2	0.97	26.3
	36.8%	36.8%	10.5%	10.5%	0.0%	0.0%	5.3%					
Question-12: The instructor was available for help outside of regular class times.	11	5	1	1	0	0	1	19	1.56	1	0.83	26.9
	57.9%	26.3%	5.3%	5.3%	0.0%	0.0%	5.3%					
Question-13: The instructor treated students respectfully, even when offering criticism.	16	1	0	1	0	0	1	19	1.22	1	0.71	46.1
	84.2%	5.3%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	16	1	0	1	0	0	1	19	1.22	1	0.71	56.8
	84.2%	5.3%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	8	6	2	2	0	0	1	19	1.89	2	0.99	29.8
	42.1%	31.6%	10.5%	10.5%	0.0%	0.0%	5.3%					
Question-16: Please rate the instructor's overall teaching effectiveness.	13	4	0	1	0	0	1	19	1.39	1	0.76	52.6
	68.4%	21.1%	0.0%	5.3%	0.0%	0.0%	5.3%					

BSC Course Evaluation for Spring-2018

Course Title: Sr Conference Research	Course Number: ED C472 1	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	1			1			0					
	50.0			50.0			0.0					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		0		1		1		0		0	
	0.0%		0.0%		50.0%		50.0%		0.0%		0.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		2		0		0		0		0	0
	0.0%		100.0%		0.0%		0.0%		0.0%		0.0%	0.0%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	2	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1.00**	**1**	**0.00**	**83.1**
	100.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	2	0	0	0	0	0	0	2	1.00	1	0.00	86.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	2	0	0	0	0	0	0	2	1.00	1	0.00	82.2
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	2	0	0	0	0	0	0	2	1.00	1	0.00	86.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	2	0	0	0	0	0	0	2	1.00	1	0.00	81.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	2	0	0	0	0	0	0	2	1.00	1	0.00	77.5
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	2	0	0	0	0	0	0	2	1.00	1	0.00	86.4
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	2	0	0	0	0	0	0	2	1.00	1	0.00	86.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	2	0	0	0	0	0	0	2	1.00	1	0.00	80.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	2	0	0	0	0	0	0	2	1.00	1	0.00	73.1
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	2	0	0	0	0	0	0	2	1.00	1	0.00	76.9
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	2	0	0	0	0	0	0	2	1.00	1	0.00	93.5
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	2	0	0	0	0	0	0	2	1.00	1	0.00	82.8
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2018

Course Title: Teaching Science and Health	Course Number: ED 324 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	3			9			2					
	21.4			64.3			14.3					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		0		12		2		0		0	
	0.0%		0.0%		85.7%		14.3%		0.0%		0.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		13		0		0		0		0	1
	0.0%		92.9%		0.0%		0.0%		0.0%		0.0%	7.1%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	11	**3**	**0**	**0**	**0**	**0**	**0**	**14**	**1.21**	**1**	**0.41**	**65.2**
	78.6%	**21.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	12	1	1	0	0	0	0	14	1.21	1	0.56	75.0
	85.7%	7.1%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	11	2	0	0	0	0	1	14	1.15	1	0.36	74.6
	78.6%	14.3%	0.0%	0.0%	0.0%	0.0%	7.1%					
Question-07: The course improved my ability to think critically and reason effectively.	11	2	0	0	0	0	1	14	1.15	1	0.36	79.7
	78.6%	14.3%	0.0%	0.0%	0.0%	0.0%	7.1%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	13	1	0	0	0	0	0	14	1.07	1	0.26	78.8
	92.9%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	14	0	0	0	0	0	0	14	1.00	1	0.00	77.5
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	13	1	0	0	0	0	0	14	1.07	1	0.26	83.5
	92.9%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	12	1	1	0	0	0	0	14	1.21	1	0.56	77.2
	85.7%	7.1%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	14	0	0	0	0	0	0	14	1.00	1	0.00	80.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	14	0	0	0	0	0	0	14	1.00	1	0.00	73.1
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	14	0	0	0	0	0	0	14	1.00	1	0.00	76.9
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	10	4	0	0	0	0	0	14	1.29	1	0.45	89.8
	71.4%	28.6%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	12	2	0	0	0	0	0	14	1.14	1	0.35	73.3
	85.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2018

Course Title: Teaching Mathematics	Course Number: ED 320 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male				Female				noResponse			
	4				13				2			
	21.1				68.4				10.5			
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		0		16		2		0		1	
	0.0%		0.0%		84.2%		10.5%		0.0%		5.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		18		0		0		0		0	1
	0.0%		94.7%		0.0%		0.0%		0.0%		0.0%	5.3%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**13**	**4**	**1**	**0**	**0**	**0**	**1**	**19**	**1.33**	**1**	**0.58**	**53.3**
	68.4%	**21.1%**	**5.3%**	**0.0%**	**0.0%**	**0.0%**	**5.3%**					
Question-05: The course was organized in a way that enhanced my learning.	13	1	3	0	0	1	1	19	1.41	1	0.77	59.9
	68.4%	5.3%	15.8%	0.0%	0.0%	5.3%	5.3%					
Question-06: The course was intellectually stimulating.	15	3	0	0	0	1	0	19	1.17	1	0.37	72.1
	78.9%	15.8%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	17	1	0	0	0	1	0	19	1.06	1	0.23	85.6
	89.5%	5.3%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	17	1	0	0	0	1	0	19	1.06	1	0.23	79.4
	89.5%	5.3%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	16	2	0	0	0	1	0	19	1.11	1	0.31	73.4
	84.2%	10.5%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	15	3	0	0	0	1	0	19	1.17	1	0.37	75.2
	78.9%	15.8%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-11: The instructor's comments on course work were helpful.	15	1	2	0	0	0	1	19	1.28	1	0.65	72.4
	78.9%	5.3%	10.5%	0.0%	0.0%	0.0%	5.3%					
Question-12: The instructor was available for help outside of regular class times.	16	0	0	1	0	1	1	19	1.18	1	0.71	64.9
	84.2%	0.0%	0.0%	5.3%	0.0%	5.3%	5.3%					
Question-13: The instructor treated students respectfully, even when offering criticism.	18	0	0	1	0	0	0	19	1.16	1	0.67	55.8
	94.7%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	18	0	0	1	0	0	0	19	1.16	1	0.67	64.9
	94.7%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	12	6	0	1	0	0	0	19	1.47	1	0.75	80.1
	63.2%	31.6%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	15	3	0	1	0	0	0	19	1.32	1	0.73	60.5
	78.9%	15.8%	0.0%	5.3%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Fall-2017

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	8			31				16				
	14.5			56.4				29.1				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	21		11		4		4		0		15	
	38.2%		20.0%		7.3%		7.3%		0.0%		27.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	5		25		1		6		2		1	15
	9.1%		45.5%		1.8%		10.9%		3.6%		1.8%	27.3%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**31**	**10**	**6**	**3**	**0**	**0**	**5**	**55**	**1.62**	**1**	**0.91**	**39.4**
	56.4%	**18.2%**	**10.9%**	**5.5%**	**0.0%**	**0.0%**	**9.1%**					
Question-05: The course was organized in a way that enhanced my learning.	25	17	3	4	0	0	6	55	1.71	1	0.90	43.3
	45.5%	30.9%	5.5%	7.3%	0.0%	0.0%	10.9%					
Question-06: The course was intellectually stimulating.	24	13	8	4	1	1	4	55	1.90	2	1.06	22.1
	43.6%	23.6%	14.5%	7.3%	1.8%	1.8%	7.3%					
Question-07: The course improved my ability to think critically and reason effectively.	25	14	5	4	1	0	6	55	1.82	1	1.04	34.7
	45.5%	25.5%	9.1%	7.3%	1.8%	0.0%	10.9%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	39	7	2	0	1	0	6	55	1.31	1	0.73	67.0
	70.9%	12.7%	3.6%	0.0%	1.8%	0.0%	10.9%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	34	12	3	0	0	0	6	55	1.37	1	0.60	55.1
	61.8%	21.8%	5.5%	0.0%	0.0%	0.0%	10.9%					
Question-10: The instructor returned graded assignments in a timely manner.	32	13	3	1	0	0	6	55	1.45	1	0.70	53.6
	58.2%	23.6%	5.5%	1.8%	0.0%	0.0%	10.9%					
Question-11: The instructor's comments on course work were helpful.	29	8	7	4	1	0	6	55	1.78	1	1.09	37.8
	52.7%	14.5%	12.7%	7.3%	1.8%	0.0%	10.9%					
Question-12: The instructor was available for help outside of regular class times.	37	10	1	1	0	0	6	55	1.31	1	0.61	59.1
	67.3%	18.2%	1.8%	1.8%	0.0%	0.0%	10.9%					
Question-13: The instructor treated students respectfully, even when offering criticism.	45	2	2	0	0	0	6	55	1.12	1	0.43	78.5
	81.8%	3.6%	3.6%	0.0%	0.0%	0.0%	10.9%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	46	2	1	1	0	0	5	55	1.14	1	0.53	84.1
	83.6%	3.6%	1.8%	1.8%	0.0%	0.0%	9.1%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	20	19	11	0	0	0	5	55	1.82	2	0.77	47.2
	36.4%	34.5%	20.0%	0.0%	0.0%	0.0%	9.1%					
Question-16: Please rate the instructor's overall teaching effectiveness.	31	11	7	0	1	0	5	55	1.58	1	0.87	48.1
	56.4%	20.0%	12.7%	0.0%	1.8%	0.0%	9.1%					

BSC Course Evaluation for Fall-2017

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	3			8			7					
	16.7			44.4			38.9					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	4		7		0		0		0		7	
	22.2%		38.9%		0.0%		0.0%		0.0%		38.9%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	2		5		1		1		1		0	8
	11.1%		27.8%		5.6%		5.6%		5.6%		0.0%	44.4%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**8**	**3**	**3**	**0**	**0**	**0**	**4**	**18**	**1.64**	**1**	**0.81**	**32.3**
	44.4%	**16.7%**	**16.7%**	**0.0%**	**0.0%**	**0.0%**	**22.2%**					
Question-05: The course was organized in a way that enhanced my learning.	4	8	0	1	0	0	5	18	1.85	2	0.77	33.9
	22.2%	44.4%	0.0%	5.6%	0.0%	0.0%	27.8%					
Question-06: The course was intellectually stimulating.	9	3	0	2	0	1	3	18	1.64	1	1.04	42.2
	50.0%	16.7%	0.0%	11.1%	0.0%	5.6%	16.7%					
Question-07: The course improved my ability to think critically and reason effectively.	6	4	2	1	0	0	5	18	1.85	2	0.95	32.2
	33.3%	22.2%	11.1%	5.6%	0.0%	0.0%	27.8%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	10	2	1	0	0	0	5	18	1.31	1	0.61	54.7
	55.6%	11.1%	5.6%	0.0%	0.0%	0.0%	27.8%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	9	4	0	0	0	0	5	18	1.31	1	0.46	54.0
	50.0%	22.2%	0.0%	0.0%	0.0%	0.0%	27.8%					
Question-10: The instructor returned graded assignments in a timely manner.	9	3	1	0	0	0	5	18	1.38	1	0.62	57.4
	50.0%	16.7%	5.6%	0.0%	0.0%	0.0%	27.8%					
Question-11: The instructor's comments on course work were helpful.	7	2	3	1	0	0	5	18	1.85	1	1.03	32.3
	38.9%	11.1%	16.7%	5.6%	0.0%	0.0%	27.8%					
Question-12: The instructor was available for help outside of regular class times.	11	2	0	0	0	0	5	18	1.15	1	0.36	73.2
	61.1%	11.1%	0.0%	0.0%	0.0%	0.0%	27.8%					
Question-13: The instructor treated students respectfully, even when offering criticism.	12	0	1	0	0	0	5	18	1.15	1	0.53	58.2
	66.7%	0.0%	5.6%	0.0%	0.0%	0.0%	27.8%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	13	0	0	1	0	0	4	18	1.21	1	0.77	62.5
	72.2%	0.0%	0.0%	5.6%	0.0%	0.0%	22.2%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	5	4	5	0	0	0	4	18	2.00	2	0.85	22.6
	27.8%	22.2%	27.8%	0.0%	0.0%	0.0%	22.2%					
Question-16: Please rate the instructor's overall teaching effectiveness.	7	5	2	0	0	0	4	18	1.64	2	0.72	40.3
	38.9%	27.8%	11.1%	0.0%	0.0%	0.0%	22.2%					

BSC Course Evaluation for Fall-2017

Course Title: Intro to Education	Course Number: ED 201 B	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	4			15			4					
	17.4			65.2			17.4					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	7		4		4		4		0		4	
	30.4%		17.4%		17.4%		17.4%		0.0%		17.4%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	3		10		0		4		1		1	4
	13.0%		43.5%		0.0%		17.4%		4.3%		4.3%	17.4%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**15**	**2**	**2**	**3**	**0**	**0**	**1**	**23**	**1.68**	**1**	**1.10**	**29.2**
	65.2%	**8.7%**	**8.7%**	**13.0%**	**0.0%**	**0.0%**	**4.3%**					
Question-05: The course was organized in a way that enhanced my learning.	12	5	3	2	0	0	1	23	1.77	1	1.00	39.1
	52.2%	21.7%	13.0%	8.7%	0.0%	0.0%	4.3%					
Question-06: The course was intellectually stimulating.	10	5	4	2	1	0	1	23	2.05	2	1.19	15.2
	43.5%	21.7%	17.4%	8.7%	4.3%	0.0%	4.3%					
Question-07: The course improved my ability to think critically and reason effectively.	11	5	2	3	1	0	1	23	2.00	2	1.24	20.1
	47.8%	21.7%	8.7%	13.0%	4.3%	0.0%	4.3%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	17	3	1	0	1	0	1	23	1.41	1	0.94	44.5
	73.9%	13.0%	4.3%	0.0%	4.3%	0.0%	4.3%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	15	5	2	0	0	0	1	23	1.41	1	0.65	43.7
	65.2%	21.7%	8.7%	0.0%	0.0%	0.0%	4.3%					
Question-10: The instructor returned graded assignments in a timely manner.	13	7	1	1	0	0	1	23	1.55	1	0.78	43.4
	56.5%	30.4%	4.3%	4.3%	0.0%	0.0%	4.3%					
Question-11: The instructor's comments on course work were helpful.	13	4	2	2	1	0	1	23	1.82	1	1.19	35.4
	56.5%	17.4%	8.7%	8.7%	4.3%	0.0%	4.3%					
Question-12: The instructor was available for help outside of regular class times.	14	7	0	1	0	0	1	23	1.45	1	0.72	37.2
	60.9%	30.4%	0.0%	4.3%	0.0%	0.0%	4.3%					
Question-13: The instructor treated students respectfully, even when offering criticism.	19	2	1	0	0	0	1	23	1.18	1	0.49	54.4
	82.6%	8.7%	4.3%	0.0%	0.0%	0.0%	4.3%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	19	2	1	0	0	0	1	23	1.18	1	0.49	64.7
	82.6%	8.7%	4.3%	0.0%	0.0%	0.0%	4.3%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	9	9	4	0	0	0	1	23	1.77	2	0.73	52.4
	39.1%	39.1%	17.4%	0.0%	0.0%	0.0%	4.3%					
Question-16: Please rate the instructor's overall teaching effectiveness.	14	4	3	0	1	0	1	23	1.64	1	1.02	40.3
	60.9%	17.4%	13.0%	0.0%	4.3%	0.0%	4.3%					

BSC Course Evaluation for Fall-2017

Course Title: Intro to Education	Course Number: ED 201 A-ES	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	1			8				5				
	7.1			57.1				35.7				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	10		0		0		0		0		4	
	71.4%		0.0%		0.0%		0.0%		0.0%		28.6%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		10		0		1		0		0	3
	0.0%		71.4%		0.0%		7.1%		0.0%		0.0%	21.4%

	1	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**8**	**5**	**1**	**0**	**0**	**0**	**0**	**14**	**1.50**	**1**	**0.63**	**40.7**
	57.1%	**35.7%**	**7.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	9	4	0	1	0	0	0	14	1.50	1	0.82	57.5
	64.3%	28.6%	0.0%	7.1%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	5	5	4	0	0	0	0	14	1.93	2	0.80	22.9
	35.7%	35.7%	28.6%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	8	5	1	0	0	0	0	14	1.50	1	0.63	54.6
	57.1%	35.7%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	12	2	0	0	0	0	0	14	1.14	1	0.35	73.7
	85.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	10	3	1	0	0	0	0	14	1.36	1	0.61	49.3
	71.4%	21.4%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	10	3	1	0	0	0	0	14	1.36	1	0.61	58.6
	71.4%	21.4%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	9	2	2	1	0	0	0	14	1.64	1	0.97	49.4
	64.3%	14.3%	14.3%	7.1%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	12	1	1	0	0	0	0	14	1.21	1	0.56	65.7
	85.7%	7.1%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	14	0	0	0	0	0	0	14	1.00	1	0.00	75.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	14	0	0	0	0	0	0	14	1.00	1	0.00	80.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	6	6	2	0	0	0	0	14	1.71	2	0.70	58.9
	42.9%	42.9%	14.3%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	10	2	2	0	0	0	0	14	1.43	1	0.73	55.5
	71.4%	14.3%	14.3%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2017

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
19	4	3
73.1%	15.4%	11.5%

Question-02: *Class level?*

Junior	Senior	Sophomore	noResponse
14	7	1	4
53.8%	26.9%	3.8%	15.4%

Question-03: *Reason for enrollment?*

Elective	Major	noResponse
1	23	2
3.8%	88.5%	7.7%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*93.1*
	96.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-05: *The course was organized in a way that enhanced my learning.*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*94.6*
	96.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-06: *The course was intellectually stimulating.*	23	2	0	0	0	0	1	*26*	*1.08*	*1*	*0.27*	*91.5*
	88.5%	7.7%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-07: *The course improved my ability to think critically and reason effectively.*	23	2	0	0	0	0	1	*26*	*1.08*	*1*	*0.27*	*96.2*
	88.5%	7.7%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	25	0	0	0	0	1	0	*26*	*1.00*	*1*	*0*	*95.4*
	96.2%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*91.5*
	96.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-10: *The instructor returned graded assignments in a timely manner.*	22	1	0	0	0	2	1	*26*	*1.04*	*1*	*0.21*	*91.5*
	84.6%	3.8%	0.0%	0.0%	0.0%	7.7%	3.8%					
Question-11: *The instructor's comments on course work were helpful.*	19	4	0	0	0	1	2	*26*	*1.17*	*1*	*0.38*	*86.2*
	73.1%	15.4%	0.0%	0.0%	0.0%	3.8%	7.7%					
Question-12: *The instructor was available for help outside of regular class times.*	22	1	0	0	0	2	1	*26*	*1.04*	*1*	*0.21*	*96.2*
	84.6%	3.8%	0.0%	0.0%	0.0%	7.7%	3.8%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	26	0	0	0	0	0	0	*26*	*1.00*	*1*	*0*	*88.5*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*90*
	96.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	18	7	1	0	0	0	0	*26*	*1.35*	*1*	*0.55*	*91.5*
	69.2%	26.9%	3.8%	0.0%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*93.1*

BSC Course Evaluation for Spring-2017

Course Title: Internship III	Course Number: ED 411 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
3	1	1
60.0%	20.0%	20.0%

Question-02: *Class level?*

Senior	noResponse
4	1
80.0%	20.0%

Question-03: *Reason for enrollment?*

Major	noResponse
4	1
80.0%	20.0%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*84.3*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*86.4*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*83.1*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	4	1	0	0	0	0	0	*5*	*1.20*	*1*	*0.40*	*77.7*
	80.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*82.2*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*79.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	4	0	0	0	0	1	0	*5*	*1.00*	*1*	*0*	*83.7*
	80.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*85.6*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*84.3*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*72.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*76.5*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	4	1	0	0	0	0	0	*5*	*1.20*	*1*	*0.40*	*92.4*
	80.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	5	0	0	0	0	0	0	*5*	*1.00*	*1*	*0*	*82.6*

BSC Course Evaluation for Spring-2017

Course Title: Internship II	Course Number: ED 410 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*	Female						Male					
	1						1					
	50.0%						50.0%					
Question-02: *Class level?*	Senior											
	2											
	100.0%											
Question-03: *Reason for enrollment?*	Major											
	2											
	100.0%											
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*84.3*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*86.4*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*83.1*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*87.1*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	1	0	0	0	0	1	0	*2*	*1.00*	*1*	*0*	*82.2*
	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*79.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	1	0	0	0	0	1	0	*2*	*1.00*	*1*	*0*	*83.7*
	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	1	0	0	0	0	1	0	*2*	*1.00*	*1*	*0*	*85.6*
	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*84.3*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*72.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*76.5*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*94.9*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*82.6*

BSC Course Evaluation for Spring-2017

Course Title: Teaching Science and Health	Course Number: ED 324 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
7	1	1
77.8%	11.1%	11.1%

Question-02: *Class level?*

Junior	noResponse
7	2
77.8%	22.2%

Question-03: *Reason for enrollment?*

Major	noResponse
8	1
88.9%	11.1%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	8	0	0	0	0	0	1	*9*	*1.00*	*1*	*0*	*84.3*
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-05: *The course was organized in a way that enhanced my learning.*	8	0	0	0	0	0	1	*9*	*1.00*	*1*	*0*	*86.4*
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-06: *The course was intellectually stimulating.*	9	0	0	0	0	0	0	*9*	*1.00*	*1*	*0*	*83.1*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	9	0	0	0	0	0	0	*9*	*1.00*	*1*	*0*	*87.1*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	9	0	0	0	0	0	0	*9*	*1.00*	*1*	*0*	*82.2*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	8	0	0	0	0	0	1	*9*	*1.00*	*1*	*0*	*79.0*
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-10: *The instructor returned graded assignments in a timely manner.*	8	0	0	0	0	0	1	*9*	*1.00*	*1*	*0*	*83.7*
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-11: *The instructor's comments on course work were helpful.*	6	1	0	0	0	0	2	*9*	*1.14*	*1*	*0.35*	*80.6*
	66.7%	11.1%	0.0%	0.0%	0.0%	0.0%	22.2%					
Question-12: *The instructor was available for help outside of regular class times.*	7	0	0	0	0	1	1	*9*	*1.00*	*1*	*0*	*84.3*
	77.8%	0.0%	0.0%	0.0%	0.0%	11.1%	11.1%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	9	0	0	0	0	0	0	*9*	*1.00*	*1*	*0*	*72.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	8	0	0	0	0	0	1	*9*	*1.00*	*1*	*0*	*76.5*
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	7	2	0	0	0	0	0	*9*	*1.22*	*1*	*0.42*	*92.2*
	77.8%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	9	0	0	0	0	0	0	*9*	*1.00*	*1*	*0*	*82.6*

BSC Course Evaluation for Spring-2017

Course Title: Teaching Mathematics	Course Number: ED 320 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
8	1	1
80.0%	10.0%	10.0%

Question-02: *Class level?*

Junior	Senior	Sophomore	noResponse
7	1	1	1
70.0%	10.0%	10.0%	10.0%

Question-03: *Reason for enrollment?*

Elective	Major
1	9
10.0%	90.0%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*84.3*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*86.4*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	7	2	0	0	0	0	1	*10*	*1.22*	*1*	*0.42*	*70.5*
	70.0%	20.0%	0.0%	0.0%	0.0%	0.0%	10.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	8	1	0	0	0	0	1	*10*	*1.11*	*1*	*0.32*	*83.8*
	80.0%	10.0%	0.0%	0.0%	0.0%	0.0%	10.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*82.2*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*79.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	9	1	0	0	0	0	0	*10*	*1.10*	*1*	*0.30*	*80.7*
	90.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	7	3	0	0	0	0	0	*10*	*1.30*	*1*	*0.46*	*71.5*
	70.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	8	1	0	0	0	1	0	*10*	*1.11*	*1*	*0.32*	*79.2*
	80.0%	10.0%	0.0%	0.0%	0.0%	10.0%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*72.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*76.5*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	5	4	1	0	0	0	0	*10*	*1.60*	*2*	*0.67*	*71.5*
	50.0%	40.0%	10.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	9	0	0	0	0	0	1	*10*	*1.00*	*1*	*0*	*82.6*

BSC Course Evaluation for Spring-2016

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
36	7	2
80.0%	15.6%	4.4%

Question-02: *Class level?*

First year	Junior	Senior	Sophomore	noResponse
13	25	3	2	2
28.9%	55.6%	6.7%	4.4%	4.4%

Question-03: *Reason for enrollment?*

Elective	General Education	Major	Schedule Convenience	noResponse
2	4	34	2	3
4.4%	8.9%	75.6%	4.4%	6.7%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	29	12	4	0	0	0	0	*45*	*1.44*	*1*	*0.65*	*52.7*
	64.4%	26.7%	8.9%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	27	11	7	0	0	0	0	*45*	*1.56*	*1*	*0.75*	*51.2*
	60.0%	24.4%	15.6%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	30	8	6	1	0	0	0	*45*	*1.51*	*1*	*0.81*	*49.6*
	66.7%	17.8%	13.3%	2.2%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	28	9	6	2	0	0	0	*45*	*1.60*	*1*	*0.88*	*55.8*
	62.2%	20.0%	13.3%	4.4%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	30	13	2	0	0	0	0	*45*	*1.38*	*1*	*0.57*	*58.9*
	66.7%	28.9%	4.4%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	28	14	2	1	0	0	0	*45*	*1.47*	*1*	*0.69*	*42.6*
	62.2%	31.1%	4.4%	2.2%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	26	11	8	0	0	0	0	*45*	*1.60*	*1*	*0.77*	*43.0*
	57.8%	24.4%	17.8%	0.0%	0.0%	0.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	28	9	6	2	0	0	0	*45*	*1.60*	*1*	*0.88*	*51.2*
	62.2%	20.0%	13.3%	4.4%	0.0%	0.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	33	9	2	0	0	1	0	*45*	*1.30*	*1*	*0.55*	*68.0*
	73.3%	20.0%	4.4%	0.0%	0.0%	2.2%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	39	6	0	0	0	0	0	*45*	*1.13*	*1*	*0.34*	*71.1*
	86.7%	13.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	40	5	0	0	0	0	0	*45*	*1.11*	*1*	*0.32*	*84.5*
	88.9%	11.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	17	18	9	1	0	0	0	*45*	*1.87*	*2*	*0.81*	*42.6*
	37.8%	40.0%	20.0%	2.2%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	29	10	6	0	0	0	0	*45*	*1.49*	*1*	*0.72*	*47.3*

BSC Course Evaluation for Spring-2016

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
16	2	1
84.2%	10.5%	5.3%

Question-02: *Class level?*

First year	Junior	Senior	Sophomore	noResponse
13	2	1	2	1
68.4%	10.5%	5.3%	10.5%	5.3%

Question-03: *Reason for enrollment?*

Elective	General Education	Major	Schedule Convenience	noResponse
2	3	10	2	2
10.5%	15.8%	52.6%	10.5%	10.5%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	14	4	1	0	0	0	0	*19*	*1.32*	*1*	*0.57*	*62.7*
	73.7%	21.1%	5.3%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	11	6	2	0	0	0	0	*19*	*1.53*	*1*	*0.68*	*51.5*
	57.9%	31.6%	10.5%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	11	4	3	1	0	0	0	*19*	*1.68*	*1*	*0.92*	*35.7*
	57.9%	21.1%	15.8%	5.3%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	10	5	2	2	0	0	0	*19*	*1.79*	*1*	*1.01*	*34.6*
	52.6%	26.3%	10.5%	10.5%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	14	5	0	0	0	0	0	*19*	*1.26*	*1*	*0.44*	*68.9*
	73.7%	26.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	14	5	0	0	0	0	0	*19*	*1.26*	*1*	*0.44*	*62.5*
	73.7%	26.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	11	4	4	0	0	0	0	*19*	*1.63*	*1*	*0.81*	*40.3*
	57.9%	21.1%	21.1%	0.0%	0.0%	0.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	10	6	2	1	0	0	0	*19*	*1.68*	*1*	*0.86*	*41.9*
	52.6%	31.6%	10.5%	5.3%	0.0%	0.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	11	6	1	0	0	1	0	*19*	*1.44*	*1*	*0.60*	*47.4*
	57.9%	31.6%	5.3%	0.0%	0.0%	5.3%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	16	3	0	0	0	0	0	*19*	*1.16*	*1*	*0.37*	*63.2*
	84.2%	15.8%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	17	2	0	0	0	0	0	*19*	*1.11*	*1*	*0.31*	*76.9*
	89.5%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	5	7	6	1	0	0	0	*19*	*2.16*	*2*	*0.88*	*15.0*
	26.3%	36.8%	31.6%	5.3%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	11	5	3	0	0	0	0	*19*	*1.58*	*1*	*0.75*	*38.9*

BSC Course Evaluation for Spring-2016

Course Title: Teaching Science and Health	Course Number: ED 324 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
9	2	1
75.0%	16.7%	8.3%

Question-02: *Class level?*

Junior	Senior	noResponse
10	1	1
83.3%	8.3%	8.3%

Question-03: *Reason for enrollment?*

Major	noResponse
11	1
91.7%	8.3%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	7	4	1	0	0	0	0	*12*	*1.50*	*1*	*0.65*	*41.8*
	58.3%	33.3%	8.3%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	9	3	0	0	0	0	0	*12*	*1.25*	*1*	*0.44*	*76.9*
	75.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	10	2	0	0	0	0	0	*12*	*1.17*	*1*	*0.38*	*78.6*
	83.3%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	9	2	1	0	0	0	0	*12*	*1.33*	*1*	*0.63*	*70.8*
	75.0%	16.7%	8.3%	0.0%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	9	3	0	0	0	0	0	*12*	*1.25*	*1*	*0.44*	*69.7*
	75.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	8	3	1	0	0	0	0	*12*	*1.42*	*1*	*0.64*	*44.5*
	66.7%	25.0%	8.3%	0.0%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	8	2	2	0	0	0	0	*12*	*1.50*	*1*	*0.77*	*47.8*
	66.7%	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	10	1	0	1	0	0	0	*12*	*1.33*	*1*	*0.85*	*69.4*
	83.3%	8.3%	0.0%	8.3%	0.0%	0.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	11	1	0	0	0	0	0	*12*	*1.08*	*1*	*0.28*	*81.9*
	91.7%	8.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	11	1	0	0	0	0	0	*12*	*1.08*	*1*	*0.28*	*74.7*
	91.7%	8.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	10	2	0	0	0	0	0	*12*	*1.17*	*1*	*0.38*	*68.6*
	83.3%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	7	3	2	0	0	0	0	*12*	*1.58*	*1*	*0.76*	*76.4*
	58.3%	25.0%	16.7%	0.0%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	9	2	1	0	0	0	0	*12*	*1.33*	*1*	*0.63*	*63.3*

BSC Course Evaluation for Spring-2016

Course Title: Teaching Mathematics	Course Number: ED 320 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*	Female							Male				
	11							3				
	78.6%							21.4%				
Question-02: *Class level?*	Junior							Senior				
	13							1				
	92.9%							7.1%				
Question-03: *Reason for enrollment?*	General Education							Major				
	1							13				
	7.1%							92.9%				
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
	8	4	2	0	0	0	0	*14*	*1.57*	*1*	*0.73*	*37.0*
	57.1%	28.6%	14.3%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	7	2	5	0	0	0	0	*14*	*1.86*	*2*	*0.92*	*29.2*
	50.0%	14.3%	35.7%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	9	2	3	0	0	0	0	*14*	*1.57*	*1*	*0.82*	*43.2*
	64.3%	14.3%	21.4%	0.0%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	9	2	3	0	0	0	0	*14*	*1.57*	*1*	*0.82*	*54.2*
	64.3%	14.3%	21.4%	0.0%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	7	5	2	0	0	0	0	*14*	*1.64*	*2*	*0.72*	*30.8*
	50.0%	35.7%	14.3%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	6	6	1	1	0	0	0	*14*	*1.79*	*2*	*0.86*	*18.5*
	42.9%	42.9%	7.1%	7.1%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	7	5	2	0	0	0	0	*14*	*1.64*	*2*	*0.72*	*39.2*
	50.0%	35.7%	14.3%	0.0%	0.0%	0.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	8	2	4	0	0	0	0	*14*	*1.71*	*1*	*0.88*	*39.2*
	57.1%	14.3%	28.6%	0.0%	0.0%	0.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	11	2	1	0	0	0	0	*14*	*1.29*	*1*	*0.59*	*61.5*
	78.6%	14.3%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	12	2	0	0	0	0	0	*14*	*1.14*	*1*	*0.35*	*64.8*
	85.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	13	1	0	0	0	0	0	*14*	*1.07*	*1*	*0.26*	*79.9*
	92.9%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	5	8	1	0	0	0	0	*14*	*1.71*	*2*	*0.59*	*64.1*
	35.7%	57.1%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-16: *Please rate the instructor's*	9	3	2	0	0	0	0	*14*	*1.50*	*1*	*0.73*	*45.3*

Class ED 324 1A Professor Russell Semester/Year Spring 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

   Making Her expectations clear at the beginning of the semester

2. **List those which you think might be done to improve the teaching of this course.**

   explanations of our projects

3. **Did you find the textbooks used in the course helpful? Why or why not?**

   Yes! They were easy to read and gave me good ideas about teaching Science

Class ED 324 Professor Russell Semester/Year Spring 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

   Knowing the material & how to explain concepts

2. **List those which you think might be done to improve the teaching of this course.**

   Explanations of what was expected out of us for lesson plans and unit presentations → very unclear

3. **Did you find the textbooks used in the course helpful? Why or why not?**

   Yes, because they helped me develop my theory

Class ED324 Professor Russell Semester/Year SPRING/13

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

- HAS A PASSION FOR TEACHING
- VERY ORGANIZED
- GRADED OUR ASSIGNMENTS IN A TIMELY MANNER.

2. **List those which you think might be done to improve the teaching of this course.**

NOT HAVE EVERYTHING DUE AT ONCE AT THE END.

3. **Did you find the textbooks used in the course helpful? Why or why not?**

yes → made it all relavent to our lessons.

Class 324 A Professor Russell Semester/Year Spring 13

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
   * obviously passionate about subject
   * very nice, very patient

2. **List those which you think might be done to improve the teaching of this course.**
   * be clearer about objectives / expectations on projects, such as science unit

3. **Did you find the textbooks used in the course helpful? Why or why not?**
   yes, liked classroom examples

Class ED324 Professor Dr Russell Semester/Year Spring '13

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

Gone in depth about topics that concerned us.

2. **List those which you think might be done to improve the teaching of this course.**

I believe Dr Russell could have gone over projects in further depth.

3. **Did you find the textbooks used in the course helpful? Why or why not?**

Yes! I very much appreciate them

Class Teaching Math Professor Dr. Russell Semester/Year Spring 13

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
   Provided good useful reading materials and Math games were awesome.

2. **List those which you think might be done to improve the teaching of this course.**
   nothing, pure Brilliance!

3. **Did you find the textbooks used in the course helpful? Why or why not?**
   absolutely!

Class ED 320 **Professor** Dr. Russell **Semester/Year** Spring 13

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

   She has given time and explaination to help us understand what needs to be went over.

2. **List those which you think might be done to improve the teaching of this course.**

   Nothing

3. **Did you find the textbooks used in the course helpful? Why or why not?**

   Yes, they have examples and aren't terribly hard to read.

Class ED 320 Professor RUSSELL Semester/Year S 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
   - given good examples
   - let us know what was expected of us

2. **List those which you think might be done to improve the teaching of this course.**
   - too many assignments due at the same time - much easier if spread out

3. **Did you find the textbooks used in the course helpful? Why or why not?**
   - yes, they explained ways of teaching math

Class ED 320 Professor Dr. Russell Semester/Year Spring 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
   Loved the passion/excitement for the subject matter.
   Loved the hands on learning.

2. **List those which you think might be done to improve the teaching of this course.**
   Spread out the projects - at the moment they are all due within the last two weeks! Very stressful!
   More explicit instructions for projects. I was sometimes unsure of what you wanted.

3. **Did you find the textbooks used in the course helpful? Why or why not?**
   Very useful! Loved it!

Class ED 320 Professor Russell Semester/Year Spring 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

I think requiring us to help students with math and use the skills we learned in the classroom whe we teach was very helpful.

2. **List those which you think might be done to improve the teaching of this course.**

Perhaps mae instruction abat writing math lessan plans

3. **Did you find the textbooks used in the course helpful? Why or why not?**

yes.

Class ED 320 Professor Russell Semester/Year Spring 13

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

Gave us a grounded understanding of how to use multiple strategies in teaching math

2. **List those which you think might be done to improve the teaching of this course.**

3. **Did you find the textbooks used in the course helpful? Why or why not?**

Yes, because they very detailed in their explanation of how children think about math.

Class ED472 Professor Dr. Russell / Dr. Jacobs Semester/Year FALL / 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
   - presented expectations clearly
   - always provided support
   - always available

2. **List those which you think might be done to improve the teaching of this course.**

   NA

3. **Did you find the textbooks used in the course helpful? Why or why not?**

   NA

Class ED 412 Professor Jacobs Russell Semester/Year Fall 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

Amazingly flexible
Beneficial feedback
Great support

2. **List those which you think might be done to improve the teaching of this course.**

None. They are perfect.

3. **Did you find the textbooks used in the course helpful? Why or why not?**

N/A

Class ED 472A Professor Kelly Russell Semester/Year F 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

objectives were made clear from the beginning - rough drafts were returned in a timely manner

2. **List those which you think might be done to improve the teaching of this course.**

Nothing

3. **Did you find the textbooks used in the course helpful? Why or why not?**

I liked getting ideas / new books that I hadn't read for my research topic

Class edu201 Professor Russell Semester/Year fall2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

   Personal attention.
   Emphasis on critical thinking
   Emphasis on real world application

2. **List those which you think might be done to improve the teaching of this course.**

   More reading / ~~ise~~
   More in depth discussions on current ~~education~~ issues

3. **Did you find the textbooks used in the course helpful? Why or why not?**

   Yes!
   Ayers gave a good example of what teaching is like
   Lesson Planning book was practical and helpful
   School was really interesting and important

Class_____Professor_____Semester/Year_____

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
   Everything, especially with keeping an open mind about how students learn.

2. **List those which you think might be done to improve the teaching of this course.**
   You are one education teacher... just keep doing what you are.

3. **Did you find the textbooks used in the course helpful? Why or why not?**
   really helpful... I'm not an education major but I will be keeping my books.

Class ED201 Professor Kelly Rissell Semester/Year Fall 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

   Given us plenty of time to discuss how we feel about certain subjects. Also plenty of discussion time to assure we know the material.

2. **List those which you think might be done to improve the teaching of this course.**

   A more set schedule

3. **Did you find the textbooks used in the course helpful? Why or why not?**

   yes. they very much provoked me to create my own opinions, and they always led me to question the norms

Class_____Professor_____Semester/Year_____

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

the class was very relaxing & enjoyable

2. **List those which you think might be done to improve the teaching of this course.**

more enforcement of the teaching, maybe quizzes

3. **Did you find the textbooks used in the course helpful? Why or why not?**

Yes! The texts were very helpful with learning

Class Intro to Edu Professor Dr. Russell Semester/Year 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

Taught me a lot about the history of education.

2. **List those which you think might be done to improve the teaching of this course.**

Visit real classes.

3. **Did you find the textbooks used in the course helpful? Why or why not?**

Yes, I will keep all my books

Class Intro to Edu. Professor Dr. Russel Semester/Year Fall 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

She is always thinking of the students. When things on her lesson plans weren't timed right, she always did what was best for the students.

2. **List those which you think might be done to improve the teaching of this course.**

Nothing, she did amazing.

3. **Did you find the textbooks used in the course helpful? Why or why not?**

Yes, great resources.

Class Child dev. Professor Dr. Russell Semester/Year Fall 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
   She was so flexible for the students. When turning in an assignment, if the time was coming too close, she reasoned with her students.

2. **List those which you think might be done to improve the teaching of this course.**
   I really don't think anything more could be done. She ran the class fluidly.

3. **Did you find the textbooks used in the course helpful? Why or why not?**
   Very helpful, easy to find things. Great texts

Class EPY 203 Professor Russell Semester/Year _____

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

She has done a good job keeping class fun and good teacher

2. **List those which you think might be done to improve the teaching of this course.**

NONE

3. **Did you find the textbooks used in the course helpful? Why or why not?**

Yes they helped

Class Child Dev. Professor Kelly Russell Semester/Year Fall 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
   Very well organized w/ powerpoints.

2. **List those which you think might be done to improve the teaching of this course.**
   N/A

3. **Did you find the textbooks used in the course helpful? Why or why not?**
   Yes, at first I did.
   Helped me understand the criteria better

Class ECHD 21C Professor Dr. Russell Semester/Year FA - 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
I loved class discussions. The questions posed were extremly helpful in explaning a topic and I appreciated how willing Dr. Russell was to get a little sidetracked in order to make sure we fully understood.

2. **List those which you think might be done to improve the teaching of this course.**

3. **Did you find the textbooks used in the course helpful? Why or why not?**
Yes, it was a good supplement to what we learned in class.

Class EPY 223 A Professor Kelly Russell Semester/Year Fall 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**
One of my favorite parts of the class was the class discussion and presentations. I usually don't enjoy speaking in front of a class but I felt very comfortable in here and each discussion created a new perspective for me

2. **List those which you think might be done to improve the teaching of this course.**
Maybe spread out the due dates of all the graded work that we did at the end.

3. **Did you find the textbooks used in the course helpful? Why or why not?**
Yes. It was very clear and put information in terms that were easily understood.

Class_____Professor_____Semester/Year_____

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. What has your professor done especially well in teaching this course?

getting everyone involved, [redacted]

2. List those which you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes because the teachers points came directly from the books.

Class EPY 223 Professor RUSSELL Semester/Year FA 2013

QUESTIONS FOR WRITTEN RESPONSES

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office

1. **What has your professor done especially well in teaching this course?**

Kelly Russell was extremely welcoming and provided a comfortable environment for students to learn, grow and ask question.

2. **List those which you think might be done to improve the teaching of this course.**

Nothing, it was flawless. So fun! Learned a lot!

3. **Did you find the textbooks used in the course helpful? Why or why not?**

Somewhat - however we only used about a third of it! Powerpoints about the book were very helpful though.

Class Independent Study **Professor** Dr. Russell **Semester/Year** Fall 2015

QUESTIONS FOR WRITTEN RESPONSES.

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Aided with my discussion on the books I have read and pointed me in the right direction.

2. List those things which you think might be done to improve the teaching of this course.

Nothing can be done

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes I find the textbooks helpful it was fun to read things that contradicted with my point of view and helped me argue what I believe should be done.

Class ED472 Professor Russell Semester/Year Fall '15

QUESTIONS FOR WRITTEN RESPONSES.

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

helped us along the way - with all questions

2. List those things which you think might be done to improve the teaching of this course.

more due dates for run throughs, ect

3. Did you find the textbooks used in the course helpful? Why or why not?

Class GD472 **Professor** Russell **Semester/Year** F/15

QUESTIONS FOR WRITTEN RESPONSES.

DIRECTIONS:
Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- been available outside of class
- been democratic w/ the topic

2. List those things which you think might be done to improve the teaching of this course.

- more due dates, have drafts of the papers due
-

3. Did you find the textbooks used in the course helpful? Why or why not?

N/A

ED 324
Sp17

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russell has done a great job in teaching this course by always being available whenever we needed her. She was always flexible with meeting times. She always observed atleast once a week.

2. List what you think might be done to improve the teaching of this course.

More feedback on observations

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, choice words was helpful in talking about how to converse effectively with my students.

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

giving a range of different assignments to expand our learning.

2. List what you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why or why not?

yes, b/c the activities went along w/ the texts.

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Having a fun, intellectual stimulating class, comments in class and on assignments were helpful, communicating changes with class schedule, modeling different techniques and reasoning

2. List what you think might be done to improve the teaching of this course.

Have more field experience, which can be hard because of conflicting school schedules and finding a school who will let us come.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, has great examples and explanations

M

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russell has shown a great appreciation for math and teaching math. This appreciation has spread to her students. Everything done in this class was clearly intentional. We never did anything without a "why" behind it. I was also taught to think about math in a new light which has made me feel better prepared to teach the subject.

2. List what you think might be done to improve the teaching of this course.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes! The text offered great insight and activities to implement in the classroom.

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Everything! This has by far been one of my favorite education classes I've ever taken! The way the class was designed in such a way that we were like the students, played the games, took the tests, etc. was beyond beneficial. It's been the most effective way I've been taught in an edu class thus far.

2. List what you think might be done to improve the teaching of this course.

Nothing, it truly was all great.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, I knew they were all intentional. Everytime we were told to read, we actually had an in-depth convo in class!

ED 320
Sp 17

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- Journal / Pros- Approach allowing us to try out + Something students can use
- 2 week plans
- flexible

2. List what you think might be done to improve the teaching of this course.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes! I loved the nature walk book!
- insightful and Practical advise

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russell's choice in textbooks was extremely intentional and built the beginning foundation of the class. The activities done in this class were extremely purposeful and directly related to what we will be doing as teachers - they provided great insight into what to expect in the classroom.

2. List what you think might be done to improve the teaching of this course.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes! To Look Closely ✓✓✓✓ ♡♡♡ Loved this book. Made me see that there is science in everything

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Fun class, displayed tons of different things to do in class, helpful comments, having hands on activities, modeling different techniques.

2. List what you think might be done to improve the teaching of this course.

More field experience, I know it is hard to get schools that will allow us to come and this year was not Dr. Russell's fault

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, had helpful activities and explanations

Course: Teaching Math
Professor: Dr Russell
Term/Year: Spring 18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

I have loved going to Minor and working with my student. Getting to put what I've learned into practice has been especially helpful, and I've loved having my professor onsite in case I need help.

2. List those things which you think might be done to improve the teaching of this course.

I would have liked more criticism when writing lesson plans and reflections so I could know how to improve my teaching. I would have also liked to work more closely with the standards and relate them to games, activities, and lessons.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, I have especially liked the Burns text and the lessons and games included.

Course: ED 324
Professor: Russell
Term/Year: Sp. 18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   showing appreciation and enjoyment about the topic.

2. List those things which you think might be done to improve the teaching of this course.

   maybe go over more how to do the new math concepts so I know how my student does it.

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes. they were interesting.

Course: Ed 324
Professor: DR. RUSSELL
Term/Year: Spring 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

I have really enjoyed taking this class w/ Dr. Russell. She has been extremely helpful, she gives us grades back on time and she is always available for extra help/questions I might have.

2. List those things which you think might be done to improve the teaching of this course.

This class was great just the way it was set up.

The only thing I would say would be to discuss more edTPA earlier in term.

3. Did you find the textbooks used in the course helpful? Why/why not?

I loved the books for this class and I will keep them for my personal bookshelf to read in the future.

Course: ED 324
Professor: Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   This professor was highly knowledgeable about the topic + made the course fun + engaging! I really enjoyed the class!

2. List those things which you think might be done to improve the teaching of this course.

   Explaining ED TPA more

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes! They gave me practical examples for math lessons I could use in my future classroom :)

Course: ED 320
Professor: Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She has taught me to apply the conceptual understanding of each lesson and apply it to my future students.

2. List those things which you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

yes. the textbooks provided visual aides to help understand the material more.

Course: ED324
Professor: Russell
Term/Year: Spring 18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

GAVE PLENTY EXAMPLES FOR STUDENTS TO LEARN FROM

2. List those things which you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

YES, GAVE GREAT EXAMPLES.

Course: EPY 223
Professor: Russell
Term/Year: Spring 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Great Videos + Power Points

2. List those things which you think might be done to improve the teaching of this course.

   SLOW DOWN!

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes helped with test

Course: EPY 223
Professor: Russell
Term/Year: Spring 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She changed the format of the tests depending on what best suited us.

2. List those things which you think might be done to improve the teaching of this course.

I wasn't always sure about what material would be on the test. Sometimes the videos didn't make sense in class.

3. Did you find the textbooks used in the course helpful? Why/why not?

The books were an interesting read. The textbook was too difficult to comprehend.

Course: EPY 223
Professor: Russell
Term/Year: EPY 223 Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Given us articles to talk about in class

2. List those things which you think might be done to improve the teaching of this course.

   Given more preperation for tests

3. Did you find the textbooks used in the course helpful? Why/why not?

   No, too much reading for the info we need

Course: EPY 223
Professor: Dr. Russell
Term/Year: Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Dr. Russell is incredibly knowledgable, and she had a great understanding of all the concepts we discussed (which made it more interesting and easier to learn).

2. List those things which you think might be done to improve the teaching of this course.

   I think if we spent more time covering each topic, since we only took one class period to talk about a chapter.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes, the textbook was quite helpful and explained every idea thoroughly.

Course: EPY 223
Professor: Russell
Term/Year: 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She leads very good discussions that promote me to think critically

2. List those things which you think might be done to improve the teaching of this course.

   I think the class is structured in a way where I feel like I am not learning about what the class is about.

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes, the tests were based on the textbook

Course: ED 201 A
Professor: Dr. Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Dr. Russell is very good at explaining different concepts in depth and to everyone's understanding. She is reasonable with assignments and easy to reach out to when help is needed.

2. List those things which you think might be done to improve the teaching of this course.

   I think if we had more interactive work, I'd be able to learn more from the course.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes, most if not all the books we've read offer great insight.

Course: ED201
Professor: Dr. Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Teaching about lesson planning & helping me understand more info about what teachers do behind the scenes in classrooms

2. List those things which you think might be done to improve the teaching of this course.

- more depth & understanding of background of education
- more structure on paper

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes b/c we use them & reflected on them

Course: ED 201 (B)
Professor: Russel
Term/Year: 2018, Fall

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Letting everyone speak and make own observations.
Show us actual read life videos of the lessons.

2. List those things which you think might be done to improve the teaching of this course.

- A little more rigourous

3. Did you find the textbooks used in the course helpful? Why/why not?

- very, entertaing and informative

Course: Intro to ed.
Professor: A. Russell
Term/Year: S2/2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   She gave us a lot of video evidence to show the things we talked about in class being implemented in kids educational lives

2. List those things which you think might be done to improve the teaching of this course.
   I think there could be more true assessment like tests implemented into the class.

3. Did you find the textbooks used in the course helpful? Why/why not?
   I found the books that we read to be very insightful. They gave me ideas even for everyday life that I can use with children.

Course: Intro to ed.
Professor: Russel
Term/Year: Fall '18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Explaining principles of teaching.

2. List those things which you think might be done to improve the teaching of this course.

None

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, good material

Course: ED 201
Professor: D. Russell
Term/Year: 2014

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She allows students to present their own ideas.

2. List those things which you think might be done to improve the teaching of this course.

   Maybe meet for less time but more class sessions.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes they allowed insight on things I never thought about

Course: ED201
Professor: Russell
Term/Year: FALL

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She was engaged and respectful to all students.

2. List those things which you think might be done to improve the teaching of this course.

   Clear teaching concepts and guidelines for papers. A lot of work felt like busy work because there was not much else for her to teach during class time.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Some, A few books were redundant to what we learned in class but some were insightful

Course: ED 201
Professor: Professor Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Gave real world examples of topics. Kept class interesting.

2. List those things which you think might be done to improve the teaching of this course.

Spend more time on the history of education.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. They gave us a broader understanding of topics.

Course: ED201
Professor: Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Explaining things.

2. List those things which you think might be done to improve the teaching of this course.

   Nothing.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes; helped with understanding.

Course: ED 201A
Professor: Dr. Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   Making sure everyone understands the importance of education. She was great at leading discussions + ensuring students took over discussions.

2. List those things which you think might be done to improve the teaching of this course.
   Nothing - Great course!

3. Did you find the textbooks used in the course helpful? Why/why not?
   Absolutely! We had discussions + reflections on the books. They were really great for the course and made me think in depth.

Course: ED-201
Professor: Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Giving us good feedback on assignments.

2. List those things which you think might be done to improve the teaching of this course.

   N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes, because I really enjoy learning new informati

Course: ED 201 A
Professor: Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Encouraged question AND HAND ON Learning creating lesson plans And critical thinking As well.

2. List those things which you think might be done to improve the teaching of this course.

3. Did you find the textbooks used in the course helpful? Why/why not?

yes, showed me how big An issue poverty act is.

Course: ED201A
Professor: Russel
Term/Year: fall / 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   She kept our attention and encouraged discussion as well as kept things interesting.

2. List those things which you think might be done to improve the teaching of this course.
   change the amount of outside reading. I felt rushed to just read but not to understand.

3. Did you find the textbooks used in the course helpful? Why/why not?
   I found the last book on lesson planning very confusing and would have preferred just going over the appendix

Course: ED 201 A
Professor: Kelly Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She has always allowed the class to have an open discussion.

2. List those things which you think might be done to improve the teaching of this course.

Give a little more detail on what we need to look for in the Readings.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, I could always find a way to use the books we were reading.

Course: ED 201A
Professor: Kelly Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Laid good groundwork for me going into elementary education

2. List those things which you think might be done to improve the teaching of this course.

   The fiction book was not needed in my opinion

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes, The nonfiction books are very helpful and will be used in the future

Course: Ed 201A
Professor: Kelly Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
She gave us broad views of topics that were within the course. This gave us an understanding of many topics

2. List those things which you think might be done to improve the teaching of this course.
I enjoyed this course and don't think you could improve it

3. Did you find the textbooks used in the course helpful? Why/why not?
Yes the textbooks were helpful because they are needed for all of class

Course: ED 201A
Professor: Dr. Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She's good at getting the class to discuss as a whole and lets us bring our ideas into the discussion as well.

2. List those things which you think might be done to improve the teaching of this course.

   Maybe a little more information on the directions for the two big papers. I was kind of lost on the first one and the second is still confusing.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes, good reads.

Course: Ed C 4721
Professor: Russell
Term/Year: Sp 18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

help us with our senior research topics + map out our presentations

2. List those things which you think might be done to improve the teaching of this course.

Begin diving into everything earlier in the semester so it doesn't get so hecktic at the end.

3. Did you find the textbooks used in the course helpful? Why/why not?

yes

Course: ED 324
Professor: Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- Keeping it interesting.
- Letting us apply what we learned in class into experiments
- ALWAYS FUN!
- Teaching through example

2. List those things which you think might be done to improve the teaching of this course.

- Evaluating readings more effectively

3. Did you find the textbooks used in the course helpful? Why/why not?

- Very helpful. Interesting reads that advanced our learning & gave good examples

Course: ED324 (science)
Professor: Dr. Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   Making science concepts easy to understand & teach.

2. List those things which you think might be done to improve the teaching of this course.
   N/A

3. Did you find the textbooks used in the course helpful? Why/why not?
   Yes!

Course: ED324
Professor: Russell
Term/Year: SP18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

encouraged everyone to participate and made the class fun and interactive

2. List those things which you think might be done to improve the teaching of this course.

Time in the classroom, more experiences writing lesson plans that we teach w/ an actual student

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. they went along w/ class discussion

Course: ED 324
Professor: Dr. Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Teaching ways to incorporate science and approach it in a constructivist way. Providing different science activities to do and how to approach them with students with questions and possible ways to assess.

2. List those things which you think might be done to improve the teaching of this course.

NA

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes because they explained how to approach science with students and gave ideas for activities.

Course: ED 324
Professor: Russell
Term/Year: 2018 S

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Hands on activities and connecting the teaching of science to real life

2. List those things which you think might be done to improve the teaching of this course.

The science standards activity was extremely long and redundant. Maybe cut it down to one activity per standard

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. I liked how they transferred into practice

Course: Teaching Science & Health
Professor: Russell
Term/Year: Spring 324

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russell has taught everyone that science is fun. She has allowed us to do awesome activities / science experiments that let us to understand the topic more than just reading a book.

2. List those things which you think might be done to improve the teaching of this course.

I wouldn't change the course at all because I truly had such a great time learning how to be a curious scientist!

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes! The textbooks were awesome and very helpful!

Course: EPY 223 A
Professor: Russel
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Taking the time to explain concepts such as Piaget's theory

2. List those things which you think might be done to improve the teaching of this course.

More time spent on No Place

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. Though we didn't exactly use the textbook in class, it was a good tool to study. And No Place and $2A Day were enlightening and relatable.

Course: EPY 223
Professor: Russell
Term/Year: 2019 Spring

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   She made class relative and enjoyable.

2. List those things which you think might be done to improve the teaching of this course.
   More engaging materials / assignments. There was a lot of repetition.

3. Did you find the textbooks used in the course helpful? Why/why not?
   Yes they related clearly w/ class.

Course: EPY 223A
Professor: Russell
Term/Year: spring/2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Good job at thoroughly explaining subjects & giving real life examples

2. List those things which you think might be done to improve the teaching of this course.

• Fewer papers

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. Gave good in depth explinations & examples

Course: EPY 223
Professor: Kelly Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

The way this class was formatted was very helpful. I liked that we started with the textbook and then moved on to more analytic and conversational work.

2. List those things which you think might be done to improve the teaching of this course.

Maybe spread out paper due dates a bit. We had no papers due until the last month and a half-ish then we had a paper due almost every week.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, they were helpful. $2/Day was a bit dense and boring, but I loved ~~every~~ everything else.

Course: Developing child
Professor: Dr Kelly Russell
Term/Year: 2018 spring

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She had organized everything really well in sections and it was very thorough

2. List those things which you think might be done to improve the teaching of this course.

   more prep for tests / quizzes / papers

3. Did you find the textbooks used in the course helpful? Why/why not?

   I enjoyed the books we read. They helped me learn more info about poverty

Course: EPY 223 A
Professor: Russell
Term/Year: 2018 Spring

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Made me think critically

2. List those things which you think might be done to improve the teaching of this course.

   - Not grade as rigorously
   - Better prep for tests

3. Did you find the textbooks used in the course helpful? Why/why not?

   NO because we did not use it much.

Course: EPY 223A
Professor: Russel
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russel is always patient and open minded. She genuinely enjoys what she teaches and loves her students.

2. List those things which you think might be done to improve the teaching of this course.

The only thing I wald change is how spread out the assignments are. We have 3 essays, the last 2 are due only days apart which is incredibly stressful.

3. Did you find the textbooks used in the course helpful? Why/why not?

yes. We used them often and it helped prep for discussions.

Course: 320 A
Professor: Russell
Term/Year: 2019 SP

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- related to us as students
- let us take agency
- very practical

2. List those things which you think might be done to improve the teaching of this course.

- more learning of concepts at upper grades

3. Did you find the textbooks used in the course helpful? Why/why not?

- yes! I'll use them forever

Course: ED 320
Professor: Dr. Russell
Term/Year: Sp 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   I really liked the mental math

2. List those things which you think might be done to improve the teaching of this course.

   Better communication with Minors on what we are doing with our students.

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes, the both went very indepth with what we were wanting to teach

Course: ED324
Professor: Russell
Term/Year: Spring/2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- Provide beneficial feedback on the lesson plans we do.

2. List those things which you think might be done to improve the teaching of this course.

- Provide more on her view of lesson plans; maybe look @ some artifacts of when she taught elementary school

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. Provided useful insight.

Course: FD 324
Professor: Russell
Term/Year: Spring / 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   - loved the experiments
   - enjoyed discussion

2. List those things which you think might be done to improve the teaching of this course.
   - Could have done more experiments
   - exposure to more lessons

3. Did you find the textbooks used in the course helpful? Why/why not?
   yes, loved the books

Course: EDY 223
Professor: Dr. Russell
Term/Year: FA18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

We had a very open enviroment for discussion

2. List those things which you think might be done to improve the teaching of this course.

Clarification in the beginning on what to study.

3. Did you find the textbooks used in the course helpful? Why/why not?

Absolutly, thats what the test were about.

Course: Epy 223
Professor: Kelly Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She communicated very well and was always open to discussions and questions

2. List those things which you think might be done to improve the teaching of this course.

   More time for reading assignments or choose more readings that are effective and shorten the list

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes it was helpful studying for tests

Course: EPY 223
Professor: Kelly Russel
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- making it discussion based
- having engaging conversations

2. List those things which you think might be done to improve the teaching of this course.

- more note-taking opportunities

- more information on the slides

3. Did you find the textbooks used in the course helpful? Why/why not?

yes, especially the online quizzes

Course: EPY223A
Professor: Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Allowed a variety of opinions from students

2. List those things which you think might be done to improve the teaching of this course.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, well informed and recent

Course: EPY 223
Professor: Russell
Term/Year: 2018 Fall

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Presenting information in a helpful and productive way.

2. List those things which you think might be done to improve the teaching of this course.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes! It covers a lot of important information that can not all be said in class

Course: EPYZZ3
Professor: Dr. Russell
Term/Year: Fall 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Communication and organization

2. List those things which you think might be done to improve the teaching of this course.

   N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

   No, didn't need it for anything.

Course: Edy 223
Professor: Russell
Term/Year: 2018 fall

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

responding to emails

2. List those things which you think might be done to improve the teaching of this course.

1) nothing

2) nothing

3. Did you find the textbooks used in the course helpful? Why/why not?

Nah... we use the same info in class

Term: Fall 2019

Professor: Dr. Russell

Course: EPY 223

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Made the discussions very interesting for everyone to partake in.

2. List those things which you think might be done to improve the teaching of this course.

Maybe elaborate more on ~~the~~ ~~how ups~~ what you want from us & when we write our papers

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, it helped me study for exams

Term: Fall 19

Professor: Kelly Russell

Course: EPY223A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Encouraged questions, class discussions, and interactive learning.

2. List those things which you think might be done to improve the teaching of this course.

   Not so much all in one day material wise.

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes, most material was taken straight from it.

Term: fall 2019

Professor: Dr. Russell

Course: EPY 223

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   she always has an outline of what specifically need to know

2. List those things which you think might be done to improve the teaching of this course.

   - less tangents

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes, because you could use it when you had questions

Term: Fall '19

Professor: Dr. Russell

Course: EPY 223 A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

I love how she lets us have class discussions and go more indepth when we're interested.

2. List those things which you think might be done to improve the teaching of this course.

— better organized and clearer power points

3. Did you find the textbooks used in the course helpful? Why/why not?

I liked the textbook, cool pictures, wished i would've rented

Term: Fall 2019

Professor: Kelly Russell

Course: EPY 223 A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She has made us all feel respected and let us feel comfortable when sharing opinions.

2. List those things which you think might be done to improve the teaching of this course.

— Maybe more comments on turned in work or going through graded exams.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. It was updated.

Term: fall 14

Professor: Russel

Course: EPY223A.

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She has done a great job at helping me fully understand what I need to know

2. List those things which you think might be done to improve the teaching of this course.

   I think its perfect

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes, it had all the context that I needed in it

Term: Fall 19

Professor: Russell

Course: EPY 223A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She gave opportunities for discussion and graded things in a timely manner.

2. List those things which you think might be done to improve the teaching of this course.

   More hands on - in class work

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes. It helped my studying

Term: Fall 19

Professor: Russel

Course: ED2013

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Dr. Russel creates an open enviroment that allows students to feel comfortable sharing ideas

2. List those things which you think might be done to improve the teaching of this course.

   answer emails

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes, we used it some

Term: Fall 2020

Professor: Kelly Russell

Course: ED 201 B

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Shown us the basic skills of how education works & how to find our teaching style.

2. List those things which you think might be done to improve the teaching of this course.

Nothing

3. Did you find the textbooks used in the course helpful? Why/why not?

yes, it gave us something to review over before & after class

Term: Fall

Professor: Russell

Course: ED 201 B

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Engaging students

2. List those things which you think might be done to improve the teaching of this course.

   nothing

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes

Term: Fall 2019

Professor: Dr Kelly Russell

Course: ED 201 B

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Really making sure we understand topics and creating an atmosphere of comunity within the class room.

2. List those things which you think might be done to improve the teaching of this course.

   Sometimes I would not understand where the lesson was going. I would understand material but not the reason for learning it.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes, except the actual textbook w/ crayons on it. I wish we would have used it more because $$$

Term: Fall 2019

Professor: Kelly Russell

Course: Ed 201 B

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   Explaining in detail the material, assignments, & what to study

2. List those things which you think might be done to improve the teaching of this course.
   Nothing. this is one of my favorite courses

3. Did you find the textbooks used in the course helpful? Why/why not?
   Yes they were easy to use & had information we needed to know

Term: Fall 2019

Professor: Dr Kelly Russell

Course: ED201B

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Demonstrated the qualities that she taught us.
   Heard us, and respected us.

2. List those things which you think might be done to improve the teaching of this course.

   N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes because they were factual and intellectually stimulating

Term: fall

Professor: Dr. Rowell

Course: Edavl B

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She did well at bringing in personal experiences and sharing them with the class. Also she made sure the class felt ~~comfortable~~ and knew eachother.

2. List those things which you think might be done to improve the teaching of this course.

I think that they could talk more about the readings and have more people come in and talk.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes we used each of the books and they were helpful with understanding

Term: FA19

Professor: Russell

Course: ED201A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Shown passion for her class and objectives.

2. List those things which you think might be done to improve the teaching of this course.

   Improve organization.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes

Term: Fall

Professor: Russell

Course: ED201A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She has done a great job providing examples and encouraging us to find the solution.

2. List those things which you think might be done to improve the teaching of this course.

   The course was well taught

3. Did you find the textbooks used in the course helpful? Why/why not?

   The textbooks were very helpful. Each book showed a different ~~method~~ style of writing as well as teaching

Term: fall 2019

Professor: Dr. Russell

Course: ED201A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Making lesson plans and always having work to do

2. List those things which you think might be done to improve the teaching of this course.

   I was all very well

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes. we use alot of info in class

Term: Fall 2019

Professor: Dr. Russell

Course: ED 201 A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Dr. Russell teaches in a way to help students learn and share their opinion in class.

2. List those things which you think might be done to improve the teaching of this course.

   NA

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes! Ayers book was great to see teaching in a learning environment.

Term: Fall

Professor: Russell

Course: ED 201 A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Everything

2. List those things which you think might be done to improve the teaching of this course.

   nothing. it was perfect

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes. helped me learn

Term: Fall 2019

Professor: Rusell

Course: ED 201A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Very interactive and used good examples for each planned lesson.

2. List those things which you think might be done to improve the teaching of this course.

   None

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes since it gave me a better picture on education

Term: Spring 2021

Professor: Kelly Russell

Course: EPY 223

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- Allowed alot of participation

- I am not usually good @ participating consistently, but you created a great, safe environment for me to do that in.

2. List those things which you think might be done to improve the teaching of this course.

- I would have liked to know what to read everytime before class.

- An actual Schedule w/ the syllabus.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. easy to read

Term: Spring

Professor: Russey

Course: EPY 223 A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   She lets all of us express how we feel with no hate or backlash

2. List those things which you think might be done to improve the teaching of this course.
   Nothing It was good

3. Did you find the textbooks used in the course helpful? Why/why not?
   Yes it's helpful for assignments

Term: Spring

Professor: Kelly Russell

Course: EPY 223A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Connecting well with her students

   Best professor I have had.

2. List those things which you think might be done to improve the teaching of this course.

   Staying on track and not rambling about other things.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes and no

   Did such a good job explaining the topics and work sometimes didn't need to look in the book.

Term: Spring '21

Professor: Kelly Russell

Course: EPY 223 A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   She used examples to further explain the topics being discussed

2. List those things which you think might be done to improve the teaching of this course.

   The course was extremely backloaded with tests, assignments, and papers so just spreading those out equally in the semester

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes, they explained well and gave plenty of examples

Term: _____

Professor: _____

Course: _____

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   - I think this course was amazing to take considering the pandemic and new 21st century advancements
   - The course had structure but we had room to go off topic and dive deeper into issues we found important
2. List those things which you think might be done to improve the teaching of this course.
   - I think the course is set up effectively as is.

3. Did you find the textbooks used in the course helpful? Why/why not?
   yes

Term: Spring '21

Professor: Russell

Course: EM 223

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Made the objectives clear

2. List those things which you think might be done to improve the teaching of this course.

   more articles & online posts b/c this subject is very relevant

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes.

Term: Spring 2021

Professor: Russell

Course: ED 201

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Relating the course material to current day issues or problems to give us a better understanding.

2. List those things which you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

yes, we did many lessons from the textbook, was a good resource

Term: Spring2021

Professor: Kelly Russell

Course: ED201 A

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Explaining concept with real-world examples. Finding relevant texts outside of just the textbook to effectively teach the subject.

2. List those things which you think might be done to improve the teaching of this course.

It was a bit easy, testing on knowledge may not work but some form of testing and understanding would be beneficial.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes.

Term: Spring 2021

Professor: Russell

Course: ED 201

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   She made education very interesting. I learned so much about the role of teachers & students that I didn't know. It taught me a lot about what makes a teacher good.
2. List those things which you think might be done to improve the teaching of this course.
   Nothing

3. Did you find the textbooks used in the course helpful? Why/why not?
   yes I did, I enjoyed reading the stories we did, especially Free Lunch. They drew attention to important topics.

Term: Spring 2021

Professor: Dr. Russell

Course: Intro to Education

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She has a clear passion in teaching the curse to all students who take it, and she leaves a lasting impression on how we need to look at our education system.

2. List those things which you think might be done to improve the teaching of this course.

The only oddity of the class was that we missed a lot of sessions, but thing out of Dr. Russell's control did that to most of our classes.

3. Did you find the textbooks used in the course helpful? Why/why not?

Not as much the personal research and extra books we read were more impactful.

Course: ED 324
Professor: Dr. Russell
Term/Year: 2021/Spring

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   showing us ways to implement science lessons in our classroom & experimenting

2. List those things which you think might be done to improve the teaching of this course.

   Nothing, I enjoyed this class

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes I thought they were very useful resources that I can refer back to

Course: ED 324
Professor: Russell
Term/Year: 2021 SP

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Giving great feedback!

2. List those things which you think might be done to improve the teaching of this course.

More organization.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes!

Course: ED 324
Professor: Russell
Term/Year: spring 21

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- given us many ideas & suggestions for creative ways to teach science

2. List those things which you think might be done to improve the teaching of this course.

- could have been more structured & organized

3. Did you find the textbooks used in the course helpful? Why/why not?

- yes

Tenured Faculty Evaluation

To be completed every three years

Faculty Name: Kelly Russell **Department:** Education

Academic Year: 2019-2020 **Last Evaluation Year:** 2016

Area Chair: Randy Law

The Tenured Faculty Evaluation form is the College's assessment tool to review the overall performance of full-time, tenured faculty who are not currently applying for promotion. The form, associated data, and Professional Reflection are to be completed by the faculty member and sent to the Area Chair by **March 31**. The faculty member may have a consultation meeting with the Department Chair prior to sending the review packet to the Area Chair. The Area Chair may consult with the Department Chair for clarification of any questions. The Area Chair will meet with the faculty member, who may choose to have the Department Chair present. The Area Chair will send a written summary, including recommendations for improvement, to the faculty member and Department Chair, both of whom may offer a written response. The review will be sent to the Provost's Office by **September 30**.

Data reported by Provost's Office, verified by faculty member and included in the review packet by the faculty member:

List of courses taught
Student evaluation numerical data
List of contracts for independent study
Advising load
List of service activities on Committees of the Faculty and Committees of the College

Data provided by faculty member and included in the review packet:

Current CV
Copies of all narrative evaluations from a sample of courses
List of scholarship (ongoing and completed)
List of additional committee and service activities (ad hoc committees, task force committees, search committees, etc.)
List of reassigned time and explanation
Professional Reflection: Please reflect on your teaching, scholarship, service, advising, and other faculty activities during this review period. Address your successes and challenges, as well as how you monitor your effectiveness.

To be completed by Area Chair:

1. Class visit:

   Course(s) visited: EPY 223, The Developing Child in the 21st Century

   Date of visit(s): March 9, 2016

2. Meet with faculty member:
3. Read Professional Reflection:

4. Review course evaluation(s):

Signature of faculty member upon packet submission: Kelly A Russell Date 9/9/19

Signature of Area Chair upon completion of review: _____ Date

Tenured Faculty Evaluation
Kelly A. Russell, PhD
2019-2020

The following pages of this document contain the information requested for the post-tenure evaluation. I have arranged my responses to the prompts according to the order in which they appear on the cover letter.

The order of documents is as follows:

- List of courses taught
- Student evaluation of numerical data
- List of contracts for independent study
- Advising loads
- List of service activities on Committees of the Faculty and Committees of the College
- Current CV
- Copies of all narrative evaluations from a sample of courses
- List of ongoing and completed scholarship since my last review
- Personal reflection

Courses Taught

ED 201 Introduction to Education

Provides and overview of American Education in both public and private settings. Students consider multiple aspects of education, including teaching as a profession, historical foundations of education, philosophical foundations of education, trends and issues in schools and teaching, issues of diversity and multicultural education. In addition, numerous social (quality of life) issues of importance to teachers, students, and society in general are addressed.

ED 299 Exploring Teaching

A field-based Exploration Term project that requires observation and participation in classrooms at the elementary, middle-school, or High School level.

ED 320 Teaching Mathematics

Develop techniques, materials, and methods for teaching mathematics to children ages 5 through 12. Attention will be given to teaching children with special needs. Laboratory required. A service-learning integrated course.

ED 324 Teaching Science and Health

Provides teacher candidates with philosophy, content knowledge, techniques, and materials to assist them in the teaching of science and health to grades K-6. Attention will be given to teaching children with special needs?

EPY 223 The Developing Child in the 21st Century

Theories of child development to help students understand the mental, social, and emotional patterns of development from preschool-adulthood. Students will engage in discussions about how phenomena unique to the culture of the Unites States in the 21st Century affect development and learning.

Numerical Evaluations

For the purpose of this review, I analyzed my numerical data from Spring 2017, Fall 2017, Spring 2018, Fall 2018. (I was on Sabbatical in Fall of 2016.)

I chose to look for patterns in order to find areas for improvement. The range of scores are as

Term	Range
Spring 2017	1.0-1.35
Fall 2017	1.0 – 1.9
Spring 2018	1.12 – 1.48
Fall 2018	1.31-1.88

At first glance I noted that my spring scores are higher than the scores in the fall. I attribute this to the way that my teaching load falls in fall and spring. In the fall I teach three 200 level classes. These classes are always much larger than the 300 and 400 level classes. In the spring I teach two 300 education classes as well as one introductory class. This results in a tremendous difference from fall to spring. (During the 2018-2019 academic year I had 77 students in the fall and 30 students in the spring.)

I feel the differences in class sizes as well as the fact that my students in the fall are overwhelmingly underclassmen can explain some of this variability, but I know that in the spring I am better able to allocate my time and focus on students who have prior knowledge of the discipline.

To more closely evaluate the numbers looked at the standard deviation from the mean. In three of the terms the standard deviation was less than 1.0, so I chose to look at items that had standard deviations more than 0.75.

This data showed a pattern. Items 11 and 15 were present in each term evaluated. Item 5 was present in two terms.

The prompts for these items:

Question 15: Please evaluation the quality of your own preparedness for class.

Question 11: The instructor's comments on course work were helpful.

Question 5: The course was organized in a way that enhanced my learning.

Based on this information, I will strive during the next post-tenure evaluative cycle to improve the comments on course work. It is difficult to know what students deem "helpful comments", but after consideration, my goal is to attempt to make sure that I give clear feedback on every graded assignment.

A similar analysis showed that Question 11 was a strong pattern in the aggregated faculty data. Professional development in the area of student feedback might be helpful across all disciplines.

BSC Course Evaluation for Spring-2017

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*	Female			Male			noResponse					
	19			4			3					
	73.1%			15.4%			11.5%					
Question-02: *Class level?*	Junior			Senior			Sophomore			noResponse		
	14			7			1			4		
	53.8%			26.9%			3.8%			15.4%		
Question-03: *Reason for enrollment?*	Elective			Major			noResponse					
	1			23			2					
	3.8%			88.5%			7.7%					
	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*93.1*
	96.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-05: *The course was organized in a way that enhanced my learning.*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*94.6*
	96.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-06: *The course was intellectually stimulating.*	23	2	0	0	0	0	1	*26*	*1.08*	*1*	*0.27*	*91.5*
	88.5%	7.7%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-07: *The course improved my ability to think critically and reason effectively.*	23	2	0	0	0	0	1	*26*	*1.08*	*1*	*0.27*	*96.2*
	88.5%	7.7%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	25	0	0	0	0	1	0	*26*	*1.00*	*1*	*0*	*95.4*
	96.2%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*91.5*
	96.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-10: *The instructor returned graded assignments in a timely manner.*	22	1	0	0	0	2	1	*26*	*1.04*	*1*	*0.21*	*91.5*
	84.6%	3.8%	0.0%	0.0%	0.0%	7.7%	3.8%					
Question-11: *The instructor's comments on course work were helpful.*	19	4	0	0	0	1	2	*26*	*1.17*	*1*	*0.38*	*86.2*
	73.1%	15.4%	0.0%	0.0%	0.0%	3.8%	7.7%					
Question-12: *The instructor was available for help outside of regular class times.*	22	1	0	0	0	2	1	*26*	*1.04*	*1*	*0.21*	*96.2*
	84.6%	3.8%	0.0%	0.0%	0.0%	7.7%	3.8%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	26	0	0	0	0	0	0	*26*	*1.00*	*1*	*0*	*88.5*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	25	0	0	0	0	0	1	*26*	*1.00*	*1*	*0*	*90*
	96.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	18	7	1	0	0	0	0	*26*	*1.35*	*1*	*0.55*	*91.5*
	69.2%	26.9%	3.8%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2017

Course Title: BSC Overall Statistics	Course Number: BSC Summary	Professor(s): All Professors

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
1964	1628	351
49.8%	41.3%	8.9%

Question-02: *Class level?*

First year	Graduate	Junior	Senior	Sophomore	noResponse
894	2	866	687	1143	351
22.7%	0.1%	22.0%	17.4%	29.0%	8.9%

Question-03: *Reason for enrollment?*

Elective	General Education	Grade Redemption	Major	Minor	Schedule Convenience	noResponse
378	1002	20	1663	357	71	452
9.6%	25.4%	0.5%	42.2%	9.1%	1.8%	11.5%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	2521	750	328	142	78	63	61	*3943*	*1.56*	*1*	*0.94*
	63.9%	19.0%	8.3%	3.6%	2.0%	1.6%	1.5%				
Question-05: *The course was organized in a way that enhanced my learning.*	2212	874	442	198	105	58	54	*3943*	*1.72*	*1*	*1.04*
	56.1%	22.2%	11.2%	5.0%	2.7%	1.5%	1.4%				
Question-06: *The course was intellectually stimulating.*	2365	835	379	162	84	58	60	*3943*	*1.63*	*1*	*0.98*
	60.0%	21.2%	9.6%	4.1%	2.1%	1.5%	1.5%				
Question-07: *The course improved my ability to think critically and reason effectively.*	2186	862	461	197	93	79	65	*3943*	*1.72*	*1*	*1.03*
	55.4%	21.9%	11.7%	5.0%	2.4%	2.0%	1.6%				
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	2572	712	312	134	76	73	64	*3943*	*1.54*	*1*	*0.93*
	65.2%	18.1%	7.9%	3.4%	1.9%	1.9%	1.6%				
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	2679	681	272	112	62	71	66	*3943*	*1.48*	*1*	*0.88*
	67.9%	17.3%	6.9%	2.8%	1.6%	1.8%	1.7%				
Question-10: *The instructor returned graded assignments in a timely manner.*	2309	778	363	163	123	136	71	*3943*	*1.67*	*1*	*1.04*
	58.6%	19.7%	9.2%	4.1%	3.1%	3.4%	1.8%				
Question-11: *The instructor's comments on course work were helpful.*	2101	893	417	184	130	147	71	*3943*	*1.75*	*1*	*1.06*
	53.3%	22.6%	10.6%	4.7%	3.3%	3.7%	1.8%				
Question-12: *The instructor was available for help outside of regular class times.*	2486	757	294	108	57	170	71	*3943*	*1.51*	*1*	*0.88*
	63.0%	19.2%	7.5%	2.7%	1.4%	4.3%	1.8%				
Question-13: *The instructor treated students respectfully, even when offering criticism.*	2956	523	200	78	71	54	61	*3943*	*1.38*	*1*	*0.83*
	75.0%	13.3%	5.1%	2.0%	1.8%	1.4%	1.5%				
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	2787	596	245	103	76	59	77	*3943*	*1.45*	*1*	*0.88*
	70.7%	15.1%	6.2%	2.6%	1.9%	1.5%	2.0%				
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	1574	1551	563	105	29	57	64	*3943*	*1.81*	*2*	*0.84*
	39.9%	39.3%	14.3%	2.7%	0.7%	1.4%	1.6%				
Question-16: *Please rate the instructor's overall teaching effectiveness.*	2322	871	365	164	102	59	60	*3943*	*1.65*	*1*	*1.00*
	58.9%	22.1%	9.3%	4.2%	2.6%	1.5%	1.5%				

BSC Course Evaluation for Spring-2017

Course Title: Teaching Science and Health	Course Number: ED 324 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*	Female			Male			noResponse						
	7			1			1						
	77.8%			11.1%			11.1%						
Question-02: *Class level?*	Junior						noResponse						
	7						2						
	77.8%						22.2%						
Question-03: *Reason for enrollment?*	Major						noResponse						
	8						1						
	88.9%						11.1%						
	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*	
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	8	0	0	0	0	0	1	9	1.00	1	0	84.3	
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%						
Question-05: *The course was organized in a way that enhanced my learning.*	8	0	0	0	0	0	1	9	1.00	1	0	86.4	
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%						
Question-06: *The course was intellectually stimulating.*	9	0	0	0	0	0	0	9	1.00	1	0	83.1	
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%						
Question-07: *The course improved my ability to think critically and reason effectively.*	9	0	0	0	0	0	0	9	1.00	1	0	87.1	
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%						
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	9	0	0	0	0	0	0	9	1.00	1	0	82.2	
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%						
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	8	0	0	0	0	0	1	9	1.00	1	0	79.0	
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%						
Question-10: *The instructor returned graded assignments in a timely manner.*	8	0	0	0	0	0	1	9	1.00	1	0	83.7	
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%						
Question-11: *The instructor's comments on course work were helpful.*	6	1	0	0	0	0	2	9	1.14	1	0.35	80.6	
	66.7%	11.1%	0.0%	0.0%	0.0%	0.0%	22.2%						
Question-12: *The instructor was available for help outside of regular class times.*	7	0	0	0	0	1	1	9	1.00	1	0	84.3	
	77.8%	0.0%	0.0%	0.0%	0.0%	11.1%	11.1%						
Question-13: *The instructor treated students respectfully, even when offering criticism.*	9	0	0	0	0	0	0	9	1.00	1	0	72.0	
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%						
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	8	0	0	0	0	0	1	9	1.00	1	0	76.5	
	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%						
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	7	2	0	0	0	0	0	9	1.22	1	0.42	92.2	
	77.8%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%						

BSC Course Evaluation for Spring-2017

Course Title: Internship II	Course Number: ED 410 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*	Female							Male				
	1							1				
	50.0%							50.0%				
Question-02: *Class level?*	Senior											
	2											
	100.0%											
Question-03: *Reason for enrollment?*	Major											
	2											
	100.0%											
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*84.3*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*86.4*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*83.1*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*87.1*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	1	0	0	0	0	1	0	*2*	*1.00*	*1*	*0*	*82.2*
	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*79.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	1	0	0	0	0	1	0	*2*	*1.00*	*1*	*0*	*83.7*
	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	1	0	0	0	0	1	0	*2*	*1.00*	*1*	*0*	*85.6*
	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*84.3*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*72.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*76.5*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	2	0	0	0	0	0	0	*2*	*1.00*	*1*	*0*	*94.9*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2017

Course Title: Internship III	Course Number: ED 411 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*	Female			Male			noResponse					
	3			1			1					
	60.0%			20.0%			20.0%					
Question-02: *Class level?*	Senior						noResponse					
	4						1					
	80.0%						20.0%					
Question-03: *Reason for enrollment?*	Major						noResponse					
	4						1					
	80.0%						20.0%					
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
	5	0	0	0	0	0	0	5	1.00	1	0	84.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	5	0	0	0	0	0	0	5	1.00	1	0	86.4
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	5	0	0	0	0	0	0	5	1.00	1	0	83.1
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	4	1	0	0	0	0	0	5	1.20	1	0.40	77.7
	80.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	5	0	0	0	0	0	0	5	1.00	1	0	82.2
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	5	0	0	0	0	0	0	5	1.00	1	0	79.0
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	4	0	0	0	0	1	0	5	1.00	1	0	83.7
	80.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	5	0	0	0	0	0	0	5	1.00	1	0	85.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	5	0	0	0	0	0	0	5	1.00	1	0	84.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	5	0	0	0	0	0	0	5	1.00	1	0	72.0
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	5	0	0	0	0	0	0	5	1.00	1	0	76.5
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	4	1	0	0	0	0	0	5	1.20	1	0.40	92.4
	80.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2017

Course Title: Teaching Mathematics	Course Number: ED 320 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory 4=mediocre, 5=poor, NA=notApplicable

Question-01: *Student gender?*

Female	Male	noResponse
8	1	1
80.0%	10.0%	10.0%

Question-02: *Class level?*

Junior	Senior	Sophomore	noResponse
7	1	1	1
70.0%	10.0%	10.0%	10.0%

Question-03: *Reason for enrollment?*

Elective	Major
1	9
10.0%	90.0%

	1	2	3	4	5	NA	noResponse	*Total*	*Mean*	*Median*	*StdDev*	*Percentile*
Question-04: *The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*84.3*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-05: *The course was organized in a way that enhanced my learning.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*86.4*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: *The course was intellectually stimulating.*	7	2	0	0	0	0	1	*10*	*1.22*	*1*	*0.42*	*70.5*
	70.0%	20.0%	0.0%	0.0%	0.0%	0.0%	10.0%					
Question-07: *The course improved my ability to think critically and reason effectively.*	8	1	0	0	0	0	1	*10*	*1.11*	*1*	*0.32*	*83.8*
	80.0%	10.0%	0.0%	0.0%	0.0%	0.0%	10.0%					
Question-08: *The instructor promoted understanding of general concepts not just knowledge of specific facts.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*82.2*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: *The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*79.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: *The instructor returned graded assignments in a timely manner.*	9	1	0	0	0	0	0	*10*	*1.10*	*1*	*0.30*	*80.7*
	90.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: *The instructor's comments on course work were helpful.*	7	3	0	0	0	0	0	*10*	*1.30*	*1*	*0.46*	*71.5*
	70.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: *The instructor was available for help outside of regular class times.*	8	1	0	0	0	1	0	*10*	*1.11*	*1*	*0.32*	*79.2*
	80.0%	10.0%	0.0%	0.0%	0.0%	10.0%	0.0%					
Question-13: *The instructor treated students respectfully, even when offering criticism.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*72.0*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: *The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.*	10	0	0	0	0	0	0	*10*	*1.00*	*1*	*0*	*76.5*
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: *Please evaluate the quality of your own preparation and work for this class.*	5	4	1	0	0	0	0	*10*	*1.60*	*2*	*0.67*	*71.5*
	50.0%	40.0%	10.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Fall-2017

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	8			31			16					
	14.5			56.4			29.1					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	21		11		4		4		0		15	
	38.2%		20.0%		7.3%		7.3%		0.0%		27.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	5		25		1		6		2		1	15
	9.1%		45.5%		1.8%		10.9%		3.6%		1.8%	27.3%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	31	**10**	**6**	**3**	**0**	**0**	**5**	**55**	**1.62**	**1**	**0.91**	**39.4**
	56.4%	**18.2%**	**10.9%**	**5.5%**	**0.0%**	**0.0%**	**9.1%**					
Question-05: The course was organized in a way that enhanced my learning.	25	17	3	4	0	0	6	55	1.71	1	0.90	43.3
	45.5%	30.9%	5.5%	7.3%	0.0%	0.0%	10.9%					
Question-06: The course was intellectually stimulating.	24	13	8	4	1	1	4	55	1.90	2	1.06	22.1
	43.6%	23.6%	14.5%	7.3%	1.8%	1.8%	7.3%					
Question-07: The course improved my ability to think critically and reason effectively.	25	14	5	4	1	0	6	55	1.82	1	1.04	34.7
	45.5%	25.5%	9.1%	7.3%	1.8%	0.0%	10.9%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	39	7	2	0	1	0	6	55	1.31	1	0.73	67.0
	70.9%	12.7%	3.6%	0.0%	1.8%	0.0%	10.9%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	34	12	3	0	0	0	6	55	1.37	1	0.60	55.1
	61.8%	21.8%	5.5%	0.0%	0.0%	0.0%	10.9%					
Question-10: The instructor returned graded assignments in a timely manner.	32	13	3	1	0	0	6	55	1.45	1	0.70	53.6
	58.2%	23.6%	5.5%	1.8%	0.0%	0.0%	10.9%					
Question-11: The instructor's comments on course work were helpful.	29	8	7	4	1	0	6	55	1.78	1	1.09	37.8
	52.7%	14.5%	12.7%	7.3%	1.8%	0.0%	10.9%					
Question-12: The instructor was available for help outside of regular class times.	37	10	1	1	0	0	6	55	1.31	1	0.61	59.1
	67.3%	18.2%	1.8%	1.8%	0.0%	0.0%	10.9%					
Question-13: The instructor treated students respectfully, even when offering criticism.	45	2	2	0	0	0	6	55	1.12	1	0.43	78.5
	81.8%	3.6%	3.6%	0.0%	0.0%	0.0%	10.9%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	46	2	1	1	0	0	5	55	1.14	1	0.53	84.1
	83.6%	3.6%	1.8%	1.8%	0.0%	0.0%	9.1%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	20	19	11	0	0	0	5	55	1.82	2	0.77	47.2
	36.4%	34.5%	20.0%	0.0%	0.0%	0.0%	9.1%					
Question-16: Please rate the instructor's overall teaching effectiveness.	31	11	7	0	1	0	5	55	1.58	1	0.87	48.1
	56.4%	20.0%	12.7%	0.0%	1.8%	0.0%	9.1%					

BSC Course Evaluation for Fall-2017

Course Title: BSC Overall Statistics	Course Number: BSC_Summary	Professor(s): All Professors

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	1651			2169				462				
	38.6			50.7				10.8				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	883		853		1163		926		9		448	
	20.6%		19.9%		27.2%		21.6%		0.2%		10.5%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	1071		1802		335		446		66		12	550
	25.0%		42.1%		7.8%		10.4%		1.5%		0.3%	12.8%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**2603**	**924**	**362**	**176**	**49**	**13**	**155**	**4282**	**1.58**	**1**	**0.91**	**35.7**
	60.8%	**21.6%**	**8.5%**	**4.1%**	**1.1%**	**0.3%**	**3.6%**					
Question-05: The course was organized in a way that enhanced my learning.	2199	1031	551	240	93	17	151	4282	1.78	1	1.03	38.2
	51.4%	24.1%	12.9%	5.6%	2.2%	0.4%	3.5%					
Question-06: The course was intellectually stimulating.	2459	897	500	172	88	18	148	4282	1.67	1	0.99	39.7
	57.4%	20.9%	11.7%	4.0%	2.1%	0.4%	3.5%					
Question-07: The course improved my ability to think critically and reason effectively.	2222	1026	542	201	86	46	159	4282	1.75	1	1.00	36.9
	51.9%	24.0%	12.7%	4.7%	2.0%	1.1%	3.7%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	2725	806	337	135	78	32	169	4282	1.54	1	0.92	34.2
	63.6%	18.8%	7.9%	3.2%	1.8%	0.7%	3.9%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	2800	767	325	114	70	36	170	4282	1.50	1	0.89	33.5
	65.4%	17.9%	7.6%	2.7%	1.6%	0.8%	4.0%					
Question-10: The instructor returned graded assignments in a timely manner.	2384	889	443	194	116	96	160	4282	1.70	1	1.03	33.6
	55.7%	20.8%	10.3%	4.5%	2.7%	2.2%	3.7%					
Question-11: The instructor's comments on course work were helpful.	2204	983	527	196	99	102	171	4282	1.75	1	1.02	42.0
	51.5%	23.0%	12.3%	4.6%	2.3%	2.4%	4.0%					
Question-12: The instructor was available for help outside of regular class times.	2751	833	255	98	47	112	186	4282	1.46	1	0.82	36.3
	64.2%	19.5%	6.0%	2.3%	1.1%	2.6%	4.3%					
Question-13: The instructor treated students respectfully, even when offering criticism.	3165	598	200	70	65	10	174	4282	1.36	1	0.79	33.6
	73.9%	14.0%	4.7%	1.6%	1.5%	0.2%	4.1%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	2900	742	272	94	72	13	189	4282	1.45	1	0.86	35.4
	67.7%	17.3%	6.4%	2.2%	1.7%	0.3%	4.4%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	1647	1663	633	123	40	18	158	4282	1.84	2	0.86	41.2
	38.5%	38.8%	14.8%	2.9%	0.9%	0.4%	3.7%					
Question-16: Please rate the instructor's overall teaching effectiveness.	2363	1088	398	177	78	15	163	4282	1.66	1	0.95	39.1
	55.2%	25.4%	9.3%	4.1%	1.8%	0.4%	3.8%					

BSC Course Evaluation for Fall-2017

Course Title: Intro to Education	Course Number: ED 201 A-ES	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	1			8			5					
	7.1			57.1			35.7					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	10		0		0		0		0		4	
	71.4%		0.0%		0.0%		0.0%		0.0%		28.6%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		10		0		1		0		0	3
	0.0%		71.4%		0.0%		7.1%		0.0%		0.0%	21.4%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	8	**5**	**1**	**0**	**0**	**0**	**0**	**14**	**1.50**	**1**	**0.63**	**40.7**
	57.1%	**35.7%**	**7.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	9	4	0	1	0	0	0	14	1.50	1	0.82	57.5
	64.3%	28.6%	0.0%	7.1%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	5	5	4	0	0	0	0	14	1.93	2	0.80	22.9
	35.7%	35.7%	28.6%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	8	5	1	0	0	0	0	14	1.50	1	0.63	54.6
	57.1%	35.7%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	12	2	0	0	0	0	0	14	1.14	1	0.35	73.7
	85.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	10	3	1	0	0	0	0	14	1.36	1	0.61	49.3
	71.4%	21.4%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	10	3	1	0	0	0	0	14	1.36	1	0.61	58.6
	71.4%	21.4%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	9	2	2	1	0	0	0	14	1.64	1	0.97	49.4
	64.3%	14.3%	14.3%	7.1%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	12	1	1	0	0	0	0	14	1.21	1	0.56	65.7
	85.7%	7.1%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	14	0	0	0	0	0	0	14	1.00	1	0.00	75.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	14	0	0	0	0	0	0	14	1.00	1	0.00	80.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	6	6	2	0	0	0	0	14	1.71	2	0.70	58.9
	42.9%	42.9%	14.3%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	10	2	2	0	0	0	0	14	1.43	1	0.73	55.5
	71.4%	14.3%	14.3%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Fall-2017

Course Title: Intro to Education	Course Number: ED 201 B	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	4			15				4				
	17.4			65.2				17.4				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	7		4		4		4		0		4	
	30.4%		17.4%		17.4%		17.4%		0.0%		17.4%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	3		10		0		4		1		1	4
	13.0%		43.5%		0.0%		17.4%		4.3%		4.3%	17.4%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**15**	**2**	**2**	**3**	**0**	**0**	**1**	**23**	**1.68**	**1**	**1.10**	**29.2**
	65.2%	**8.7%**	**8.7%**	**13.0%**	**0.0%**	**0.0%**	**4.3%**					
Question-05: The course was organized in a way that enhanced my learning.	12	5	3	2	0	0	1	23	1.77	1	1.00	39.1
	52.2%	21.7%	13.0%	8.7%	0.0%	0.0%	4.3%					
Question-06: The course was intellectually stimulating.	10	5	4	2	1	0	1	23	2.05	2	1.19	15.2
	43.5%	21.7%	17.4%	8.7%	4.3%	0.0%	4.3%					
Question-07: The course improved my ability to think critically and reason effectively.	11	5	2	3	1	0	1	23	2.00	2	1.24	20.1
	47.8%	21.7%	8.7%	13.0%	4.3%	0.0%	4.3%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	17	3	1	0	1	0	1	23	1.41	1	0.94	44.5
	73.9%	13.0%	4.3%	0.0%	4.3%	0.0%	4.3%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	15	5	2	0	0	0	1	23	1.41	1	0.65	43.7
	65.2%	21.7%	8.7%	0.0%	0.0%	0.0%	4.3%					
Question-10: The instructor returned graded assignments in a timely manner.	13	7	1	1	0	0	1	23	1.55	1	0.78	43.4
	56.5%	30.4%	4.3%	4.3%	0.0%	0.0%	4.3%					
Question-11: The instructor's comments on course work were helpful.	13	4	2	2	1	0	1	23	1.82	1	1.19	35.4
	56.5%	17.4%	8.7%	8.7%	4.3%	0.0%	4.3%					
Question-12: The instructor was available for help outside of regular class times.	14	7	0	1	0	0	1	23	1.45	1	0.72	37.2
	60.9%	30.4%	0.0%	4.3%	0.0%	0.0%	4.3%					
Question-13: The instructor treated students respectfully, even when offering criticism.	19	2	1	0	0	0	1	23	1.18	1	0.49	54.4
	82.6%	8.7%	4.3%	0.0%	0.0%	0.0%	4.3%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	19	2	1	0	0	0	1	23	1.18	1	0.49	64.7
	82.6%	8.7%	4.3%	0.0%	0.0%	0.0%	4.3%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	9	9	4	0	0	0	1	23	1.77	2	0.73	52.4
	39.1%	39.1%	17.4%	0.0%	0.0%	0.0%	4.3%					
Question-16: Please rate the instructor's overall teaching effectiveness.	14	4	3	0	1	0	1	23	1.64	1	1.02	40.3
	60.9%	17.4%	13.0%	0.0%	4.3%	0.0%	4.3%					

BSC Course Evaluation for Fall-2017

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	3			8				7				
	16.7			44.4				38.9				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	4		7		0		0		0		7	
	22.2%		38.9%		0.0%		0.0%		0.0%		38.9%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	2		5		1		1		1		0	8
	11.1%		27.8%		5.6%		5.6%		5.6%		0.0%	44.4%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	8	**3**	**3**	**0**	**0**	**0**	**4**	**18**	**1.64**	**1**	**0.81**	**32.3**
	44.4%	**16.7%**	**16.7%**	**0.0%**	**0.0%**	**0.0%**	**22.2%**					
Question-05: The course was organized in a way that enhanced my learning.	4	8	0	1	0	0	5	18	1.85	2	0.77	33.9
	22.2%	44.4%	0.0%	5.6%	0.0%	0.0%	27.8%					
Question-06: The course was intellectually stimulating.	9	3	0	2	0	1	3	18	1.64	1	1.04	42.2
	50.0%	16.7%	0.0%	11.1%	0.0%	5.6%	16.7%					
Question-07: The course improved my ability to think critically and reason effectively.	6	4	2	1	0	0	5	18	1.85	2	0.95	32.2
	33.3%	22.2%	11.1%	5.6%	0.0%	0.0%	27.8%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	10	2	1	0	0	0	5	18	1.31	1	0.61	54.7
	55.6%	11.1%	5.6%	0.0%	0.0%	0.0%	27.8%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	9	4	0	0	0	0	5	18	1.31	1	0.46	54.0
	50.0%	22.2%	0.0%	0.0%	0.0%	0.0%	27.8%					
Question-10: The instructor returned graded assignments in a timely manner.	9	3	1	0	0	0	5	18	1.38	1	0.62	57.4
	50.0%	16.7%	5.6%	0.0%	0.0%	0.0%	27.8%					
Question-11: The instructor's comments on course work were helpful.	7	2	3	1	0	0	5	18	1.85	1	1.03	32.3
	38.9%	11.1%	16.7%	5.6%	0.0%	0.0%	27.8%					
Question-12: The instructor was available for help outside of regular class times.	11	2	0	0	0	0	5	18	1.15	1	0.36	73.2
	61.1%	11.1%	0.0%	0.0%	0.0%	0.0%	27.8%					
Question-13: The instructor treated students respectfully, even when offering criticism.	12	0	1	0	0	0	5	18	1.15	1	0.53	58.2
	66.7%	0.0%	5.6%	0.0%	0.0%	0.0%	27.8%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	13	0	0	1	0	0	4	18	1.21	1	0.77	62.5
	72.2%	0.0%	0.0%	5.6%	0.0%	0.0%	22.2%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	5	4	5	0	0	0	4	18	2.00	2	0.85	22.6
	27.8%	22.2%	27.8%	0.0%	0.0%	0.0%	22.2%					
Question-16: Please rate the instructor's overall teaching effectiveness.	7	5	2	0	0	0	4	18	1.64	2	0.72	40.3
	38.9%	27.8%	11.1%	0.0%	0.0%	0.0%	22.2%					

BSC Course Evaluation for Spring-2018

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	8			38			8					
	14.8			70.4			14.8					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	9		3		29		8		0		5	
	16.7%		5.6%		53.7%		14.8%		0.0%		9.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	4		40		1		2		0		0	7
	7.4%		74.1%		1.9%		3.7%		0.0%		0.0%	13.0%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**41**	**9**	**1**	**1**	**0**	**0**	**2**	**54**	**1.27**	**1**	**0.59**	**72.1**
	75.9%	**16.7%**	**1.9%**	**1.9%**	**0.0%**	**0.0%**	**3.7%**					
Question-05: The course was organized in a way that enhanced my learning.	40	4	6	1	0	1	2	54	1.37	1	0.77	73.7
	74.1%	7.4%	11.1%	1.9%	0.0%	1.9%	3.7%					
Question-06: The course was intellectually stimulating.	36	13	0	2	0	1	2	54	1.37	1	0.68	71.3
	66.7%	24.1%	0.0%	3.7%	0.0%	1.9%	3.7%					
Question-07: The course improved my ability to think critically and reason effectively.	41	9	0	1	0	1	2	54	1.24	1	0.55	85.6
	75.9%	16.7%	0.0%	1.9%	0.0%	1.9%	3.7%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	46	5	0	1	0	1	1	54	1.15	1	0.50	87.2
	85.2%	9.3%	0.0%	1.9%	0.0%	1.9%	1.9%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	48	3	0	1	0	1	1	54	1.12	1	0.47	89.5
	88.9%	5.6%	0.0%	1.9%	0.0%	1.9%	1.9%					
Question-10: The instructor returned graded assignments in a timely manner.	41	9	1	1	0	1	1	54	1.27	1	0.59	75.2
	75.9%	16.7%	1.9%	1.9%	0.0%	1.9%	1.9%					
Question-11: The instructor's comments on course work were helpful.	36	9	5	2	0	0	2	54	1.48	1	0.82	62.6
	66.7%	16.7%	9.3%	3.7%	0.0%	0.0%	3.7%					
Question-12: The instructor was available for help outside of regular class times.	43	5	1	2	0	1	2	54	1.25	1	0.68	72.1
	79.6%	9.3%	1.9%	3.7%	0.0%	1.9%	3.7%					
Question-13: The instructor treated students respectfully, even when offering criticism.	50	1	0	2	0	0	1	54	1.13	1	0.58	69.7
	92.6%	1.9%	0.0%	3.7%	0.0%	0.0%	1.9%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	50	1	0	2	0	0	1	54	1.13	1	0.58	80.8
	92.6%	1.9%	0.0%	3.7%	0.0%	0.0%	1.9%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	32	16	2	3	0	0	1	54	1.55	1	0.81	60.9
	59.3%	29.6%	3.7%	5.6%	0.0%	0.0%	1.9%					
Question-16: Please rate the instructor's overall teaching effectiveness.	42	9	0	2	0	0	1	54	1.28	1	0.66	75.3
	77.8%	16.7%	0.0%	3.7%	0.0%	0.0%	1.9%					

BSC Course Evaluation for Spring-2018

Course Title: Teaching Science and Health	Course Number: ED 324 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	3			9				2				
	21.4			64.3				14.3				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		0		12		2		0		0	
	0.0%		0.0%		85.7%		14.3%		0.0%		0.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		13		0		0		0		0	1
	0.0%		92.9%		0.0%		0.0%		0.0%		0.0%	7.1%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**11**	**3**	**0**	**0**	**0**	**0**	**0**	**14**	**1.21**	**1**	**0.41**	**65.2**
	78.6%	**21.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	12	1	1	0	0	0	0	14	1.21	1	0.56	75.0
	85.7%	7.1%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	11	2	0	0	0	0	1	14	1.15	1	0.36	74.6
	78.6%	14.3%	0.0%	0.0%	0.0%	0.0%	7.1%					
Question-07: The course improved my ability to think critically and reason effectively.	11	2	0	0	0	0	1	14	1.15	1	0.36	79.7
	78.6%	14.3%	0.0%	0.0%	0.0%	0.0%	7.1%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	13	1	0	0	0	0	0	14	1.07	1	0.26	78.8
	92.9%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	14	0	0	0	0	0	0	14	1.00	1	0.00	77.5
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	13	1	0	0	0	0	0	14	1.07	1	0.26	83.5
	92.9%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	12	1	1	0	0	0	0	14	1.21	1	0.56	77.2
	85.7%	7.1%	7.1%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	14	0	0	0	0	0	0	14	1.00	1	0.00	80.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	14	0	0	0	0	0	0	14	1.00	1	0.00	73.1
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	14	0	0	0	0	0	0	14	1.00	1	0.00	76.9
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	10	4	0	0	0	0	0	14	1.29	1	0.45	89.8
	71.4%	28.6%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	12	2	0	0	0	0	0	14	1.14	1	0.35	73.3
	85.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2018

Course Title: Sr Conference Research	Course Number: ED C472 1	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	1			1			0					
	50.0			50.0			0.0					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		0		1		1		0		0	
	0.0%		0.0%		50.0%		50.0%		0.0%		0.0%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		2		0		0		0		0	0
	0.0%		100.0%		0.0%		0.0%		0.0%		0.0%	0.0%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	2	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1.00**	**1**	**0.00**	**83.1**
	100.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	2	0	0	0	0	0	0	2	1.00	1	0.00	86.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	2	0	0	0	0	0	0	2	1.00	1	0.00	82.2
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	2	0	0	0	0	0	0	2	1.00	1	0.00	86.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	2	0	0	0	0	0	0	2	1.00	1	0.00	81.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	2	0	0	0	0	0	0	2	1.00	1	0.00	77.5
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	2	0	0	0	0	0	0	2	1.00	1	0.00	86.4
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	2	0	0	0	0	0	0	2	1.00	1	0.00	86.3
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	2	0	0	0	0	0	0	2	1.00	1	0.00	80.6
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-13: The instructor treated students respectfully, even when offering criticism.	2	0	0	0	0	0	0	2	1.00	1	0.00	73.1
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	2	0	0	0	0	0	0	2	1.00	1	0.00	76.9
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	2	0	0	0	0	0	0	2	1.00	1	0.00	93.5
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	2	0	0	0	0	0	0	2	1.00	1	0.00	82.8
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2018

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	0			15			4					
	0.0			78.9			21.1					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	9		3		0		3		0		4	
	47.4%		15.8%		0.0%		15.8%		0.0%		21.1%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	4		7		1		2		0		0	5
	21.1%		36.8%		5.3%		10.5%		0.0%		0.0%	26.3%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	15	**2**	**0**	**1**	**0**	**0**	**1**	**19**	**1.28**	**1**	**0.73**	**58.0**
	78.9%	**10.5%**	**0.0%**	**5.3%**	**0.0%**	**0.0%**	**5.3%**					
Question-05: The course was organized in a way that enhanced my learning.	13	2	2	1	0	0	1	19	1.50	1	0.90	48.3
	68.4%	10.5%	10.5%	5.3%	0.0%	0.0%	5.3%					
Question-06: The course was intellectually stimulating.	8	8	0	2	0	0	1	19	1.78	2	0.92	24.7
	42.1%	42.1%	0.0%	10.5%	0.0%	0.0%	5.3%					
Question-07: The course improved my ability to think critically and reason effectively.	11	6	0	1	0	0	1	19	1.50	1	0.76	48.3
	57.9%	31.6%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	14	3	0	1	0	0	1	19	1.33	1	0.75	47.0
	73.7%	15.8%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	16	1	0	1	0	0	1	19	1.22	1	0.71	58.7
	84.2%	5.3%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-10: The instructor returned graded assignments in a timely manner.	11	5	1	1	0	0	1	19	1.56	1	0.83	40.6
	57.9%	26.3%	5.3%	5.3%	0.0%	0.0%	5.3%					
Question-11: The instructor's comments on course work were helpful.	7	7	2	2	0	0	1	19	1.94	2	0.97	26.3
	36.8%	36.8%	10.5%	10.5%	0.0%	0.0%	5.3%					
Question-12: The instructor was available for help outside of regular class times.	11	5	1	1	0	0	1	19	1.56	1	0.83	26.9
	57.9%	26.3%	5.3%	5.3%	0.0%	0.0%	5.3%					
Question-13: The instructor treated students respectfully, even when offering criticism.	16	1	0	1	0	0	1	19	1.22	1	0.71	46.1
	84.2%	5.3%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	16	1	0	1	0	0	1	19	1.22	1	0.71	56.8
	84.2%	5.3%	0.0%	5.3%	0.0%	0.0%	5.3%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	8	6	2	2	0	0	1	19	1.89	2	0.99	29.8
	42.1%	31.6%	10.5%	10.5%	0.0%	0.0%	5.3%					
Question-16: Please rate the instructor's overall teaching effectiveness.	13	4	0	1	0	0	1	19	1.39	1	0.76	52.6
	68.4%	21.1%	0.0%	5.3%	0.0%	0.0%	5.3%					

BSC Course Evaluation for Spring-2018

Course Title: Teaching Mathematics	Course Number: ED 320 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	4			13			2					
	21.1			68.4			10.5					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	0		0		16		2		0		1	
	0.0%		0.0%		84.2%		10.5%		0.0%		5.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	0		18		0		0		0		0	1
	0.0%		94.7%		0.0%		0.0%		0.0%		0.0%	5.3%

	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**13**	**4**	**1**	**0**	**0**	**0**	**1**	**19**	**1.33**	**1**	**0.58**	**53.3**
	68.4%	**21.1%**	**5.3%**	**0.0%**	**0.0%**	**0.0%**	**5.3%**					
Question-05: The course was organized in a way that enhanced my learning.	13	1	3	0	0	1	1	19	1.41	1	0.77	59.9
	68.4%	5.3%	15.8%	0.0%	0.0%	5.3%	5.3%					
Question-06: The course was intellectually stimulating.	15	3	0	0	0	1	0	19	1.17	1	0.37	72.1
	78.9%	15.8%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	17	1	0	0	0	1	0	19	1.06	1	0.23	85.6
	89.5%	5.3%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	17	1	0	0	0	1	0	19	1.06	1	0.23	79.4
	89.5%	5.3%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	16	2	0	0	0	1	0	19	1.11	1	0.31	73.4
	84.2%	10.5%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	15	3	0	0	0	1	0	19	1.17	1	0.37	75.2
	78.9%	15.8%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-11: The instructor's comments on course work were helpful.	15	1	2	0	0	0	1	19	1.28	1	0.65	72.4
	78.9%	5.3%	10.5%	0.0%	0.0%	0.0%	5.3%					
Question-12: The instructor was available for help outside of regular class times.	16	0	0	1	0	1	1	19	1.18	1	0.71	64.9
	84.2%	0.0%	0.0%	5.3%	0.0%	5.3%	5.3%					
Question-13: The instructor treated students respectfully, even when offering criticism.	18	0	0	1	0	0	0	19	1.16	1	0.67	55.8
	94.7%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	18	0	0	1	0	0	0	19	1.16	1	0.67	64.9
	94.7%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	12	6	0	1	0	0	0	19	1.47	1	0.75	80.1
	63.2%	31.6%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	15	3	0	1	0	0	0	19	1.32	1	0.73	60.5
	78.9%	15.8%	0.0%	5.3%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Spring-2018

Course Title: Teaching Mathematics	Course Number: ED 320 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	4			13			2					
	21.1			68.4			10.5					
Question-02: Class level?	FirstYear		Sophomore	Junior		Senior	Graduate		noResponse			
	0		0	16		2	0		1			
	0.0%		0.0%	84.2%		10.5%	0.0%		5.3%			
Question-03: Reason for enrollment?	General Education	Major	Minor	Elective	Schedule Convenience	Grade Redemption	noResponse					
	0	18	0	0	0	0	1					
	0.0%	94.7%	0.0%	0.0%	0.0%	0.0%	5.3%					
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
	13	4	1	0	0	0	1	19	1.33	1	0.58	53.3
	68.4%	21.1%	5.3%	0.0%	0.0%	0.0%	5.3%					
Question-05: The course was organized in a way that enhanced my learning.	13	1	3	0	0	1	1	19	1.41	1	0.77	59.9
	68.4%	5.3%	15.8%	0.0%	0.0%	5.3%	5.3%					
Question-06: The course was intellectually stimulating.	15	3	0	0	0	1	0	19	1.17	1	0.37	72.1
	78.9%	15.8%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	17	1	0	0	0	1	0	19	1.06	1	0.23	85.6
	89.5%	5.3%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	17	1	0	0	0	1	0	19	1.06	1	0.23	79.4
	89.5%	5.3%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	16	2	0	0	0	1	0	19	1.11	1	0.31	73.4
	84.2%	10.5%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	15	3	0	0	0	1	0	19	1.17	1	0.37	75.2
	78.9%	15.8%	0.0%	0.0%	0.0%	5.3%	0.0%					
Question-11: The instructor's comments on course work were helpful.	15	1	2	0	0	0	1	19	1.28	1	0.65	72.4
	78.9%	5.3%	10.5%	0.0%	0.0%	0.0%	5.3%					
Question-12: The instructor was available for help outside of regular class times.	16	0	0	1	0	1	1	19	1.18	1	0.71	64.9
	84.2%	0.0%	0.0%	5.3%	0.0%	5.3%	5.3%					
Question-13: The instructor treated students respectfully, even when offering criticism.	18	0	0	1	0	0	0	19	1.16	1	0.67	55.8
	94.7%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	18	0	0	1	0	0	0	19	1.16	1	0.67	64.9
	94.7%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	12	6	0	1	0	0	0	19	1.47	1	0.75	80.1
	63.2%	31.6%	0.0%	5.3%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	15	3	0	1	0	0	0	19	1.32	1	0.73	60.5
	78.9%	15.8%	0.0%	5.3%	0.0%	0.0%	0.0%					

BSC Course Evaluation for Fall-2018

Course Title: Professor Summary	Course Number: Summary Kelly Russell	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female				noResponse				
	25			33				13				
	35.2			46.5				18.3				
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	25		25		2		6		0		13	
	35.2%		35.2%		2.8%		8.5%		0.0%		18.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	13		26		1		7		9		1	14
	18.3%		36.6%		1.4%		9.9%		12.7%		1.4%	19.7%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	42	**19**	**3**	**4**	**1**	**0**	**2**	71	**1.59**	**1**	**0.92**	**38.2**
	59.2%	**26.8%**	**4.2%**	**5.6%**	**1.4%**	**0.0%**	**2.8%**					
Question-05: The course was organized in a way that enhanced my learning.	40	17	8	1	3	0	2	71	1.70	1	1.03	42.6
	56.3%	23.9%	11.3%	1.4%	4.2%	0.0%	2.8%					
Question-06: The course was intellectually stimulating.	42	10	10	5	3	0	1	71	1.81	1	1.17	28.4
	59.2%	14.1%	14.1%	7.0%	4.2%	0.0%	1.4%					
Question-07: The course improved my ability to think critically and reason effectively.	44	13	6	1	3	1	3	71	1.60	1	1.02	49.4
	62.0%	18.3%	8.5%	1.4%	4.2%	1.4%	4.2%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	50	11	3	1	2	0	4	71	1.42	1	0.88	47.1
	70.4%	15.5%	4.2%	1.4%	2.8%	0.0%	5.6%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	53	8	5	1	1	0	3	71	1.37	1	0.80	44.9
	74.6%	11.3%	7.0%	1.4%	1.4%	0.0%	4.2%					
Question-10: The instructor returned graded assignments in a timely manner.	37	15	12	3	1	0	3	71	1.76	1	0.99	32.9
	52.1%	21.1%	16.9%	4.2%	1.4%	0.0%	4.2%					
Question-11: The instructor's comments on course work were helpful.	40	22	4	1	2	0	2	71	1.59	1	0.89	49.4
	56.3%	31.0%	5.6%	1.4%	2.8%	0.0%	2.8%					
Question-12: The instructor was available for help outside of regular class times.	51	12	0	0	0	4	4	71	1.19	1	0.39	78.5
	71.8%	16.9%	0.0%	0.0%	0.0%	5.6%	5.6%					
Question-13: The instructor treated students respectfully, even when offering criticism.	62	6	0	0	0	0	3	71	1.09	1	0.28	75.5
	87.3%	8.5%	0.0%	0.0%	0.0%	0.0%	4.2%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	60	7	1	0	0	0	3	71	1.13	1	0.38	74.7
	84.5%	9.9%	1.4%	0.0%	0.0%	0.0%	4.2%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	38	20	6	3	1	0	3	71	1.66	1	0.92	69.4
	53.5%	28.2%	8.5%	4.2%	1.4%	0.0%	4.2%					
Question-16: Please rate the instructor's overall teaching effectiveness.	53	11	2	1	2	0	2	71	1.38	1	0.85	62.0
	74.6%	15.5%	2.8%	1.4%	2.8%	0.0%	2.8%					

BSC Course Evaluation for Fall-2018

Course Title: BSC Overall Statistics	Course Number: BSC_Summary	Professor(s): All Professors

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	1744			2245			448					
	39.3			50.6			10.1					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	998		978		877		1117		3		464	
	22.5%		22.0%		19.8%		25.2%		0.1%		10.5%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	1037		1926		350		421		97		22	584
	23.4%		43.4%		7.9%		9.5%		2.2%		0.5%	13.2%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	2824	**863**	**359**	**194**	**64**	**2**	**131**	**4437**	**1.56**	**1**	**0.93**	**38.2**
	63.6%	**19.5%**	**8.1%**	**4.4%**	**1.4%**	**0.0%**	**3.0%**					
Question-05: The course was organized in a way that enhanced my learning.	2508	920	510	263	110	2	124	4437	1.74	1	1.05	40.3
	56.5%	20.7%	11.5%	5.9%	2.5%	0.0%	2.8%					
Question-06: The course was intellectually stimulating.	2674	873	469	199	84	10	128	4437	1.64	1	0.98	35.6
	60.3%	19.7%	10.6%	4.5%	1.9%	0.2%	2.9%					
Question-07: The course improved my ability to think critically and reason effectively.	2473	968	535	209	102	21	129	4437	1.72	1	1.02	37.3
	55.7%	21.8%	12.1%	4.7%	2.3%	0.5%	2.9%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	2952	774	332	153	78	6	142	4437	1.52	1	0.91	34.4
	66.5%	17.4%	7.5%	3.4%	1.8%	0.1%	3.2%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	3047	714	336	123	54	13	150	4437	1.46	1	0.85	35.6
	68.7%	16.1%	7.6%	2.8%	1.2%	0.3%	3.4%					
Question-10: The instructor returned graded assignments in a timely manner.	2551	901	477	190	112	69	137	4437	1.68	1	1.02	34.8
	57.5%	20.3%	10.8%	4.3%	2.5%	1.6%	3.1%					
Question-11: The instructor's comments on course work were helpful.	2418	973	480	235	118	58	155	4437	1.74	1	1.04	35.4
	54.5%	21.9%	10.8%	5.3%	2.7%	1.3%	3.5%					
Question-12: The instructor was available for help outside of regular class times.	2972	787	297	82	46	84	169	4437	1.43	1	0.80	38.2
	67.0%	17.7%	6.7%	1.8%	1.0%	1.9%	3.8%					
Question-13: The instructor treated students respectfully, even when offering criticism.	3431	553	165	83	54	8	143	4437	1.31	1	0.75	33.8
	77.3%	12.5%	3.7%	1.9%	1.2%	0.2%	3.2%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	3181	687	241	93	62	10	163	4437	1.40	1	0.81	35.8
	71.7%	15.5%	5.4%	2.1%	1.4%	0.2%	3.7%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	1839	1635	633	135	41	8	146	4437	1.81	2	0.87	43.5
	41.4%	36.8%	14.3%	3.0%	0.9%	0.2%	3.3%					
Question-16: Please rate the instructor's overall teaching effectiveness.	2632	996	391	175	91	5	147	4437	1.62	1	0.96	36.2
	59.3%	22.4%	8.8%	3.9%	2.1%	0.1%	3.3%					

BSC Course Evaluation for Fall-2018

Course Title: Intro to Education	Course Number: ED 201 B	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	6			11			5					
	27.3			50.0			22.7					
Question-02: Class level?	FirstYear	Sophomore		Junior	Senior		Graduate	noResponse				
	5	12		0	0		0	5				
	22.7%	54.5%		0.0%	0.0%		0.0%	22.7%				
Question-03: Reason for enrollment?	General Education	Major	Minor	Elective	Schedule Convenience	Grade Redemption	noResponse					
	3	9	0	2	2	1	5					
	13.6%	40.9%	0.0%	9.1%	9.1%	4.5%	22.7%					
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	14	**5**	**1**	**2**	**0**	**0**	**0**	**22**	**1.59**	**1**	**0.94**	**35.7**
	63.6%	**22.7%**	**4.5%**	**9.1%**	**0.0%**	**0.0%**	**0.0%**					
Question-05: The course was organized in a way that enhanced my learning.	13	4	3	0	2	0	0	22	1.82	1	1.23	33.4
	59.1%	18.2%	13.6%	0.0%	9.1%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	13	3	4	1	1	0	0	22	1.82	1	1.15	27.3
	59.1%	13.6%	18.2%	4.5%	4.5%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	13	6	2	1	0	0	0	22	1.59	1	0.83	45.3
	59.1%	27.3%	9.1%	4.5%	0.0%	0.0%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	16	3	0	0	2	0	1	22	1.52	1	1.18	34.4
	72.7%	13.6%	0.0%	0.0%	9.1%	0.0%	4.5%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	15	4	1	1	1	0	0	22	1.59	1	1.07	28.4
	68.2%	18.2%	4.5%	4.5%	4.5%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	12	3	7	0	0	0	0	22	1.77	1	0.90	30.8
	54.5%	13.6%	31.8%	0.0%	0.0%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	13	7	1	0	1	0	0	22	1.59	1	0.94	46.3
	59.1%	31.8%	4.5%	0.0%	4.5%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	15	5	0	0	0	1	1	22	1.25	1	0.43	57.0
	68.2%	22.7%	0.0%	0.0%	0.0%	4.5%	4.5%					
Question-13: The instructor treated students respectfully, even when offering criticism.	17	4	0	0	0	0	1	22	1.19	1	0.39	48.2
	77.3%	18.2%	0.0%	0.0%	0.0%	0.0%	4.5%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	18	3	1	0	0	0	0	22	1.23	1	0.52	50.2
	81.8%	13.6%	4.5%	0.0%	0.0%	0.0%	0.0%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	12	6	2	1	1	0	0	22	1.77	1	1.08	47.8
	54.5%	27.3%	9.1%	4.5%	4.5%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	17	3	1	0	1	0	0	22	1.41	1	0.94	51.0
	77.3%	13.6%	4.5%	0.0%	4.5%	0.0%	0.0%					

BSC Course Evaluation for Fall-2018

Course Title: Intro to Education	Course Number: ED 201 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	14			11			2					
	51.9			40.7			7.4					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	14		7		1		3		0		2	
	51.9%		25.9%		3.7%		11.1%		0.0%		7.4%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	4		9		1		4		6		0	3
	14.8%		33.3%		3.7%		14.8%		22.2%		0.0%	11.1%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	**1**	**2**	**3**	**4**	**5**	**NA**	**noResponse**	**Total**	**Mean**	**Median**	**StdDev**	**Percentile**
	14	8	2	2	1	0	0	27	1.81	1	1.09	21.3
	51.9%	29.6%	7.4%	7.4%	3.7%	0.0%	0.0%					
Question-05: The course was organized in a way that enhanced my learning.	10	11	4	1	1	0	0	27	1.96	2	1.00	26.5
	37.0%	40.7%	14.8%	3.7%	3.7%	0.0%	0.0%					
Question-06: The course was intellectually stimulating.	12	5	5	3	2	0	0	27	2.19	2	1.31	11.5
	44.4%	18.5%	18.5%	11.1%	7.4%	0.0%	0.0%					
Question-07: The course improved my ability to think critically and reason effectively.	13	6	4	0	3	1	0	27	2.00	2	1.30	20.0
	48.1%	22.2%	14.8%	0.0%	11.1%	3.7%	0.0%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	18	5	3	1	0	0	0	27	1.52	1	0.83	34.4
	66.7%	18.5%	11.1%	3.7%	0.0%	0.0%	0.0%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	20	4	3	0	0	0	0	27	1.37	1	0.67	43.4
	74.1%	14.8%	11.1%	0.0%	0.0%	0.0%	0.0%					
Question-10: The instructor returned graded assignments in a timely manner.	11	9	3	3	1	0	0	27	2.04	2	1.14	20.0
	40.7%	33.3%	11.1%	11.1%	3.7%	0.0%	0.0%					
Question-11: The instructor's comments on course work were helpful.	14	11	1	0	1	0	0	27	1.63	1	0.87	43.7
	51.9%	40.7%	3.7%	0.0%	3.7%	0.0%	0.0%					
Question-12: The instructor was available for help outside of regular class times.	19	5	0	0	0	2	1	27	1.21	1	0.41	63.7
	70.4%	18.5%	0.0%	0.0%	0.0%	7.4%	3.7%					
Question-13: The instructor treated students respectfully, even when offering criticism.	25	2	0	0	0	0	0	27	1.07	1	0.26	66.1
	92.6%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	22	4	0	0	0	0	1	27	1.15	1	0.36	60.9
	81.5%	14.8%	0.0%	0.0%	0.0%	0.0%	3.7%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	14	9	2	2	0	0	0	27	1.70	1	0.90	54.5
	51.9%	33.3%	7.4%	7.4%	0.0%	0.0%	0.0%					
Question-16: Please rate the instructor's overall teaching effectiveness.	18	6	1	1	1	0	0	27	1.56	1	0.99	40.9
	66.7%	22.2%	3.7%	3.7%	3.7%	0.0%	0.0%					

BSC Course Evaluation for Fall-2018

Course Title: Developing Child in 21st Cent	Course Number: EPY 223 A	Professor(s): Kelly Russell

Response values: 1=excellent, 2=good, 3=satisfactory, 4=mediocre, 5=poor, NA=notApplicable

Question-01: Student gender?	Male			Female			noResponse					
	5			11			6					
	22.7			50.0			27.3					
Question-02: Class level?	FirstYear		Sophomore		Junior		Senior		Graduate		noResponse	
	6		6		1		3		0		6	
	27.3%		27.3%		4.5%		13.6%		0.0%		27.3%	
Question-03: Reason for enrollment?	General Education		Major		Minor		Elective		Schedule Convenience		Grade Redemption	noResponse
	6		8		0		1		1		0	6
	27.3%		36.4%		0.0%		4.5%		4.5%		0.0%	27.3%
Question-04:The instructor clearly communicated objectives, expectations, and grading policies, and consistently implemented them.	1	2	3	4	5	NA	noResponse	Total	Mean	Median	StdDev	Percentile
	14	6	0	0	0	0	2	22	1.30	1	0.46	59.5
	63.6%	27.3%	0.0%	0.0%	0.0%	0.0%	9.1%					
Question-05: The course was organized in a way that enhanced my learning.	17	2	1	0	0	0	2	22	1.20	1	0.51	74.7
	77.3%	9.1%	4.5%	0.0%	0.0%	0.0%	9.1%					
Question-06: The course was intellectually stimulating.	17	2	1	1	0	0	1	22	1.33	1	0.78	59.5
	77.3%	9.1%	4.5%	4.5%	0.0%	0.0%	4.5%					
Question-07: The course improved my ability to think critically and reason effectively.	18	1	0	0	0	0	3	22	1.05	1	0.22	87.8
	81.8%	4.5%	0.0%	0.0%	0.0%	0.0%	13.6%					
Question-08: The instructor promoted understanding of general concepts not just knowledge of specific facts.	16	3	0	0	0	0	3	22	1.16	1	0.36	68.7
	72.7%	13.6%	0.0%	0.0%	0.0%	0.0%	13.6%					
Question-09: The instructor gave an appreciation for the breadth of the subject and its context within the larger body of human knowledge.	18	0	1	0	0	0	3	22	1.11	1	0.45	72.7
	81.8%	0.0%	4.5%	0.0%	0.0%	0.0%	13.6%					
Question-10: The instructor returned graded assignments in a timely manner.	14	3	2	0	0	0	3	22	1.37	1	0.67	57.0
	63.6%	13.6%	9.1%	0.0%	0.0%	0.0%	13.6%					
Question-11: The instructor's comments on course work were helpful.	13	4	2	1	0	0	2	22	1.55	1	0.86	51.6
	59.1%	18.2%	9.1%	4.5%	0.0%	0.0%	9.1%					
Question-12: The instructor was available for help outside of regular class times.	17	2	0	0	0	1	2	22	1.11	1	0.31	77.3
	77.3%	9.1%	0.0%	0.0%	0.0%	4.5%	9.1%					
Question-13: The instructor treated students respectfully, even when offering criticism.	20	0	0	0	0	0	2	22	1.00	1	0.00	70.7
	90.9%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%					
Question-14: The instructor fostered an atmosphere that encouraged questions, comments, and original thinking by students.	20	0	0	0	0	0	2	22	1.00	1	0.00	76.7
	90.9%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%					
Question-15: Please evaluate the quality of your own preparation and work for this class.	12	5	2	0	0	0	3	22	1.47	1	0.68	81.0
	54.5%	22.7%	9.1%	0.0%	0.0%	0.0%	13.6%					
Question-16: Please rate the instructor's overall teaching effectiveness.	18	2	0	0	0	0	2	22	1.10	1	0.30	80.5
	81.8%	9.1%	0.0%	0.0%	0.0%	0.0%	9.1%					

Contracts Independent Study

Spring 2018

Virginia Cade: ED 472 Senior Research Project in Education
Reese Guthrie: ED 472 Senior Research Project in Education

January 2019

Mary Ashleigh Ivey: ED 299 Internship at MUS Wright Preparatory School, Mobile, AL

Summer 2019

CaMeshia Brown: ED 324 Methods of Teaching Science

Advising Load

I currently have 18 advisees. Many of my advisees graduated in 2019, so I received new Freshman advises this year. As my Freshman have settled into life on The Hilltop I have had fewer students making appointments or dropping by to see me.

As an advisor, I answer questions about how to navigate the catalog and to register for classes. Recently I talked to a student who wondered what major would be good for someone going into Child Life Services in a hospital setting and was happy to talk to her about minoring in psychology. After our meeting, I remembered the Distinction in Public Health Studies. I emailed her to point her toward this distinction. Part of my role as an advisor is to make sure that the students in my care know all of the opportunities and services that are available at BSC.

I also work with students who are struggling, and this can be a challenge Last term I had a rising senior tell me that she was thinking of leaving BSC and go school at the Aveda Institute of Birmingham. This student had come to us with red flags for retention risk. During her first semester her grandfather and father both died unexpectedly. This proved, of course, to be an additional strain for this student. For three years I watched this student struggle and supported her in ways that went beyond academic advising. She often came to me with personal issues as well as issues concerning her financial resources.

I did everything I could to keep her at BSC and to help her to fulfill the requirements and graduate, but I also counselled her to do what was best for her. I asked whether this decision was based on finances. She said that she had been funding her education on the money that she and her family got from her father's life insurance and that she only had enough money to fund one more term, and that same amount of money would pay for her entire education at Aveda. Because she had expressed a financial need, I focused on trying to find a way for her to pay for her final term. I was trying to support her to make the choice that would be best for her. Spring term ended without my knowing what she had chosen.

I got an email from her in July telling me that she was sending her textbooks back to campus with a friend. She wanted me to get them to any students who might need the books because she knew what it meant to struggle financially. I am disappointed that she chose to leave, but I must, and do, believe that she made the right choice for her. In the end, that is the goal of advising. Yes, I help them choose classes, and yes, I work to keep them as BSC students. (I have a story about convincing a freshman to stay by asking her parents to stop letting her Skype with her cat.) When I become someone's advisor, I know my role as a professor, but I also know that my ultimate goal is to guide them along the path of becoming who they want to be.

Service Activities on Committees of the Faculty and Committees of the College

Since my last evaluation finished my rotation on the Faculty Development Committee. I served member of the search committee to hire an instructional designer. I was elected to the Curriculum and Standards committee since 2017.

I co-chaired the committee in the 2018-2019 academic year. In this particular year, there were many changes regarding the deadlines and timelines for getting classes approved. This resulted in a massive task for C&S. I am proud of the entire committee for the work that we did last year to get courses vetted, refined, and sent to the faculty floor. I am completing my rotation on this committee this year, and it is proving again to be a committee with a herculean task.

I was the C&S representative to the task force committee charged with evaluating and refining a plan that resulted in "Forward", a curricular structure that continues to be refined.

Kelly Russell

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Hayden, AL 35079
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krussell@bsc.edu

EDUCATION

Ph.D. Early Childhood Education – 2008
University of Alabama at Birmingham

M.A.Ed. Elementary Education – 2004
University of Alabama at Birmingham

B.S. Elementary Education – 1990
University of Alabama at Birmingham

PUBLICATIONS

Books

Goldman, R., Aldridge, J., Russell, K. (2007). *Language and Literacy Supports for Struggling Readers,* Birmingham, AL: Seacoast Publishing.

Book Chapters

Russell, K. (2007). Working with diverse families: A transformative approach. In J. Aldridge & R. Goldman (Eds.), *Moving towards transformation: Teaching and Learning in inclusive classrooms* (pp. 45 -54). Birmingham, AL: Seacoast Publishing.

Peer Reviewed Journals

Russell, K. (2004, Fall). Sitting down with Connie Kamii. *The Constructivist* [online], *15*(1) Available: www.odu.edu/act/journal

Russell, K. (2007, Summer). Interaction and influence: Teachers and curriculum. *Focus on Teacher Education, 7(4), 1 -3.*

Russell, K. & Aldridge, J. (2009) Play, unity and symbols: Parallels in the works of Froebel and Jung. *African Journal of Psychology and Counseling,* 1(1), 001-004.

Kamii, C. & Russell, K. (2010) The Older of Two Trees: Young Children's Development of Operational Time. *Journal of Research in Mathematics Education,* 41(1), 6-15.

Kamii, C. & Russell, K. (2012) Elapsed time: Why is it so hard to teach? *Journal of Research in Mathematics Education,* 43(3), 296-315.

Russell, K. & Kamii, C. (2012) Children's Prenumerical Conception of Time. *Journal of School Science and Mathematics.* 112 (8). 476-482.

Multi-Media

Martin, K & Emfinger, K. (Executive Producers) & Russell, K. (writer) (2007- in press). *Developing oral language: Talk to learn* [DVD] Southern Early Childhood Association.

PRESENTATIONS

National Conferences

Russell, K. (2005, June) Oral language development: Foundation to literacy. Annual MidSouth Reading and Writing Institute. Birmingham, AL.

Aldridge, J.; Emfinger, K.; Strevy, D., Russell, K.; Kirkland, L. (2005, December) The language of instruction: Closing the gap between what we say and what they know. Annual Convention of the National Association for the Education of Young Children. Washington, DC.

Aldridge, J.; Russell, K. (2006, June) Critical literacy: Teaching to transform the world. MidSouth Reading and Writing Institute. Birmingham, AL.

Aldridge, J.; Emfinger, K.; Russell, K. (2006, July) Can developmentally appropriate practice survive no child left behind? Whole Language Umbrella: Literacies for All Summer Institute. Charlotte, NC.

Russell, K., Aldridge, J. (2007) A Search for Wholeness: Parallels in the Work of Froebel and Jung. Annual Convention of the American Educational Research Association, Chicago, IL.

Russell, K., Aldridge, J., Emfinger, K., Christensen, L. (2007) Family matters: Equipping teachers to work with families in the 21st century. Annual Convention of the American Educational Research Association. Tampa, FL.

Manning, M.; Kato, T.; Russell, K. (2006, November) Correlation doesn't mean causation: Phonemic awareness. National Council for the Teachers of English, Nashville, TN.

Manning, M.; Kato, T.; Russell, K. (2006, November) Correlation doesn't mean causation: Phonemic awareness. Annual convention of the National Association for the Education of Young Children. Atlanta, GA.

Martin, K.; Emfinger, K.; Russell, K. (2006, November) Professional Development in Preschool Settings: Building Literacy; Touching Teachers. Annual convention of the National Association for the Education of Young Children. Atlanta, GA.

Aldridge, J., Russell, K., Jepkemboi, G. Is there a doctorate in your future? Annual MidSouth Reading and Writing Institute. Birmingham, AL.

Russell, K., Aldridge, J. (2007, November) A search for wholeness: Parallels in the work of Froebel and Jung. Annual convention of the National Association for the Education of Young Children. Chicago, IL.

Russell, K. & Ferrel, G. (2010) Reconstructing a Constructivist Teacher Education Program. Annual convention of the Association for Constructivist Teaching. Napersville, IL

Russell, K. & Jacobs, L. (2014) Playing Their Game by Our Rules. Annual convention of the Association for Constructivist Teaching. Charleston, SC

Russell, K., Jacobs, L., Barnes, G., & Spencer, A. (2016) Remembering Again: Anchor Texts and Piaget's Theory of Memory. Annual convention of the Association for Constructivist Teaching. Houston, TX.

Russell, K. (2017) The Implications of Piaget's Epistemological Theory on Early Literacy Instruction. Annual convention of the Association for Constructivist Teaching. Fullerton, CA.

Russell,K. & Barnes, G. (2019) There are no Weeds: Restorative Justice in the Elementary Classroom. Annual convention of the Association for Constructivist Teaching. Columbia, South Caronlina.

International Conferences

Russell, K. (2006, April) Early Reading First Celebrates Preschool Teachers. Annual Meeting of the Association for Childhood Education International. San Antonio, Texas.

Russell, K. (2006, April) Invited Speaker for Celebration Breakfast, Annual Meeting of the Association for Childhood Education International. San Antonio, Texas.

Russell, K. (2008, July) A search for wholeness: Parallels in the work of Froebel and Jung. Annual convention of the International Froebel Society, Boston, MA.

PROFESSIONAL EXPERIENCES

Research Experience

University of Alabama at Birmingham, (Birmingham, AL), September 2005 – September 2006, Classroom Coordinator, Early Reading First Project

Teaching Experience

September 2013 – Present, Associate Professor of Education, Birmingham-Southern College

September 2008 to August 2013, Assistant Professor of Education, Birmingham-Southern College

September 2007- August 2008, Instructor of Education, Birmingham-Southern College.

September 2006 to August 2007, Teaching and Research Assistant, Department of Curriculum and Instruction, University of Alabama at Birmingham

Hayden Elementary School, (Hayden, AL) August 1998 – June 2005
First Grade Teacher 1999 - 2004
Second Grade Teacher 2004 – 2005

Jefferson County School System February 1992 – June 1993
Classroom Teacher (First and Second Grades)

PROFESSIONAL SERVICES

Guest Editor

Focus on Teacher Education – Association for Childhood Education International – 2007.
Childhood Education – Special Theme Issue: Rethinking Diversity
Association for Childhood Education International, 2007.

Editor

The Constructivist Journal of the Association for Constructivist Teaching
(October 2017-)_

Program Evaluator

Evaluation of the Even Start program for Sylacauga Alliance for Family Enrichment (May 2006).
Evaluation of the Even Start program for Selma, Alabama (April 2007)

Committees

Local Planning Committee for the annual conference of the Association for Childhood Education International, Atlanta, GA, April 2008.

Steering Committee for the 18th annual MidSouth Reading and Writing Institute – University of Alabama at Birmingham, June 2007.

Curriculum and Standards Committee – Birmingham-Southern College 2009-2010

Institutional Review Board – Co-chair – Birmingham-Southern College 2011 – 2012

Institutional Review Board – Chair - Birmingham-Southern College, 2012 – present

QEP Committee - Birmingham-Southern College, 2012

Faculty Development Committee - Birmingham-Southern College 2013- 2016.

Curriculum and Standards Committee – Birmingham-Southern College 2017 -

HONORS & AWARDS

Outstanding Masters Student, University of Alabama at Birmingham, 2004

Who's Who Among America's Teachers, 2005

PROFESSIONAL ORGANIZATIONS

Alabama Council of Teachers of Mathematics

Association for Constructivist Teaching

ED 324
Sp17

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russell has done a great job in teaching this course by always being available whenever we needed her. She was always flexible with meeting times. She always observed atleast once a week.

2. List what you think might be done to improve the teaching of this course.

More feedback on observations

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, choice words was helpful in talking about how to converse effectively with my students.

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Clear expectations and goals. Great support system and I felt like I could ask anything.

2. List what you think might be done to improve the teaching of this course.

My major doesn't exist anymore, so not really applicable at this time !!

3. Did you find the textbooks used in the course helpful? Why or why not?

Not applicable

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- We played lots of math games
- Did math lessons

2. List what you think might be done to improve the teaching of this course.

~~N~~ Maybe space the tests out a little more

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, they gave good ideas for math games and lesson examples

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

giving a range of different assignments to expand our learning.

2. List what you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, b/c the activities went along w/ the texts.

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Having a fun, intellectual stimulating class, comments in class and on assignments were helpful, communicating changes with class schedule, modeling different techniques and reasoning

2. List what you think might be done to improve the teaching of this course.

Have more field experience, which can be hard because of conflicting school schedules and finding a school who will let us come.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, has great examples and explanations

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She is always encouraging and makes me want to come to class. She is very understanding and Fosters a great learning environment

2. List what you think might be done to improve the teaching of this course.

If we could have gone into more schools to play math games w/ kids.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Encouraged discussion.
Really insightful class.
Preparation for becoming a teacher.

2. List what you think might be done to improve the teaching of this course.

Maybe more time at schools with the kids.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes. And also the moodle readings were great.

M

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
Dr. Russell has shown a great appreciation for math and teaching math. This appreciation has spread to her students. Everything done in this class was clearly intentional. We never did anything without a "why" behind it. I was also taught to think about math in a new light which has made me feel better prepared to teach the subject.

2. List what you think might be done to improve the teaching of this course.

3. Did you find the textbooks used in the course helpful? Why or why not?
Yes! The text offered great insight and activities to implement in the classroom.

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- teaching math & helping us know how to teach it and not make it seem like a scary subject

2. List what you think might be done to improve the teaching of this course.

nothing

3. Did you find the textbooks used in the course helpful? Why or why not?

yes it gave us examples as to what we are going to see teaching math & giving us good games to play in our classrooms one day.

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- 2 week plan!
- the math game file will be really helpful
- mental math - forced us to look through all standards

2. List what you think might be done to improve the teaching of this course.

I wish we could've covered how to teach math a little more / class math game lessons

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes - activities in the back!

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Allowing students to explore + discover things themselves, flexible

2. List what you think might be done to improve the teaching of this course.

More time in the classroom or allowing us to teach each other

3. Did you find the textbooks used in the course helpful? Why or why not?

I really liked the textbook plus it has lots of resources in the back!!!

Part II. Questions For Written Responses

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Everything! This has by far been one of my favorite education classes I've ever taken! The way the class was designed in such a way that we were like the students, played the games, took the tests, etc. was beyond beneficial. It's been the most effective way I've been taught in an edu class thus far.

2. List what you think might be done to improve the teaching of this course.

Nothing, it truly was all great.

3. Did you find the textbooks used in the course helpful? Why or why not?

Yes, I knew they were all intentional. Everytime we were told to read, we actually had an in-depth convo in class!

Course: Teaching Math
Professor: Dr Russell
Term/Year: Spring 18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

I have loved going to Minor and working with my student. Getting to put what I've learned into practice has been especially helpful, and I've loved having my professor onsite in case I need help.

2. List those things which you think might be done to improve the teaching of this course.

I would have liked more criticism when writing lesson plans and reflections so I could know how to improve my teaching. I would have also liked to work more closely with the standards and relate them to games, activities, and lessons.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, I have especially liked the Burns text and the lessons and games included.

Course: ED 320
Professor: Russell
Term/Year: Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Made the course interesting and showed us how to teach certain math skills.

2. List those things which you think might be done to improve the teaching of this course.

More lab practice and advice on how to teach older grades

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes because they helped shaped all the discussion that we have.

Course: ED324
Professor: Dr. Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?
   Giving feedback, being available, explaining, etc.

2. List those things which you think might be done to improve the teaching of this course.
   N/A

3. Did you find the textbooks used in the course helpful? Why/why not?
   yes! I will be keeping them to read for my future classroom.

Course: ED 324
Professor: Russell
Term/Year: Sp. 16

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   showing appreciation and enjoyment about the topic.

2. List those things which you think might be done to improve the teaching of this course.

   maybe go over more how to do the new math concepts so I know how my student does it.

3. Did you find the textbooks used in the course helpful? Why/why not?

   yes they were interesting.

Course: ED 320
Professor: Russell
Term/Year: 2018 S

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Demonstrating not only how to teach math but also how to connect with our students

2. List those things which you think might be done to improve the teaching of this course.

I loved it. I have no complaints

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes! They translated very well into discussion and into practice

Course: ED 320A
Professor: Russell
Term/Year: Spring '18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

helped me learn different strategies for teaching math, and writing effective lesson plans.

2. List those things which you think might be done to improve the teaching of this course.

more practice on math problems, like worksheets or something

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, they helped with different strategies I can use with my students

Course: ED 324
Professor: Russell
Term/Year: Spring 18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Great job communicating expectations.
Always very encouraging.
Great validator + encourager.
Loved this class

2. List those things which you think might be done to improve the teaching of this course.

Nothing.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes they were used to enhance the class not overbearing.

Course: Ed 324
Professor: DR. Russell
Term/Year: Spring 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

I have really enjoyed taking this class w/ Dr. Russell. She has been extremely helpful, she gives us grades back on time and she is always available for extra help/questions I might have.

2. List those things which you think might be done to improve the teaching of this course.

This class was great just the way it was set up.

The only thing I would say would be to discuss more edTPA earlier in term.

3. Did you find the textbooks used in the course helpful? Why/why not?

I loved the books for this class. And I will keep them for my personal bookshelf to read in the future.

Course: ED 320
Professor: Russell
Term/Year: S/18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Our professor introduced us to new procedural and conceptual ways to interpret math problems. We also learned new strategies to introduce new topics to students.

2. List those things which you think might be done to improve the teaching of this course.

   More examples of number talks.

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes, they outlined different ways to think and talk about math related topics in the classroom.

Course: ED 324
Professor: Dr. Russell
Term/Year: 2018 Spring

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She did really well in providing examples we can use in our classrooms

2. List those things which you think might be done to improve the teaching of this course.

- maybe more instruction on how to teach & more feedback on what we do with our Student in Minor.

3. Did you find the textbooks used in the course helpful? Why/why not?

- They worked in providing examples & a good foundation.

Course: ED 324
Professor: Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

This professor was highly knowledgeable about the topic + made the course fun + engaging! I really enjoyed the class!

2. List those things which you think might be done to improve the teaching of this course.

Explaining EDTPA more

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes! They gave me practical examples for math lessons I could use in my future classroom ☺

Course: ED 320
Professor: Russell
Term/Year: Spring / 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- explaining concepts
- providing feedback
- grades in timely manner

2. List those things which you think might be done to improve the teaching of this course.

- receive math edTPA a little earlier

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, they provide real life useful examples

Course: 3500
Professor: Dr. Russell
Term/Year: Spring 18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Explaining different ways to teach math to students and different mental math problems and how to solve and explain. Providing math games that will help students and can be used for assessments

2. List those things which you think might be done to improve the teaching of this course.

NA

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes because the textbooks explained problems and included conversations students had about problems that helped me see questions to ask.

Course: ED 320
Professor: Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She has taught me to apply the conceptual understanding to each lesson and apply it to my future studats.

2. List those things which you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

yes the textbooks provided visual aides to help understand the material more.

Course: ED 320
Professor: Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russell did a great job with teaching new strategies when enhancing a child's mathematical skills. She is a wonderful teacher who valued every answer!

2. List those things which you think might be done to improve the teaching of this course.

I would not do anything to change this course because I think it was wonderful! I learned so much ☺

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, I loved the textbook. It was very useful when showing other strategies and solutions to solve equations. The textbook will be very helpful during student teaching ☺

Course: EP320
Professor: Russell
Term/Year: Spring 2018

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She's been very understanding and willing to work with us and is very considerate. I've also really enjoyed my time at Minot for this class.

2. List those things which you think might be done to improve the teaching of this course.

* looking at different ways to teach math by each grade level
* offering just a more solid basis of the material and firm foundation of the material.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, they offered a variety of strategies, activities and teaching methods that I can use in my classroom in the future.

Course: ED324
Professor: Russell
Term/Year: Spring 18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

GAVE PLENTY EXAMPLES FOR STUDENTS TO LEARN FROM

2. List those things which you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

YES, GAVE GREAT EXAMPLES

Course: ED380
Professor: Russell
Term/Year: Spring '18

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russell showed me that I can enjoy math despite having issues with math in the past. She taught me to actually understand the concepts in math. The lab/field experience provided opportunities to apply what we learn in class.

2. List those things which you think might be done to improve the teaching of this course.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes. The Burns text is a great resource for activities to use in a real classroom that aligns with a constructivist math philosophy.

Course: Eng 223
Professor: Russell
Term/Year: Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

2. List those things which you think might be done to improve the teaching of this course.
   - Limit the amount papers are worth
   - Better powerpoint

3. Did you find the textbooks used in the course helpful? Why/why not?
   - No, Not needed

Course: EPY 223
Professor: Russell
Term/Year: Spring 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Great Videos & Power Points

2. List those things which you think might be done to improve the teaching of this course.

   SLOW DOWN!

3. Did you find the textbooks used in the course helpful? Why/why not?

   Yes helped with test

Course: ERY 223
Professor: Russell
Term/Year: Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Teaching about how certain things effect children. ex. poverty & their mental health

2. List those things which you think might be done to improve the teaching of this course.

I loved this course! Nothing :)

3. Did you find the textbooks used in the course helpful? Why/why not?

yes, very helpful.

Course: EPY 223
Professor: Russell
Term/Year: Spring 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She changed the format of the tests depending on what best suited us.

2. List those things which you think might be done to improve the teaching of this course.

I wasn't always sure about what material would be on the test. Sometimes the videos didn't make sense in class.

3. Did you find the textbooks used in the course helpful? Why/why not?

The books were an interesting read. The textbook was too difficult to comprehend.

Course: EPY 223
Professor: Russell
Term/Year: Spr 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- covered lots of topics, taught using different methods, facilitated dynamic discussions

2. List those things which you think might be done to improve the teaching of this course.

N/A

3. Did you find the textbooks used in the course helpful? Why/why not?

yes, tests followed textbook and learned through it (powerpoints)

Course: EPY 223
Professor: Russell
Term/Year: Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

-Knowing a lot about the subjects & being able to talk about more than just what we had to know

2. List those things which you think might be done to improve the teaching of this course.

-More detailed powerpoints or study guide

3. Did you find the textbooks used in the course helpful? Why/why not?

a little in the beginning but not much

Course: EPY 223
Professor: Russell
Term/Year: EPY 223 Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Given us articles to talk about in class

2. List those things which you think might be done to improve the teaching of this course.

Given more preperation for tests

3. Did you find the textbooks used in the course helpful? Why/why not?

No, too much reading for the info we need

Course: EPY 223
Professor: Russell
Term/Year: S 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   A lot I loved the class

2. List those things which you think might be done to improve the teaching of this course.

   A little bit more of a rubric on papers

3. Did you find the textbooks used in the course helpful? Why/why not?

   Just the main text book

Course: EPY 223
Professor: Russell
Term/Year: SP 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

   Allowing us to work in groups

2. List those things which you think might be done to improve the teaching of this course.

   Better preparation for tests

3. Did you find the textbooks used in the course helpful? Why/why not?

   N/A.

Course: EPY 223
Professor: Dr. Russell
Term/Year: Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Dr. Russell is incredibly knowledgable, and she had a great understanding of all the concepts we discussed (which made it more interesting and easier to learn).

2. List those things which you think might be done to improve the teaching of this course.

I think if we spent more time covering each topic, since we only took one class period to talk about a chapter.

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, the textbook was quite helpful and explained every idea thoroughly.

Course: EPY223
Professor: Dr Russell
Term/Year: Spring 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She did a good job mixing media & up-to-date news with the class materials.

2. List those things which you think might be done to improve the teaching of this course.

- Handout fully scheduled syllabus the first day of class

- Don't over schedule assignments (ex 2-a-day) & then remove them

3. Did you find the textbooks used in the course helpful? Why/why not?

No, b/c we barely ~~only~~ used it when we did it was to study for tests but most the info was on her powerpoints

Course: EPY 223
Professor: Russell
Term/Year: Spring 19

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

Explaining the text in context that we would understand

2. List those things which you think might be done to improve the teaching of this course.

use a different textbook

3. Did you find the textbooks used in the course helpful? Why/why not?

No not really - it was kind of confusing to understand or repeated itself

Course: EPY 223
Professor: Russell
Term/Year: 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

She leads very good discussions that promote me to think critically.

2. List those things which you think might be done to improve the teaching of this course.

I think the class is structured in a way where I feel like I am not learning about what the class is about.

3. Did you find the textbooks used in the course helpful? Why/why not?

yes, the tests were based on the textbook

Course: EDY 223
Professor: Dr. Russell
Term/Year: Spring 2019

QUESTIONS FOR WRITTEN RESPONSES

Directions:

Please respond in writing to the three questions below using the spaces provided. Your answers will be given to the professor after final grades have been turned in to the Records Office.

1. What has your professor done especially well in teaching this course?

- making the class interesting
- allowing us to think about society issues
- making the concepts easy to understand

2. List those things which you think might be done to improve the teaching of this course.

- Turning homework / tests & redo interactive on time
- Clarifying what assignments are going to be about

3. Did you find the textbooks used in the course helpful? Why/why not?

Yes, they were enjoyable however, the Child Development textbook was difficult to understand

Scholarship

I serve as a board member of the Association for Constructivist Teaching (ACT). ACT is a national organization devoted to constructivist teaching methods. This philosophy of education is based on the works of Jean Piaget. The focus of my PhD was the epistemological work done by this well-known figure in both education and psychology. Since the year of my last faculty evaluation I have presented at each meeting of ACT.

In Houston, TX, the focus was using "trade literature" to foster understanding and empathy for persons with physical and cognitive exceptionalities. In Fullterton, CA, I presented my sabbatical research on the implications of Piaget's theories to the teaching of literacy. I chose this topic in order to get out of the box of my previous research which focused on developmental math. Last year, Gay Barnes and I presented on the topic of restorative justice as a way to honor the dignity of all learners.

I currently have three articles in different stages of writing and eventual submission for publication. They include two articles that I am writing that are based on topics presented at ACT and one article that is a collaborative project with the other members of my department.

The working titles for those articles include:

A Different Lens: The Use of Fictional Literature in a Collaborative Education Program

There are no Weeds: Restorative Justice in the Elementary Classroom

The Implications of Piaget's Constructivist Theory on Early Literacy Instruction

Additional Committee and Service Activities

I was the C&S representative to the task force committee charged with evaluating and refining a plan that resulted in "Forward", a curricular structure that continues to be refined.

There is one other crucial thing that my colleagues and I in the Education Department do for the college. There are innumerable state and national regulations and expectations for programs that recommend candidates for teacher certification. These expectations change from year to year, and in my time as an educator of educators, new reports have been invented by the Alabama State Department of Education. The national accrediting process has changed hands completely. These present challenges to all college and university faculty in our state.

The work of keeping the education department open is enormous. It requires much of our time. Few people on campus realize the work that is done behind the scenes to ensure that the college continues to have an education department. Maintaining Education as a major as well as a pathway for students of other majors to be certified in secondary education are important. Students often come to BSC because what we offer in education cannot be found. We offer a combination of a unique dual certification as well the opportunity to have individualized attention from faculty who bring many strengths to our program. We have been told by the admissions staff that all of these things are invaluable to recruitment. When we spend four hours per week and weeks during our summer in order to ensure that our work continues, we not only advocate for ourselves and our profession. We advocate for this important major at BSC.

Personal Reflection

The periodic expectation to reflect and report on our teaching, service, and scholarship offers the opportunity to assess our strengths and weaknesses. It allows each of us the opportunity to look at our work in small snapshots. This contemplative examination has its value in our work.

I believe my service to be a strength of the years since my last evaluation. The workload of the Curriculum and Standards committee has shifted due to the changes made in expectations for course schedules and for the College Catalog. Last year I believe I can speak for the committee when I say that the work was exponentially more difficult than the year before due to the timing and time constraints resulting in the changing expectations of the administration. I am very proud of the fact that as Co-Chairs Pam Sawallis and I were able to guide the committee to accomplish what at times seemed impossible. All courses were vetted, refined, and voted upon mere weeks after the deadlines of submission. If I find myself in the position of chairing this committee in the future, I will better understand that task that is ahead. I will shape the work differently in order to meet the task. I believed I served the college well in this capacity, and I will use the experience moving forward as a leader.

I believe teaching to be my greatest strength. I put much thought and work into each class that I teach. I never get to a point that I have all my lectures arranged, books selected, and teaching materials prepared because I adapt to my students. I reflect on what does and does work in each class not only at the end of the term but after each class meeting as well. I keep a plan book in which I write my objectives and activities beforehand and reflect upon and record the result after each class.

This practice requires that I push myself as a teacher. It requires that I assess not only my students but also myself. I do not get comfortable. I constantly change lanes and reroute in my teaching. I make decisions about texts based on the narrative evaluations of the students. I often have the students formally evaluate the class at midterm in order to make any changes as we move forward. I am pleased with both my numerical and narrative evaluations.

My biggest challenge is scholarship. I have several projects in the works as well as research that interests me that I would like to start in the spring. I have let myself become from my scholarship by the work I put into service and teaching. My goal is to have the three articles now on my hard drive finished and submitted by the start of spring term.

In the spring 2020 term I have charged myself to design a study to examine the developmental appropriateness of teaching subtraction as the opposite of addition because my own experience and research shows that this is not the case. I will collect the data in the spring and work on the analysis and synthetization of that data during the summer of 2020.

In order to meet these goals, I have been very intentional about protecting my time. Much of my time in consumed by teaching and service. I have not carved out and protected the time for scholarship. Last year I was intentional about my office hours and pointed students toward those hours when they wanted to meet. I have become more disciplined about this, and going forward I plan to partition my time in such a way that I am able to focus on scholarship.