Institutional Effectiveness Report

2019–2020

Program: Exceptional Learning Ph.D. (ELPhD)

College and Department: Curriculum & Instruction, College of Education

Contact: Ashley B. Akenson

Mission:

The central focus of the Exceptional Learning Ph.D. (ELPhD) program is the study of diverse exceptional learner populations. Exceptional learners may be a member of one or more of the following groups: at-risk, vulnerable, underserved, underrepresented, and/or marginalized populations. Exceptional learners include, but are not limited to, those persons for whom social, economic, cultural, and physical characteristics may function as a barrier to learning. These exceptional populations may be neglected, oppressed, or disempowered by society; often excluded from equitable access to governmental, economic, educational, sociocultural, and community resources; and viewed as inherently different from the majority population. The ELPhD program offers an outstanding graduate education that prepares professionals for careers as leaders in their disciplines and to effect positive change in diverse populations through research, leadership, and service.

The ELPhD program has a primary mission of offering rigorous and robust academic preparation of professionals who serve their communities, public school systems, institutions of higher education, and nontraditional educational environments. Core courses prepare students to address issues related to exceptional learners in all disciplines, traditional and nontraditional learning environments, inclusion, equity, and diversity. The research course sequence provides students a thorough grounding in research methods. Core, research, and concentration courses deliver interdisciplinary perspectives, advanced methodological preparation, and fundamental theoretical knowledge—which work together to shape inspired, engaged, and innovative professionals. Specific programs of study are available in five concentrations: Applied Behavior Analysis (ABA), Health Behaviors & Wellness Education (HBWE), Literacy, Program Planning & Evaluation (PPE), and STEM Education. There are two strands within ABA: *Applied Behavior Analysis School Age and Adult Populations* (ABAS) and *Young Children and Families* (YCF). Instruction and research are major components of the academic mission of the program. A committed faculty serves the students through instruction, scholarly activity, and service to provide quality academic experiences.

Program Goals

These goals and outcomes have been identified through faculty collaboration, and they are consistent with a central purpose of any Ph.D. program: to prepare individuals for scholarly and professional success in their chosen field. The objectives are broad enough to allow for the diversity of the concentrations, yet maintain the focus on exceptional learners.

1. **Course Instruction**: Provide course instruction that models evidence-based practices in the respective program areas.
    a. Core Principles: *Academic Excellence*, *Meaningful Innovation*, *Student Success*, *Value Creation*
    b. Strategic Goals: SG1–PA A, B, D, E; SG2–PA B & C; SG4–PA B

2. **Scholarly Research**: Initiate and maintain scholarly research activities that enhance program development and contribute to the design and delivery of services and supports to exceptional populations through research dissemination in the field.
    a. Core Principles: *Academic Excellence, Community Engagement, Meaningful Innovation, Student Success, Supportive Environment, Value Creation*
    b. Strategic Goals: SG1–PA A, B, D, E; SG2–PA B & C; SG4–PA B

3. **Leadership Personnel**: Develop leadership personnel in the areas of teaching and research for service in the fields of public education and social services such as public schools, state agencies, and higher education.
    a. Core Principles: *Academic Excellence, Community Engagement, Meaningful Innovation, Student Success, Supportive Environment, Value Creation*
    b. Strategic Goals: SG1–PA D; SG4–PA A, B, C, D

Student Learning Outcomes

1. **Content Mastery & Course Competency:** Upon successful completion of Exceptional Learning Ph.D. program, the graduate will demonstrate successful attainment of course competencies within the required program of study that results in the learner's mastery of program content.
    a. Core Principles: *Academic Excellence*, *Community Engagement*, *Meaningful Innovation*, *Student Success*, *Supportive Environment*, *Value Creation*
    b. Strategic Goals: SG1–PA A, B, C, D, E; SG2–PA B & C; SG4–PA B & C

2. **Professional Skills**: Upon successful completion of Exceptional Learning Ph.D. program, the graduate will demonstrate the development of professional skills in the areas of teaching, research, and service.
    a. Core Principles: *Academic Excellence*, *Community Engagement*, *Meaningful Innovation*, *Student Success*, *Supportive Environment*, *Value Creation*

b. Strategic Goals: SG1–PA A, B, C, D, E; SG2–PA B & C; SG4–PA A, B, C, D

A departmentally developed curriculum map can be found in Appendix 1 that shows the connections between courses and student learning outcomes.

Assessment Methods

1. **IDEA evaluations (PG 1)**
   - **a.** *description*: Course evaluations for each faculty member are implemented and maintained through the IDEA evaluation system, and are used by faculty members to refine instructional practices and modify course content based on student feedback in support of program goals and student learning outcomes. The IDEA evaluation survey is nationally normed, standardized instrument. These evaluations allow for national comparisons against similar courses with student ratings of progress on relevant objectives and teacher and course effectiveness. IDEA evaluations are used at higher education institutions all over the US. The evaluations have the support of 45 years of research and include questions to account for variables such as class size, student motivation, and other student and course characteristics. Scores, on a five-point scale, are used to gauge curriculum and faculty efficacy with respect to program goals and SLOs. The IDEA evaluation reports incorporate resources to support instruction development and improvement.
   - **b.** *type*: survey
   - **c.** *frequency*: every semester
   - **d.** *thresholds*:
     i. *Acceptability*: 3.5 score
     ii. *Expectation*: 3.6–3.9 score
     iii. *Exceptionality*: ≥ 4.0 score

2. **ELPhD Scholarly Activity Report (PGs 2 & 3; SLOs 1 & 2)**
   - **a.** *description*: Each faculty member submits a Faculty Activity report to Director of Graduate Programs addressing her or his efforts for the previous academic year. The report will address the following indicators: grant proposals, publications, presentations, other research endeavors, external consultants to public schools and agencies (including in-service and professional development). An overall summary of the program's progress will be included in this IE report as the format of the annual report no longer captures a complete picture of faculty activity. ELPhD Student Scholarly Activity Report In addition, ELPhD students are asked annually to provide a current record of their scholarly activity (e.g., publication and presentations of original research or theoretical work, grant proposals, professional development activities). These assessment tools are used to monitor faculty and student attainment of program goals & SLOs. Informal check-ins occur throughout the year as well. Opportunities for collaboration, support, and skill development (e.g., calls for proposals for articles/chapters/conferences, workshops, seminars) in these areas are disseminated to all ELPhD students and faculty.

Results are disseminated through faculty meetings, the twice-yearly Data and Assessment Forum, and institutional reports.

- **b.** *type*: other
- **c.** *frequency*: annual
- **d.** *thresholds*:
    i. *Acceptability*: actively working on a presentation or publication manuscript; submitted at least one presentation proposal &/or publication; collaboration with ELPhD students and faculty.
    ii. *Expectation*: submitted two or more presentation proposals &/or publication manuscripts; acceptance continued work on conference proposals and manuscripts for submission; collaboration with ELPhD students, faculty, and staff.
    iii. *Exceptionality*: submitted multiple presentation proposals &/or publications; at least one acceptance; cross-disciplinary and/or interdepartmental collaboration with students and faculty.

3. ELPhD Academic Achievement (PGs 1, 2; SLOs 1 & 2)

- **a.** *description*: A grade of *B* (80–89 out of 100) or better demonstrates sufficient content mastery for each course, whether that content is methods, practical application of professional skills, theory, or any combination of the three. Failure is considered a C or below. Students are allowed one *C* (70–79 out of 100) during their time in the ELPhD program. A second *C* is grounds for academic dismissal from the program. Tables in Appendix 1 demonstrate course alignment to SLOs & PGs; attainment of an acceptable grade or higher in these courses aligns with progress toward and attainment of SLOs & PGs.
- **b.** *type*: other–scores (0–100 scale)/GPA (0–4 scale)
- **c.** *frequency*: every semester
- **d.** *thresholds*:
    i. *Acceptability*: 3.25 GPA (mainly *B*s; 80–89 out of 100)
    ii. *Expectation*: 3.5 GPA (*A*s & *B*s; 85–100)
    iii. *Exceptionality*: ≥ 3.9 GPA (almost all *A*s or all *A*s; 90–100)

4. Graduation rate (PGs 1, 2, 3; SLOs 1 & 2)

- **a.** *description*: 6-year Graduation rate for ELPhD students, time to graduation
- **b.** *type*: graduation rate, time to graduation
- **c.** *frequency*: annual
- **d.** *thresholds*:
    i. *Acceptability*: 50% / 5.8 years (aligns with national trend)
    ii. *Expectation*: 55% / 4.5–5.7 years
    iii. *Exceptionality*: ≥ 60% / ≤ 4.4 years

5. Research sequence courses (PGs 1, 2, 3; SLOs 1 & 2)

a. *description*: The research course sequence is an integral part of the ELPhD program. *Theoretical Foundations of Research* (EDU 7010), *Qualitative Inquiry in Education* (EDU 7330), *Data Analysis and Representation in Qualitative Inquiry* (EDU 7340) make up the qualitative series. *Quantitative Inquiry in Education I* (EDU 7420), *Quantitative Inquiry in Education II* (EDU 7430), and *Research Design* (EDU 7300) comprise the quantitative series. Each 3-course series includes foundational theoretical concepts, methods of data collection and data analysis, creation of a research proposal, and an original study. The research courses build upon one another and are sequential in order, further facilitating theoretical understanding and methodological application. For example, statistical concepts learned in EDU 7420 form the base knowledge for assignments in EDU 7430. Assignments in EDU 7430 are deliberately designed to be further developed in EDU 7300, the culminating quantitative research course. Similarly, theoretical foundations are used to inform a research proposal in EDU 7010 that is then used to enact data collection (EDU 7330), analysis, and interpretation (EDU 7340). This succession allows students to develop the necessary research skills and emerge from the courses with original work that addresses gaps in the literature, investigates theory, uses sound and appropriate methodologies, and contributes knowledge to the discipline. Additional concentration research classes are also required. These courses offer students the chance to gain crucial theoretical and methodological knowledge, which they then apply to required original research projects. This familiarizes them with the types of research available while preparing them to successfully meet the expected quality and scope of scholarship as they enter dissertation. Course instructors work closely with students to ensure their success. If an instructor becomes aware that a student is not prepared to move onto the next course in the sequence, they are connected with peer tutors, additional study materials, and/or other resources to ensure success in the course and preparedness for the next level or, if more appropriate, encouraged to withdraw and re-take the class at a later date. Starting in Fall 2018, ELPhD faculty and the Director of Graduate Programs have recently implemented a noncompletion identification and intervention procedure to improve student success and identify risk factors to better support students throughout their academic journey in the program. Faculty alert the Director when students are in danger of earning a C, display a marked change in classroom behavior (e.g., a shift from engaged and outspoken to withdrawn), failure to submit multiple assignments, consistent underperformance, and/or knowledge of major life changes that could undermine or threaten academic success. The Director then schedules an interview with each student whom faculty have identified as at-risk for noncompletion. After the interview, the student, faculty, and Director decide on a course of action that best accommodates the student's needs and provides supports and process to assist (e.g., tutoring, weekly meetings with faculty members, peer mentors).

b. *type*: other–ELPhD Academic Achievement Table, score (0–100 scale)/GPA (0–4 scale)

c. *frequency*: every semester

d. *thresholds*:

i. *Acceptability*: successful completion of all research courses with a grade of *B* or better (research course GPA minimum: 3.0); submission of an original research project (via presentation or manuscript) to a regional, national, or international scholarly conference or publication.

ii. *Expectation*: successful completion of all research courses with a grade of *B* or better, with at least two *A*s (research course GPA minimum: 3.3); acceptance of an original research project (via presentation or manuscript) to a regional, national, or international scholarly conference or publication.

iii. *Exceptionality*: successful completion of all research courses with mainly *A*s (research course GPA minimum: 3.6); submission of original research projects (via presentation or manuscript) to two or more national or international scholarly conference or publication; acceptance to one or more national and/or international scholarly conferences or publications; collaboration on current research projects with ELPhD and/or other Tech faculty, staff, and/or students.

6. Grant Proposals (PG 1, 2, 3; SLOs 1 & 2)

a. *description*: Grant proposals are crafted each Summer semester in *Program Planning and Proposal Development* (EDU 7040). *Program Planning and Proposal Development* (EDU 7040) incorporates theoretical program planning perspectives; in-depth discussion of various program planning models; and effective program development, planning, and evaluation practices for a variety of educational settings. This class includes a focus on adult learners as exceptional learners, in and out of traditional educational environments, and their particular needs. These theories, skills, and practices are not typically addressed in undergraduate or graduate programs and are especially important in preparing professionals who can lead sustainable change for exceptional learners. This course requires students to prepare products that may have real-world impact. One of two main project students undertake in EDU 7040 is creation of a grant proposal for a state- or federally-funded program. After completing the proposal, students must defend their proposal in mock "board meeting" discussions, which prepares them for gaining stakeholder buy-in, identifying unintended outcomes, and assessing needs in professional environments. This also provides students a chance to further improve their proposal via incorporation of the feedback given. The course instructor, who has authored or co-authored multiple successful grants over the last decade, evaluates the grant proposals and provides further input. Students who choose to submit proposals to the funding agency are encouraged to do so and directed to the Office of Research for instruction in grant submission policy and procedures. Scores are monitored and in-class and informal feedback and qualitative data about the grant proposal process and collaboration (development of professional skills) are collected to ensure progress toward SLOs and PGs and to improve student success. Students are also encouraged to participate in/collaborate with faculty and campus initiatives in submitting and carrying out grants.

b. *type*: other–ELPhD Student Scholarly Activity Table, ELPhD Academic Achievement Table

c. *frequency*: every semester

d. *thresholds*:

i. *Acceptability*: successful completion of a grant proposal as part of *Program Planning and Proposal Development* (EDU 7040) with a score of *≥ 80*o r better.

ii. *Expectation*: successful completion of a grant proposal as part of *Program Planning and Proposal Development* (EDU 7040) with a score of *≥88* or better.

iii. *Exceptionality*: successful completion of a grant proposal as part of *Program Planning and Proposal Development* (EDU 7040) with a score of *≥ 88* or better; grant proposal submission; collaboration with other Tech faculty and students on additional grant proposals.

7. Comprehensive Exam (**PGs 1 & 2; SLOs 1 & 2)**

a. *description*: Comprehensive examinations are administered near the end of each semester as needed, typically in conjunction with *Research Seminar in Education* (EDU 7920), after all other coursework has been completed. Rigorous comprehensive examinations provide an opportunity for ELPhD students to provide evidence of proficiency in and mastery of expected learning outcomes. Students illustrate mastery of theory, research proficiency, professional skills, and concentration-specific content through their comprehensive exam responses. Students must pass their comprehensive exams in order to move on to Ph.D. candidacy and continue in the program. At the beginning of *Research Seminar in Education* (EDU 7920), the student and his/her Chair will select a series of four consecutive days during which the comprehensive examination will take place. Each committee member submits an exam question or set of questions to the Chair. The student typically has 24 hours in which to craft a response to each member's question/set of questions. Committee members may elect to allow the use of resources or to prohibit them. Responses are written to one committee member's question at a time. A student should not work on multiple responses at once. The questions must be answered with appropriate detail, clarity, and insight, and display strong comprehension and integration of fundamental concepts. Once complete, the student submits the response to the Chair. If the question being answer was the Chair's, the Chair will then grade the response. If the question was submitted by a committee member, the Chair shares the response with the appropriate member. Responses on the qualifying exam are scored by their program chair and members of their graduate committee. Scores (pass, low pass, fail) are based on pre-determined performance criteria devised by their committee and informed by evidence-based practices, discipline content knowledge, and professional skills introduced and reinforced in previous coursework taken by the student. Upon passing the comprehensive exam, students move into Ph.D. candidacy. If an answer lacks the desired mastery, committee members have two options. If the response is reasonably close to the expected level of proficiency and fluency, the committee member may choose to ask for more detail and offer a student an opportunity to elaborate if necessary. Alternatively, the committee member may fail the student. Students who fail the comprehensive exam must wait a semester

before retaking their exam. Students may only retake their comprehensive exam one time. A failure of any part of a student's retake examination warrants academic dismissal from the program. Student pass rates are monitored every semester. Any signs of declining competence and response quality are reviewed as a means of maintaining and/or improving curricular efficacy as well as ensuring student success.

b. *type*: Graduation Rate, ELPhD Academic Achievement Table

c. *frequency*: every semester

d. *thresholds*:

i. *Acceptability*: students pass the comprehensive exam in no more than two attempts.

ii. *Expectation*: students pass the comprehensive exam on the first attempt with no more than one *Low Pass* score.

iii. *Exceptionality*: students pass the comprehensive exam on the first attempt and receive *Pass* for all sections.

8. Dissertation Prospectus Defense (PGs 1, 2, 3; SLOs 1 & 2)

a. *description*: A dissertation prospectus is presented each semester as needed, in conjunction with or immediately following *Research Seminar in Education* (EDU 7920). [**Note:** Ph.D. candidate is used in place of student as the individual will typically have passed comprehensive exams before presenting the prospectus.] Ph.D. candidates prepare their dissertation prospectus in Research Seminar in Education (EDU 7920). In this course, the Ph.D. candidate crafts the research design and write the prospectus for the proposed study. After receiving iterative feedback on the first three chapters of their research proposal from the course instructor and making revisions, the Ph.D. candidate presents a practice prospectus defense. The course instructor and candidate's Chair attend, though all committee members are welcome. Input from the course instructor and Chair is given at the end of the practice defense. The Ph.D. candidate then incorporates the feedback into the prospectus presentation and the dissertation prospectus. After the practice prospectus defense, the Ph.D. candidate is directed to either schedule a formal prospectus defense with his/her dissertation advisory committee (after successful defense) or is directed to continue working on the prospectus and presentation with guidance from the Chair and committee members. Once a formal prospectus presentation and defense date has been selected, the Ph.D. candidate is required to submit the dissertation prospectus to committee members at least two weeks prior to the scheduled prospectus date, though earlier is encouraged when possible. At formal prospectus defense, the Ph.D. candidate presents the prospectus using PowerPoint, Prezi, or Keynote (other mediums may be acceptable) and provides handouts for the committee. The presentation is 20–30 minutes long. The Ph.D. candidate covers study background and context, problem description, study purpose, significance, theoretical lens, connections to relevant literature, and a detailed description of the proposed research methodology. Other pertinent information may also be included. After the presentation has concluded, committee members pose

questions that the candidate must answer. The Ph.D. candidate is then dismissed from the room, while the committee members deliberate on whether or not the candidate should pursue the proposed research. Once a decision has been reached, the Ph.D. candidate is brought back and the decision is shared. The committee also provides additional feedback on the prospectus. If the prospectus defense was not successful, the committee will ask the Ph.D. candidate to revise the proposal and convene at a later date to present the revised prospectus. Ph.D. candidates who successfully defend the dissertation prospectus are given permission to proceed with their dissertation work. Dissertation prospectus defense pass rates are regularly monitored. Historical data suggest students are well-prepared and indicate the ELPhD program is meeting PGs & SLOs, however, should a decrease in preparedness and pass rate occur, it will be recognized quickly and corrective action can be taken.

b. *type*: other–ELPhD Academic Achievement Table

c. *frequency*:

d. *thresholds*:

i. *Acceptability*: Ph.D. candidate passes the dissertation prospectus defense in no more than two attempts; Ph.D. candidate answers defense questions, but answers may lack some of the desired complexity/depth; prospectus addresses all the required elements (study context, problem description, study purpose, significance, theoretical lens, connections to relevant literature, and research methodology), but may need additional information; major revisions may be required.

ii. *Expectation*: Ph.D. candidate passes the dissertation prospectus defense on the first attempt; Ph.D. candidate adequately answers defense questions; prospectus is thorough and well-crafted, addressing all required elements in sufficient detail; revisions to the prospectus are required. After revisions, Ph.D. candidate will be ready to enter dissertation work.

iii. *Exceptionality*: Ph.D. candidate passes the dissertation prospectus defense on the first attempt; Ph.D. candidate's answers to defense questions are exceptional and demonstrate deep understanding of the problem to be addressed and its relevance; prospectus displays thoughtful organization, relevant study purpose, clear significance, excellent methodology, and sophisticated insight; minimal revisions are required; Ph.D. candidate is clearly ready to enter dissertation work.

9. Dissertation Defense (PGs 1, 2, 3; SLOs 1 & 2)

a. *description*: The dissertation defense occurs each semester as needed. Graduates must successfully complete a written and oral dissertation defense, scored by their dissertation advisory committee (minimum four qualified members). Building upon the prospectus work, the Ph.D. candidate works closely with committee members throughout the dissertation process in preparation for the dissertation defense. A Ph.D. candidate regularly submits dissertation chapters to each committee member for

feedback (schedule determined by Ph.D. candidate and committee Chair). The Ph.D. candidate incorporates feedback from all members and continually seeks additional guidance on revisions and refinement. The full dissertation must be submitted to the dissertation advisory committee and Director of Graduate Programs at least two weeks prior to the scheduled defense date, though earlier is encouraged when possible. During the dissertation defense, the Ph.D. candidate has 20–40 minutes to review the information covered in the prospectus proposal (e.g., context, problem addressed, significance, methodology) and present the original dissertation research findings, conclusions, and implications (defense time is determined by the Chair). The defense includes written materials and a formal presentation. After the presentation has concluded, the committee and any others present may pose questions to the Ph.D. candidate. Once all questions have been answered satisfactorily, the Ph.D. candidate and any guests are dismissed from the room. The dissertation advisory committee then deliberates about whether the Ph.D. candidate's defense was successful. Once a decision has been reached, the Ph.D. candidate is brought back and the decision is shared. If the dissertation defense was successful, the committee signs the *Dissertation Defense* form and submits it to the Director of Graduate Programs and Graduate Studies. If the defense was not successful, the committee also provides additional feedback and outlines revisions that need to be made before scheduling a second defense. The dissertation defense serves as the final assessment of a Ph.D. candidate's content mastery, course competency, and professional skill development as well as their development as scholars and leaders. Students' must have mastered and integrated the content and skills acquired throughout the ELPhD program in order to pass the dissertation defense. Historical data show that students are well-prepared and generally pass on the first attempt. This pass rate (graduation rate) is monitored every semester.

b. *type*: Graduation Rate, ELPhD Academic Achievement Table

c. *frequency*: every semester

d. *thresholds*:

i. *Acceptability*: Ph.D. candidate passes the dissertation defense in no more than two attempts; candidate answers to defense questions, but answers may lack some of the desired complexity/depth; dissertation and defense presentation address all the required elements (study context, problem description, study purpose, significance, theoretical lens, connections to relevant literature, research methodology, findings, conclusions, and implications), but may need additional information; major revisions may be required before submitting to Graduate Studies and ProQuest.

ii. *Expectation*: Ph.D. candidate passes the dissertation defense on the first attempt; Ph.D. candidate adequately answers defense questions; dissertation is thorough and well-crafted, addressing all required elements in sufficient detail; minor revisions required before submitting to Graduate Studies and ProQuest.

iii. *Exceptionality*: Ph.D. candidate passes the dissertation defense on the first attempt; candidate's answers to defense questions are exceptional and

demonstrate deep understanding of and connection to the work; defense presentation is engaging, informative, and shows Ph.D. candidate's expertise as a scholar and appropriate professional skills; dissertation displays thoughtful organization, relevant study purpose, clear significance, excellent methodology, clear findings, and insightful, nuanced conclusions and implications; minimal, if any, revisions are required before submitting to Graduate Studies and ProQuest.

Results

1. **IDEA evaluations (PG 1)** IDEA evaluations allow for comparison against similar courses on a national level. Fall 2019 faculty scored an adjusted average of 4.59 on a 5-point scale. Spring 2020 faculty scored an adjusted average of 4.73 on a 5-point scale. The academic year average was 4.69. This exceeds the *Threshold of Acceptability* (3.5); ELPhD faculty are performing at the *Threshold of Exceptionality* (≥4). Scores indicate faculty and curricula are successful in achieving learning outcomes and objectives.

   Tables 1 & 2. Exceptional Learning Ph.D. Faculty IDEA Evaluations 2019–2020

Fall 2019 ELPhD Course IDEA Evaluation Scores

Faculty	*Course*	*N*	*Overall Ratings*										*Summary Evaluation*	
			B. Progress on Relevant Objectives			*D. Excellent Teacher*		*E. Excellent Course*		*C. Average of D & E*		*A. Average of B & C*		
			# Obj	*Raw*	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*
Akenson, Ashley	**EDU 7000**	7	4	3.8	3.8	5.0	5.0	4.3	4.3	4.7	4.7	4.3	4.3
Akenson, Ashley	**EDU 7920**	4	3	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Baker, Jane	**EDU 7020**	8	3	4.7	4.7	5.0	5.0	5.0	5.0	5.0	5.0	4.7	4.7
Blair, Jeremy	**CUED 7803**	4	12	4.9	4.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Isbell, Janet	**EDU 7330**	6	2	4.6	4.6	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.8
Larimore, David	**EDU 7420**	6	12	1.6	2.5	3.0	4.2	2.5	4.4	2.8	4.3	2.2	3.4
Meadows, Jennifer	**EDUS 7510**	5	3	4.7	4.7	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9

Spring 2020 ELPhD Course IDEA Evaluation Scores

Faculty	*Course*	*N*	*Overall Ratings*										*Summary Evaluation*
			B. Progress on Relevant Objectives			*D. Excellent Teacher*		*E. Excellent Course*		*C. Average of D & E*		*A. Average of B & C*	
			# Obj	*Raw*	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*
Anthony, Holly	**EDU 7340**	5	3	4.5	4.5	4.6	4.6	4.4	4.5	4.5	4.5	4.5	4.5
Chitiyo, George	**EDU 7430**	8	3	4.5	4.5	4.8	4.9	4.6	4.9	4.7	4.9	4.6	4.7
Isbell, Janet	**EDU 7010**	4	3	4.8	4.8	5.0	5.0	4.7	4.7	4.9	4.9	4.9	4.9
Isbell, Janet	**EDU 7920**	3	3	4.7	4.7	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9
Kennedy, Krystal	**EDU 7320**	4	3	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Kennedy, Krystal	**SPED 6000**	12	3	4.8	4.8	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9
Garrett,	**EDUP 7420**	5	5	4.9	4.9	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9

Rebecca													
Robinson, Steve & Engelhardt, Paula	**EDUL 7600**	8	5	3.7	3.7	4.2	4.2	3.8	3.8	4.0	4.0	3.9	3.9
Spears, Amber	**EDUL 7600**	5	3	4.7	4.7	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9

2. **ELPhD Scholarly Activity Report (PGs 2 & 3; SLOs 1 & 2)** Each faculty member provides the program director her or his annual faculty activity report (Program Goals 2 & 3). The reports provide the basis for much of the program's annual report submitted annually to the Dean of Education. The information from these comprises the Exceptional Learning Ph.D. Faculty Scholarly Activity report. In addition, the Exceptional Learning Ph.D. Student Scholarly Activity report demonstrates student involvement in and dissemination of scholarly research and development of associated professional skills. The tables below show a high degree of faculty activity for each indicator and respective guided student involvement. The tables below show a high degree of faculty activity for each indicator and respective guided student involvement. During the 2019–2020 academic year, ELPhD students belonged to over 30 professional organizations and disseminated original work (either their own or part of an active research collaboration with faculty &/or peers) at 39 scholarly/professional conferences (18 regional presentations, 11 national presentations, 10 international presentations) (see Table 2). Students constantly performed or above the *Threshold of Expectation*, with several attaining the *Threshold of Exceptionality*. A list of faculty and student scholarly and professional activity is attached (Appendix).

Table 3. Exceptional Learning Ph.D. Faculty Scholarly Activity

2019–2020 Exceptional Learning Ph.D. Faculty Activity (*n* =23)						
In-Service Workshops	Grant Proposals Funded	National Presentations	International Presentations	Books	Book Chapters	Peer-Reviewed Publications
21	16	28	15	2	6	57

Table 4. Exceptional Learning Ph.D. Student Scholarly Activity

2019–2020 Exceptional Learning Ph.D. Student Activity (*n* = 32)							
In-Service Workshops	Grant Proposals Submitted	Regional Presentations	National Presentations	International Presentations	Book Chapters	Peer-Reviewed Publications	Pending Peer-Reviewed Publications
1	14*	18	11	10	2	7	5

* Seven proposals in which ELPhD students took part or wrote were funded.

3. **ELPhD Academic Achievement (PGs 1, 2; SLOs 1 & 2)** majority of students (90%) maintain an *A* (3.5 or higher GPA equivalent) throughout the duration of the program. In 2019–2020, ELPhD students maintained an *A* average in the key courses listed in the table above (overall score across all courses: 3.76 out of 4.0). Students are performing at or above the *Threshold of Expectation*. (See Table 5 below)

Table 5. Exceptional Learning Ph.D. Student Academic Achievement

Key for table below:

non completer

ˆ second attempt required

˜ revised prospectus presentation required

≈ not in program of study

(ip) = in progress at time of report

A=90–100 / 4.0 B=80–89 / 3.0 C=70–79 / 2.0

Admitted		**7010**	**7330**	**7340**	**7420**	**7430**	**7300**	**7040**	**Comps**	**Prospectus**	**Defense**	**Grad**
2009–2010	1	B	A	B	B	B	A	A	F11ˆ	F11	S13	M13
2009–2010	2	A	A	A	A	A	A	A	S13	S13	F13	F13
2009–2010	3	A	A	B	A	A	A	A	F14	S15	M15	M15
2009–2010	4	B	A	A	A	B	A	A	S11	S11	S13	S13

2010–2011	1	A	A	A	≈	A	A	A	M13	M13	S14	S14
2010–2011	2	B	B	B	A	B	C	A	S13ˆ	S13˜	–	–
2010–2011	3	A	A	A	A	B	A	A	M13	M13	S14	S14
2011–2012	1	A	A	B	≈	C	B	B	M14	M13	M16	M16
2011–2012	2	B	B	B	A	A	A	A	M14	F14	M19	M19
2011–2012	3	A	A	A	A	A	A	B	M14	S14	M16	M16
2011–2012	4	A	A	A	A	A	A	A	M14	S14	S15	S15
2011–2012	5	A	B	A	–	–	–	–	–	–	–	–
Admitted		**7010**	**7330**	**7340**	**7420**	**7430**	**7300**	**7040**	**Comps**	**Prospectus**	**Defense**	**Grad**
2011–2012	6	A	A	A	A	A	A	A	M14	F14	S15	S15
2011–2012	7	A	A	A	A	B	A	A	M14	S14	F14	F14
2012–2013	1	B	A	A	A	B	≈	A	M15	M15	M16	M16
2012–2013	2	A	A	A	A	A	A	B	M13	M13	S16	S16
2012–2013	3	B	A	B	A	C	A	A	F15	F15	M17	M17
2012–2013	4	A	A	A	A	A	A	A	M15	S16	F16	F16
2012–2013	5	A	A	A	A	A	≈	A	M13	M13	S16	S16
2012–2013	6	–	–	–	A	–	–	A	–	–	–	–
2012–2013	7	A	A	B	A	A	A	A	M17	F17	S20	S20
2012–2013	8	A	A	A	A	A	A	A	F16	F16	S16	F16
2012–2013	9	A	A	A	A	A	A	A	S15	S15	F15	F15
2012–2013	10	B	B	B	–	–	–	–	–	–	–	–
2012–2013	11	C	A	A	A	B	A	A	M16	M16	F16	F16
2012–2013	12	A	A	A	A	A	A	A	S16	M16	F16	S17
2012–2013	13	A	A	A	A	A	A	A	S16	S16	S16	F16

2012–2013	14	A	A	A	A	B	A	A	S13	S15	F15	F15
2012–2013	15	B	A	B	A	B	A	B	F15	F15	M16	M16
2012–2013	16	B	B	B	A	C	A	B	S16	S16		
2013–2014	1	A	A	A	A	A	A	A	M16	F16	S18	S18
2013–2014	2	A	A	A	A	A	A	A	M17	M17	M17	F17
2013–2014	3	I	–	–	B	C	–	B	–	–	–	–
2013–2014	4	A	A	A	A	A	A	B	S16	S16	M16	M16
2013–2014	5	A	A	A	A	B	A	A	S17	M17	S18	S18
2013–2014	6	A	A	C	A	B	A	B	M17^	M17	–	–
Admitted		**7010**	**7330**	**7340**	**7420**	**7430**	**7300**	**7040**	**Comps**	**Prospectus**	**Defense**	**Grad**
2013–2014	7	A	A	A	A	A	A	A	F16	S17	S20	S20
2014–2015	1	B	A	B	≈	A	A	A	S17	M17	S18	S18
2014–2015	2	A	A	A	A	A	A	A	S18	F18	M18	M18
2014–2015	3	B	C	–	B	B	B	C	–	–	–	–
2014–2015	4	A	A	A	A	A	A	A	M19	M19	S20	S20
2014–2015	5	A	A	A	A	A	A	A	F16	F16	F17	F17
2014–2015	6	A	A	A	A	B	A	A	S17	S17	S18	S18
2014–2015	7	B	–	–	A	C	–	–	–	–	–	–
2015–2016	1	A	A	A	A	A	A	A	M17	M17	S18	S18
2015–2016	2	B	A	A	A	A	A	A	S18	S18	F18	F18
2015–2016	3	B	A	B	A	B	A	A	F18	F18		
2015–2016	4	A	A	B	B	B	B	≈	S19	S19	F19	F19
2015–2016	5	A	A	B	A	A	A	A	S18	S18	F18	F18
2015–2016	6	A	A	B	A	A	A	A	F18	F18	F19	F19

2015–2016	7	A	A	B	A	A	A	A	F18	F18	F18	S19
2015–2016	8	A	B	B	B	B	A	A	F18	F18	S20	M20
2015–2016	9	B	A	A	B	B	A	A	M18	M18	F19	F19
2015–2016	10	A	A	B	B	A	B	A	M19	S19		
2016–2017	1	A	A	A	A	A	A	A	F19	F19	M20	M20
2016–2017	2	B	A	A	A	A	A	≈	S19	S19	F19	F19
2016–2017	3	–	–	–	A	B	A	–	–	–	–	–
2016–2017	4	A	I	–	B	W	–	–	–	–	–	–
2016–2017	5	A	A	A	A	A	A	A	F18	M18	S19	S19
2016–2017	6	B	–	–	C	–	–	–	–	–	–	–
Admitted		**7010**	**7330**	**7340**	**7420**	**7430**	**7300**	**7040**	**Comps**	**Prospectus**	**Defense**	**Grad**
2016–2017	7	B	–	–	–	–	–	–	–	–	–	–
2016–2017	8	A	A	B	B	B	A	B	F19	F19		
2017–2018	1	–	–	–	A	–	–	–	–	–	–	–
2017–2018	2	A	–	–	A	A	A	–	–	–	–	–
2017–2018	3	A	A	B	A	A	B	A	F19	F19		
2017–2018	4	A	A	A	A	A	A	A	S20	S20		
2017–2018	5	A	A	A	A	A	A	A	F19	F19		
2017–2018	6	B	–	–	A	B	I	–	–	–	–	–
2017–2018	7	A	A	A	A	A	A	A	S20	S20		
2017–2018	8	B	A	A	A	A	A	(ip)				
2017–2018	9	A	A	A	A	A	A	(ip)		F20		
2017–2018	10	A	A	B	B	B	A	A				
2017–2018	11	A	A	B	A	A	A	B	M20	M20		

2017–2018	12	A	A	A	A	A	A	A	S20	S20		
2017–2018	13				A							
2017–2018	14	A	A	A	A	A	A	(ip)				
2018–2019	1	A	A	A	A	A	(ip)	(ip)				
2018–2019	2	A	(ip)		A	A	A	(ip)				
2018–2019	3	A	(ip)		B	A	B					
2018–2019	4	–	–	–	–	–	–	–	–	–	–	–
2018–2019	5	A	A	A	A	A	A	A	M20	M20		
2018–2019	6	A	A	A	A	A	A	(ip)				
2018–2019	7	A	A	A	A	A	(ip)	(ip)				
2019–2020	1				B	B	(ip)					
Admitted		**7010**	**7330**	**7340**	**7420**	**7430**	**7300**	**7040**	**Comps**	**Prospectus**	**Defense**	**Grad**
2019–2020	2				B	B						
2019–2020	3				B	B	(ip)					
2019–2020	4	A			A	A	(ip)	(ip)				
2019–2020	5	A			A	A	(ip)	(ip)				
2019–2020	6	A			A	A	(ip)	(ip)				
		7010	**7330**	**7340**	**7420**	**7430**	**7300**	**7040**	**Comps**	**Prospectus**	**Defense**	**Grad**

4. **Graduation rate (PGs 1, 2, 3; SLOs 1 & 2)** The 6–year graduation rate (2013 cohort) is 70% (7 out of 10). The average time to graduation for this cohort is 3.79 years.

5. **Research sequence courses (PGs 1, 2, 3; SLOs 1 & 2)** Quantitative research course sequence data—EDU 7420, EDU 7430, EDU 7300—demonstrate students' acquisition and mastery of knowledge of quantitative methods, instruments, analysis, and research design (see Table 5). Results across courses show consistency with each respective student. The higher number of Bs in EDU 7430 is expected considering the degree of difficulty with cumulative knowledge and application of research analysis skills. During the 2019–2020 academic year, academic year,

student grades were split evenly between *A*s and *B*s, and no student earned a *C* (see Table 5). The slight dip may be related to the challenges of teaching applied statistical content via video conferencing during the pandemic. The three students who earned Bs also self-reported as weaker in quantitative methods initially. Students are performing at or above the *Threshold of Expectation*. Qualitative research course sequence data—EDU 7010, EDU 7330, EDU 7340—demonstrate students' acquisition and mastery of knowledge of qualitative theory, study design, methods, and analysis (see Table 5). Results across courses show consistency with each respective student and the increased degree of rigor in EDU 7010 and EDU 7430 in comparison to EDU 7330 (where data collection occurs and emphasis is on practical application of research skills). Students maintained mainly *A*s (two students earned a *B* in one of the three courses) and no student earned a *C* (see Table 5). Students are performing at or above the *Threshold of Exceptionality*.

6. **Grant Proposals (PG 1, 2, 3; SLOs 1 & 2)** Grant proposals for an externally funding source are a required component of EDU 7040. Students are also encouraged to take part in grants with faculty and community members. Table 4 above shows the number of proposals written during 2019–2020. Fourteen grant proposals (including collaborative grants written outside of EDU 7040) were crafted and submitted proposals; seven of these were funded. Students constantly performed or above the *Threshold of Expectation*, with several attaining the *Threshold of Exceptionality*.

7. **Comprehensive Exam (PGs 1 & 2; SLOs 1 & 2)** Students are well prepared for their comprehensive examinations. All students in the last academic year passed their comprehensive examination on the first attempt and entered Ph.D. candidacy successfully. None received a low pass. Students are performing at or above the *Threshold of Expectation*. Historical comprehensive examination data show successful responses on the first attempt for students taking exams in the past 5 years (see Table 5).

8. **Dissertation Prospectus Defense (PGs 1, 2, 3; SLOs 1 & 2)** All Ph.D. candidates in the last academic year passed their dissertation prospectus defense, performing at or above the *Threshold of Expectation*. Dissertation prospectus data show successful completion of presentations on the first attempt for all ELPhD students admitted since 2009 (see Table 5).

9. **Dissertation Defense (PGs 1, 2, 3; SLOs 1 & 2)** All Ph.D. candidates in the last academic year successfully passed their dissertation defense on the first attempt, performing at or above the *Threshold of Expectation*. Historical dissertation defense data show successful completion of defense on the first attempt for all ELPhD candidates admitted since 2009 (see Table 5).

Modifications for Improvement

PGs 1, 2, 3 – Evidence-based Practices, Scholarly Research, and Leadership Personnel

ELPhD students participate in seven research courses and use the knowledge gained not only to become successful researchers, but also to understand information in other ELPhD courses and that they encounter in everyday life (savvy research consumers). Developing strong research skills sets ELPhD students up to be active, fruitful collaborators—a hallmark of a great researcher, leader, and educator. Though they are successful in their ELPhD coursework (see ELPhD Academic Achievement table) and engaged in scholarly activities (see ELPhD Scholarly Activity table), students have mentioned the need for additional encouragement in sharing their work and in collaborating. In response to this informal, formative feedback, the Director of Graduate Programs has highlighted opportunities to use high-quality coursework as ways for ELPhD students to collaborate across concentrations on projects as a pilot program. To do so, the Director has 1) increased regular sharing of conference, seminar, and symposia calls for proposals (CFPs) and calls for publication submissions to increase student awareness of these opportunities, 2) added workshops to support proposal submissions, and 3) provided feedback on proposal and publication submission drafts. The Director also directly encourages faculty to continue to include students in their research activities, and encourages students to work together on submissions for presentations and publications. This also offers multiple opportunities to increase cross-disciplinary knowledge, collaborative skills, and dissemination of scholarship, as well as to heighten exposure to and support of diverse views and scholarship. The Director continued this program in the 2019–2020 academic year and solicited feedback to evaluate the initiative's efficacy (paired with *ELPhD Academic Achievement table* and *ELPhD Student Scholarly Activity table*). Students continue to report that the additional information about CFPs for publication/presentations, workshops, and feedback help them succeed and feel better prepared going forward. (Alignment to: PGs 1, 2, 3; SLOs 1 & 2; Core Principles: *Academic Excellence*, *Student Success*, *Supportive Environment*; SG–1 PAs A,B, D, E; SG–2 PAs B, C; SG4– PAs A, B, D)

Link to assessments. Though the associated assessments (*ELPhD Academic Achievement table* and *ELPhD Student Scholarly Activity table*) indicate appropriate progress, the Director of Graduate Programs and Dean of the College of Education recognize this is only part of the picture. In order to maintain the threshold of expectation and move toward exceptionality, student feedback is solicited for the express purpose of program improvements such as is described above.

SLOs 1 & 2 – Content Mastery & Course Competency, Professional Skills

Though students generally do well in the research course sequence (see *ELPhD Academic Achievement table*), informal, formative assessment done through discussions with students in those courses revealed anxiety around course success and the need for additional support. In response, study support sessions for quantitative research courses (all students made *B* or higher) were implemented in the 2018–2019 academic year as a pilot program. In 2019–2020, support for quantitative research courses

continued. Students in this cohort reported more anxiety around the courses. Course grades were evenly split between *A*s and *B*s. No student earned a *C*, and those who expressed additional concern received extra sessions and were connected with peer mentors. Student feedback continues to be positive. The three students who earned Bs noted that they felt they were initially weaker in these areas and the study sessions helped them better understand the content and feel more confident. The Director will continue this program in the 2020–2021 academic year and regularly solicit feedback to evaluate the initiative's efficacy (paired with *ELPhD Academic Achievement table*) and ensure students' needs are met. (Alignment to: SLOs 1 & 2; Core Principles: *Academic Excellence*, *Student Success*, *Supportive Environment*; SG–1 PA E, SG–2 PA B)

While students do well their coursework which requires scholarly writing, (see *ELPhD Academic Achievement table*), students in EDU 7000 requested additional support in mastering academic/scholarly writing. The course offers opportunities to practice scholarly writing and receive feedback. Student, however, have requested additional support as they move on to research, core, and concentration courses. Requests from students further along in their Programs of Study have also been received. In response, one-on-one writing support for research and theoretical papers are offered. Students may also be paired with other students or ELPhD alumni in the area for additional support. This helps students develop skills to succeed in research, core, and concentration classes; enrich quality of scholarly research activities; and enhance program development and contribute to and across disciplines through research dissemination. The Director will continue this program in the 2020–2021 academic year and regularly solicit feedback to evaluate the initiative's efficacy (paired with *ELPhD Academic Achievement table*) and ensure students' needs are met. (Alignment to: SLOs 1 & 2; Core Principles: *Academic Excellence*, *Student Success*, *Supportive Environment*; SG–1 PA B, SG–2 PA B, SG4–PAs B & D)

As part of their enrollment in the ELPhD program, students are expected to present original scholarly work at academic/scholarly/professional conferences, seminars, and symposia. While students demonstrate a high level of participation in such events (see *ELPhD Student Scholarly Activity table*), some have been more productive than others. It is important that all students take part in presenting original work. Many students have asked faculty and/or the Director of Graduate Programs for additional assistance in preparing proposals for submission. In an effort to increase student scholarly research activity and move more students into the threshold of exceptionality, two tactics have been implemented: 1) regular sharing of conference, seminar, and symposia calls for proposals (CFPs) to increase student awareness of these opportunities and 2) workshops for conference proposal submissions to help students learn discipline-specific protocols and language in support of sharing original research done as part of ELPhD coursework. In addition to presenting scholarly work and developing professional skills, growth in submission to and participation in these events increases exposure to and knowledge of evidenced-based practices–which not only benefits the students, but also offers opportunities to share this knowledge with others in the ELPhD program, College of Education, Tech, and the community. The Director will continue this program in the 2020–2021 academic year and

solicit feedback to evaluate the initiative's efficacy (paired with *ELPhD Student Scholarly Activity table*) and ensure students feel prepared. (Alignment to: PGs 1, 2, 3; SLOs 1 & 2; Core Principles: *Academic Excellence*, *Student Success*, *Supportive Environment*; SG–1 PAs A,B, D; SG–2 PA B, SG4–PAs A, B, D)

Though graduation rate and time to completion (3.96 years) are good, students have informally voiced recurring questions about the Program of Study and dissertation process. In response, the Director of Graduate Programs is creating Program of Study and dissertation workshops, with plans to debut in the 2020–2021 academic year (initial plans were to debut Spring 2020 but the coronavirus pandemic necessitated reallocation of resources to student and faculty support in other ways). Student input will be collected as the workshops are created to ensure their concerns are addressed, and faculty will also be consulted as they often field questions and concerns and have valuable insights to share. (Alignment to: SLOs 1 & 2; Core Principles: *Academic Excellence*, *Student Success*, *Supportive Environment*; SG–1 PAs A,B, D; SG–2 PA B, SG4–PAs A, B, D).

Link to assessments. Though the associated assessments (*ELPhD Academic Achievement table*, *ELPhD Student Scholarly Activity table*, graduation rate, time to graduation) indicate appropriate progress, the Director of Graduate Programs and Dean of the College of Education recognize this is only part of the picture. In order to maintain the threshold of expectation and move toward exceptionality, student feedback is solicited for the express purpose of program improvements such as is described above.

Appendices

1. Curriculum Map - ELPhD Core & Research Course Alignments
2. Faculty & Student Scholarly and Professional Activity 2019–2020

Appendix 1: Curriculum Map - ELPhD Core & Research Course Alignments

I = introduced R = reinforced M = mastery A = assessment

Core Course Alignment with Program Goals and Student Learning Outcomes

Course	*Title*	*Content Mastery (SLO 1)*	*Scholarly Research Activities (PG 2)*	*Professional Skill Development (PG 3, SLO 2)*	*Evidence-based Practices (PG1)*
EDU 7000	Trans-Concentration Seminar	I	I	I	I
EDU 7010	Theoretical Foundations of Research	I	I, A	I	R
EDU 7020	At-Risk Populations: Research, Service, & Delivery	R, A	R	R, A	R, A
EDU 7040	Program Planning and Proposal Development	I, R	I, R, A	R, M, A	R
CUED 7430	Specialized Applications of Technology to Education	I	I	R, A	R

Research Course Alignment with Program Goals and Student Learning Outcomes

Course	*Title*	*Content Mastery (SLO 1)*	*Scholarly Research Activities (PG 2)*	*Professional Skill Development (PG 3, SLO 2)*	*Evidence-based Practices (PG1)*
EDU 7010	Theoretical Foundations of Research	I	I, A	I	R
EDU 7330	Qualitative Inquiry in Education	R	R	R	R
EDU 7340	Data Analysis and Representation in Qualitative Inquiry	R, M, A	M, A	M, A	M, A
EDU 7420	Quantitative Inquiry in Education I	I	I	I	I
EDU 7430	Quantitative Inquiry in Education II	R, M	R, M	R	R
EDU 7300	Research Design	M, A	M, A	M, A	M, A
EDU 7320	Single Subject Design	I, R	R, M, A	R, M, A	R, M
EDU 7350	Advanced Regression Analysis	R, M	R, M, A	R, M	R, M
EDUL 7700	Theory, Methodology, & Trends in Literacy Research	R, M	M, A	M	M
EDUS 7350	STEM Education Research	R, M	M, A	M, A	M
ABAP 7920	Topics, Issues, & Research in Early Childhood Special Education	I, R	R, M	M, A	R

Appendix 2: Faculty Scholarly and Professional Activity 2019–2020

Faculty Publications

Adams, B., Jorgensen, S., **Arce-Trigatti, A.,** & Arce, P. (2020). Innovative curriculum design for enhancing learning in engineering education: The strategies, principles and challenges of an inquiry-guided laboratory. *Proceedings from the 14th annual International Technology, Education and Development (INTED)Conference. Valencia, 2nd, 3rd and 4th of March, 2020,* Valencia, Spain.

Adams, B., **Arce-Trigatti, A.,** Jorgensen, S., & Arce, P. (2020). Facilitating Understanding for exploratory learning: Unpacking the significance of the resource component of the renaissance foundry model. *Proceedings from the 2020 American Society for Engineering Education Annual Conference,* Montreal, Quebec, Canada.

Adams, B., **Arce-Trigatti, A.,** Jorgensen, S., & Arce, P. (2020). Implementing an inquiry-guided laboratory manual with educational learning objectives aligned to abet accreditation standards. *Proceedings from the 2020 American Society for Engineering Education Annual Conference,* Montreal, Quebec, Canada.

Adams, B., **Arce-Trigatti, A.,** Arce, P., & Sanders, J. R. (2020). Understanding learning environments at the graduate level: A qualitative analysis of doctoral engineering education programs within the United States. *Proceedings from the American Society for Engineering Education Southeastern Conference,* Auburn, AL.

Adams, B., **Arce-Trigatti, A.,** & Arce, P. (2020). Developing an inquiry-guided laboratory manual with abet-centered student learning objectives for chemical engineering transfer science courses. *Proceedings from the American Society for Engineering Education Southeastern Conference*, Auburn, AL.

Adams, B., **Arce-Trigatti, A**., Arce, P., & Sanders, J. R. (2019). Understanding learning environments at the graduate level: A theoretical analysis of doctoral engineering education programs. *Proceedings from the 12th International Conference of Education, Research and Innovation,* Seville, Spain.

Green, C., Eady, M. J., McCarthy, M., **Akenson, A. B.,** Supple, B., McKeon, J., & Cronin, J. (2020). Beyond the conference: Singing our SSONG. *Teaching Learning and Inquiry*, *8*(1), 42–60. doi:10.20343/teachlearninqu.8.1.4

Green, C., Eady, M. J., **Akenson, A. B.**, McKeon, J., Supple, B., Cronin, J., & McCarthy, M. (2019). Supporting writing collaboration through synchronous technologies. In N. Simmons and A. Singh (Eds.), *Critical collaboration communities: Academic writing partnerships, groups, and retreats*. Lieden, The Netherlands: Brill.

Akenson, J. E., Arce–Trigatti, A. L., & Akenson, A. B. (2020). Threads & roots: Mapping the complexities and ambiguities of transformative, civic, and leadership learning theories. *Journal of Transformative Education*, special issue "*Civic Education as Transformative Education*." (*in press*)

Akenson, J. E. (2020). Operator get me obsolescence in my classic country songs. *Country Underground Australia, 2–10.* http://countryunderground.com.au/operator-get-me-obsolescence/

Akenson, J. E. (2020). Corona, corona will you impact me. *Country Underground Australia*, 2–10. http://countryunderground.com.au/coronacorona-will-impact-me/

Akenson, J. E. (2020). Country folks can survive. *Country Music Underground Australia***,** 2–10 http://countryunderground.com.au/country-folks-can-survive**/**

Akenson, J. E. (2020). Alter egos: Sigmund, Hank, Garth, and Dierks. *Country Underground Australia,* 2–10. http://countryunderground.com/alter-egos

Akenson, J. E. (2020). Jake Hoot revisited…at the hoop. *Country Underground Australia***,** 2–10**.**

Akenson, J. E. (2019). Jake Hoot: From Cookeville to The Voice. *Country Underground Australia*, 2–10. http://countryunderground.com.au/jake-hoot-from-cookeville-to-the-voice**.**

Akenson, J. E. (2019). Tennessee folklore I presume? *Country Underground Australia,* 2–10*.* http://countryunderground.com.au/tennessee-folklore-/i-presume/.

Akenson, J. E. (2019). 12 South Band: Nashville and not quite country? *Country Underground Australia*, *2–10.* http://countryunderground.com.au/12-south-band

Akenson, J. E. (2019). Lewis Crook: Looking back looking ahead. *Country Underground Australia.* 2–10*.* http://countryunderground.com.au/lewis-crook-looking-back-looking-ahead.

Akenson, J. E. (2019). Ken Burns: If the hype fits, wear-it. *Country Underground Australia*, 2–10*.* http://countryunderground.com.au/ken-burns-if-the-hype-fits-wear-it/

Akenson, J. E. (2019). The Tennessee Valley: Dam it… like it or not! *Country Underground Australia,* 2–10. http://countryunderground.com.au/the-tennessee-valley-dam-it/

Akenson, J. E. (2019). Jessie Ritter: On her way? *Country Underground Australia,* 2–10. http://countryunderground.com.au/jessie-ritter-on-her-way

Akenson, J. E. & Huebner, D. (2019). Music and the Tennessee Valley Authority. *Currents of Change.* BVI. https://www.currentsofchange.net

Akenson, J. E. (2019). I am woman can she roar: Gender equity and country music radio. *Country Underground Australia,* 2–10. http://countryunderground.com.au/i-am-woman-can-she-roar

Akenson, J. E. (2019). Alabama folklife: Fort Payne revisited. *Country Underground Australia,* 2–10. http://countryunderground.com.au/alabama-folklife/.

Akenson, J. E. (2019). WCTE public television rox and rulz! *Country Underground Australia,* 2–10. http://countryunderground.com.au/wcte-public-television-rox-and-rulz/

Akenson, J. E. (2019). Sunday morning 6:30am: You've got to be kidding. *Country Underground Australia,* 2–10. http://countryunderground.com.au/sunday-morning-630/

Akenson, J. E. (2019). John Schneider: Let's duke it… or dance it… out. *Country Underground Australia,* 2–10. http://countryunderground.com.au/john-schneider**.**

Anthony, H. G. (in press). Review of the book: In search of deeper learning: The quest to remake the American high school by J. Mehta & S. Fine]. *Teachers College Record*.

Arce-Trigatti, A., Jorgensen, S., Sanders, J. R., & Arce, P. (2020). Constraining the landscape: Unpacking the inquiry learning aspects of the foundry model for the purpose of curriculum design. *Proceedings from the American Society for Engineering Education Southeastern Conference,* Auburn, AL.

Arce-Trigatti, A., Geist, M., & Sanders, J. R. (2019). Analysis of student communication strategies in an undergraduate, cross-disciplinary, collaborative course. *The Journal for Research and Practice in College Teaching, 4*(1), 1-22.

Arce-Trigatti, A., & Anderson, A. (2019). Shortchanging complexity: A critical analysis of diversity policy in the era of neoliberalism. *EPAA Journal, 27*(8).

Arce-Trigatti, A. (accepted). Fostering emotional engineers: Revisiting constructive thinking in engineering. *Multicultural Journal of Education*

Baker, J. & Howard, M. & Callender, A. (2020). Preparing to teach primary grades. *Including Children with Special Needs in the Primary Grades*. Dubuque, Iowa: Great River Learning.

Baker, J. Howard, M. & Kennedy, K. (2020). Preparing to teach primary grades*. Guiding behavior*. Dubuque, Iowa: Great River Learning.

Callender, A., King, S. & **Howard, M**. (2020). Social validity assessment: Examples from a functional skills training intervention. *Developmental Disabilities: Diagnosis, Services, and Support.* Nova Publishing.

Chitiyo, G. Zagumny, L., Littrell, M. N., Besnoy, K., **Akenson, A. B**., & Davis K. M., & Ablakwa, C. (Accepted for publication in 2020). Students' perceptions of the benefits of scholastic chess instruction. *Journal of Chess Research.*

Chitiyo, G. Zagumny, L., **Akenson, A. B.,** Bishop, T., & Nash J. (Accepted for Publication). Families' perspectives of scholastic chess instruction. *Journal of Chess: Education and Science.*

Cruz, L., & **Geist, M.J**. (2019). A team-teaching matrix: Asking new questions about how we teach together. *Teaching and Learning*, 12(1).

Davis, K. M., & **Chitiyo, G.** (Accepted for publication). Student Voice and Engagement as Predictors of Exclusionary Discipline across Grade Tiers. *Research in the Schools.*

Fidan, I., Geist, M., **Chitiyo, G.**, & Zhang, Y. (2019). The Development and Implementation of an Interdisciplinary Additive Manufacturing for Healthcare Innovation Course*. American Society for Engineering Education.*

Fidan, I., **Geist, M.J.,** Kim, Z., & Chitiyo, g. (2019). Development and implementation of a cross-disciplinary additive manufacturing for healthcare innovation course. *Proceedings from American Society of Engineering Education* National Meeting.

Fletcher, S., & **Anthony, H. G**. (2020). Children at the border (Chapter 6). In R. Q. Berry III, B. M. Conway IV, B. R. Lawler, & J. W. Staley (Eds.), *High School Mathematics Lessons to Explore, Understand, and Respond to Social Injustice.* (pp. 110–118). Thousand Oaks, CA: Corwin.

Geist, M.J., Sanders, J.R., **Arce-Trigatti, A.,** Harris, K., Cass, C. (2019). Clinical Immersion: An approach for fostering critical thinking, cross-disciplinary communication, and innovation in nursing and engineering undergraduate students. *Nurse Educator, 44(2).* doi: 10.1097/NNE.0000000000000547

Green, C., Eady, M. J., McCarthy, M., **Akenson, A. B.,** Supple, B., McKeon, J., & Cronin, J. (2020). Beyond the conference: Singing our SSONG. *Teaching Learning and Inquiry*, *8*(1), 42–60. doi:10.20343/teachlearninqu.8.1.4

Green, C., Eady, M. J., **Akenson, A. B**., McKeon, J., Supple, B., Cronin, J., & McCarthy, M. (2019). Supporting writing collaboration through synchronous technologies. In N. Simmons and A. Singh (Eds.), *Critical collaboration communities: Academic writing partnerships, groups, and retreats*. Lieden, The Netherlands: Brill.

Guimaraes, T., Carmo Caccia-Bava, M., & **Geist, M.J.** (2019). The moderating effect of organization culture on competition intensity and hospital quality. *Healthcare Information Systems and Informatics*, 15 (9).

Haynes, A. and **Stein, B**. (In press). Observations from a long-term effort to assess and improve critical thinking, In F. Fair and D. Fasko (Eds). *Critical Thinking and Reasoning: Development, Instruction, and Assessment.* Boston, MA: Brill Publishers.

Isbell, J. K., Baker, J. C., Potter, D., & Ezell, L. (2019). Rural working-class scholars' perspectives and experiences seeking post-secondary education. In *Adult Higher Education Alliance 43rd Annual Conference Proceedings*. Orlando, FL: AHEA.

Jorgensen, S., **Arce-Trigatti, A.,** Sanders, J. R., & Arce, P (2020). A Focus on Functional-Based Teams in the Development of Prototypes of Innovative Technology: Observations from a QEP Grant Implementation at Tennessee Tech. *Proceedings from the American Society for Engineering Education Southeastern Conference,* Auburn, AL.

Kennedy, K. & King. S. (2019). All Aboard: Using positive behavior supports on the school bus. *Beyond Behavior, 28*(1), 21–28.

King, S.A., Dzenga, C., Burch, T. & **Kennedy, K. K.** (2020). Teaching partial-interval recording of problem behavior with virtual reality. *Journal of Behavioral Education.*

King, S. A., **Kennedy, K. K.,** & Ward, A. (2019). Behavior interventions on school buses: A systematic review. *Education and Treatment of Children*, *43*(1), 99–126.

Malik M. & **Silber-Furman, D**. (2019*). Czym Skorobka za Mlodu Nasiaknie...Kilka Slow o Ksztaltowaniu w Wieku Najmlodszym Stosunku do Pracy*. Oficyna Wydawnicza 'Impuls', Krakow. Chapter in Problemy Nauk Pedagogicznych. (ISBN 978-83-8095-550-9)

Mathende, A., **Arce-Trigatti, A.,** Jorgensen, S., Sanders, J. R., & Arce, P. (accepted). *Leveraging observation to evaluate student-centered learning: A theory based analysis of observational models applied to a curricular redesign.* Emerging Voices in Education.

Meadows, J.R., **Baker, J**., & Wendt, S. (2020). Fab Fridays: Fostering elementary teacher candidate preparation through informal STEM events. *Journal of STEM Teacher Education, 54*(1), 24-36.

Roe, B., Smith, S., & **Kolodziej, N.** (2019). *Teaching reading in today's elementary schools* (*12th ed*.). Belmont, CA: Wadsworth, Cengage Learning. (https://www.cengage.com/c/teaching-reading-in-today-s-elementary-schools-12e-roe)

Sanders, J. R., **Arce-Trigatti, A.,** & Arce, P. E. (2020). Promoting student problem-identification skills via a Jeopardy-Inspired Game within the Renaissance Foundry. *Journal of the European Federation of Chemical Engineering, 30*, 49-59.

Silber-Furman, D. (2019) *Quest for success: How international students college school experiences are being shaped by their English language proficiency*, Krakow, Poland, Rideró (ISBN 9788381556569)

Silber-Furman, D. (2019) How to? Lesson from the past. *TNTESOL Newsletter*.

Sisk, C., & **Baker, J**. (2019). Children with special health care needs: Partners in participatory research. In I.R. Berson, M.J. Berson, & C. Gray (Eds.), *Participatory methodologies to elevate children's voice and agency* (pp. 251-274). Information Age Publishing.

Spears, A., & **Baker, J.** (2019). Using writing mentor texts in elementary science to support comprehension. *Midsouth Literacy Journal*, *4*(2), 58-64.

Stratton, E. **Chitiyo, G.,** Mathende, A.M., & Davis K.M. (2019). Evaluating flipped versus face-to-face classrooms in middle school on science achievement and student perceptions. *Contemporary Educational Technology 11*(1).

Faculty Grants

Anthony, H. P. (Senior Personnel). *Food for Thought for Student Athletes: An Online Education Program to Fuel Athletes with Knowledge on Nutrition and Mental Health (FFT)* [Grant]. NCAA Innovations in Research and Practice Grant Program, (Funded $20,000).

Anthony, H. P. (Principal Investigator). (2019-2020). *Redesign of SEED 4422/5422 to Incorporate Creative Inquiry* [Grant]. TTU EDGE Curriculum Grant (Office of Creative Inquiry/QEP), (Funded $4,550).

Arce-Trigatti, A. (Co-Principal Investigator). (2019) *Renaissance Foundry Sociocultural Elements in Ethics Proposal* [Grant]. EDGE Curriculum Grant Program, CHE 1020. The Office of Creative Inquiry – Quality Enhancement Plan (QEP)Tennessee Tech University. (Funded $8,000).

Arce-Trigatti, A. (Principal Investigator). (2019) *STEM Foundry Heritage Fellows Program* [Grant]. Tennessee SERS Grant. (Funded $25,000).

Chitiyo, G. (Project Evaluator: Senior Personnel). (2019-22). *Mobile AMP: Mobile Additive Manufacturing Platform for the 21st Century STEM Workforce Enhancement* [Grant]. National Science Foundation Advanced Technological Education (ATE) program, (Funded $600,000).

Howard, M. & Smith, A. (2020). *COVID-19 CDL* Tuition [Grant]. Recovery Relief Grant. (Funded $44,600).

Howard, M. & Smith, A. (2020). *CDL Playground Enhancement* [Grant]. (Funded $4,000).

Isbell, J. K., & Schmitt-Matzen, C. (2020). *Jeff Roth Cycling Foundation Community Cycling Grant for Jere Whitson Freedom School* [Grant]. TN NAME. ($1,000, funded)

Isbell, J. K., Schmitt-Matzen, C., & Qualls, C. (2020). *Jere Whitson Freedom School* [Grant]. Believe in Reading Grant. ($3,000, funded)

Isbell, J. K., & Qualls, C. (2020). *Jere Whitson Freedom School* [Grant]. Walmart Foundation Community Grant. ($1,000, funded).

Isbell, J. K. (2019). *The Lisa Libraries, 300 new children's books for Jere Whitson CDF Freedom School participants' home libraries* [Grant]. ($2,859, funded)

Isbell, J. K., & **Spears, A.** (2019). *Literacy empowerment for civic engagement* [Grant]. Tennessee Tech Faculty research grant. ($10,000, funded).

Spears, A., & Braisted, L. (2020). Literacy Association of Tennessee's Reading Improvement [Grant]. (Funded $400).

Spears, A. (2019). Literacy Association of Tennessee's Community Service Project [Grant]. (Funded $1,500)

Spears, A. (2019). EDGE QEP Faculty Development [Grant]. (Funded $1,000).

Spears, A., Isbell, J. K., & Schmitt-Matzen, C. (2020). *US Bank grant for Jere Whitson Freedom School field trips* [Grant]. TN NAME. ($1,520, funded)

Faculty Presentations

Adams, B., **Arce-Trigatti, A**., Jorgensen, S., & Arce, P. (2020, June 21–24). *Facilitating understanding for exploratory learning: Unpacking the significance of the resource component of the renaissance foundry model* [Paper presentation]. 2020 American Society for Engineering Education Annual Conference, Montreal, Quebec, Canada.

Adams, B., **Arce-Trigatti, A**., Jorgensen, S., & Arce, P. (2020, June 21–24). *Implementing an inquiry-guided laboratory manual with educational learning objectives aligned to abet accreditation standards* [Paper presentation]. 2020 American Society for Engineering Education Annual Conference, Montreal, Quebec, Canada.

Adams, B., **Arce-Trigatti, A**., Arce, P., & Sanders, J. R. (2020, March 8–10). *Understanding learning environments at the graduate level: A qualitative analysis of doctoral engineering education programs within the United States* [Paper presentation]. The American Society for Engineering Education Southeastern Conference, Auburn, AL.

Adams, B., **Arce-Trigatti, A.,** & Arce, P. (2020, March 8–10). *Developing an inquiry-guided laboratory manual with abet-centered student learning objectives for chemical engineering transfer science*

courses [Paper presentation]. The American Society for Engineering Education Southeastern Conference, Auburn, AL.

Adams, B., **Arce-Trigatti, A.,** Jorgensen, S., Sanders, R., & Arce, P. (2019, October 9–12). *The Renaissance Foundry: Leveraging theory to enhance praxis for innovation-driven learning* [Poster presentation]. 12th Annual International Society for the Scholarship of Teaching and Learning (ISSoTL) conference, Atlanta, GA.

Adams, B., **Arce-Trigatti, A.,** Sanders, R., & Arce, P. (2019, October 9–12). *A practitioner research project featuring the application of the Foundry to an undergraduate gel lab experiment* [Paper presentation]. 12th Annual International Society for the Scholarship of Teaching and Learning (ISSoTL) conference, Atlanta, GA.

Adams, B., **Arce-Trigatti, A**., Arce, P., & Sanders, J. R. (2019, November 11–13). *Understanding learning environments at the graduate level: A theoretical analysis of doctoral engineering education programs* [Paper presentation]. 12th International Conference of Education, Research and Innovation, Seville, Spain.

Adams, B. , Jorgensen, S., **Arce-Trigatti, A**., & Arce, P. (2020, March 2–4). *Innovative curriculum design for enhancing learning in engineering education: The strategies, principles and challenges of an inquiry-guided laboratory* [Paper presentation]. 14th annual International Technology, Education and Development (INTED) Conference, Valencia, Spain.

Akenson, A. B. (2020, June 23–26). *Mindfulness-based stress reduction implementation for chronic illnesses (MBSR–ICI) program planning and evaluation (PPE) model*. International Conference on Mindfulness annual conference, "Diversity & equality—leaving no one behind." Aarhus, Denmark. (Conference canceled due to COVID–19 pandemic)

Akenson, A.B., Arce-Trigatti, A. L., Kelley, J. K., & Garner, B. (2019, October 9–12). *Marching to a different beat: Voices of social change from a community of practice on diversity and inclusion*.

International Society for the Scholarship of Teaching & Learning (ISSoTL) annual conference, "SoTL without borders: Engaged practices for social change." Atlanta, GA.

Akenson, A. B., & Silber-Furman, D. (2019, November 6–10). *Who, when, where, why, and how: Re-constructing multicultural educational spaces*. National Association of Multicultural Education (NAME) annual conference, "Decolonizing minds: Forging a new future through multicultural education." Tucson, AZ.

Akenson, J. E., Akenson, A. B., & Arce-Trigatti, A. L. (2020, July 17). *Creating wide open knowledge environments (WOKE) in higher education*. Tennessee National Association of Multicultural Education (NAME), "Awake and active: Equity, empowerment, and civility in challenging times." Cookeville, TN. (Conference canceled due to COVID–19 pandemic)

Anderson, A., & **Arce-Trigatti, A**. (2020, February 27–28). *Leveraging mindful abstraction as a tool for liberation: Pedagogical observations from an international education course that teaches pre-service teachers to transgress knowledge boundaries* [Paper presentation]. 16th Annual Globalization, Education, and Liberation conference, Pullman, WA.

Anderson, A., & **Arce-Trigatti, A.** (2019, October 31–November 3). *Creating & commodifying the neoliberal self: A Weberian analysis of an international education course* [Paper presentation] The American Educational Studies Association Annual Conference 2019, Baltimore, MA.

Anthony, H. G., Perez, M., Gulley, B., & England, M. (2020, May). ***Trends in STEM: Content analysis of international STEM education research journals*** [Paper presentation]. Sixteenth International Congress of Qualitative Inquiry, Urbana-Champaign, IL.

Anthony, H. G., Vogel, J., & Kolitsch, S. (2019, October). *Investigations with right triangles to deepen students' conceptual understanding* [Paper presentation] National Council of Teachers of Mathematics Regional Meeting, Nashville, TN.

Anthony, H. G., Perez, M., & Wilson, C. (2019, October). ***High school mathematics teachers' experiences transitioning to integrated mathematics*** [Paper presentation].National Council of Teachers of Mathematics Regional Meeting, Nashville, TN.

Anthony, H. G. (2019, July). *Affordances of a Noyce Program-STEM Center partnership* [Poster presentation]. 2019 Noyce Summit: The Role of Teacher Preparation in STEM Teacher Retention in High-Need School Districts, Washington, DC.

Arce-Trigatti, A., Jorgensen, S., Sanders, J. R., & Arce, P. (2020, March 8–10). *Constraining the landscape: Unpacking the inquiry learning aspects of the foundry model for the purpose of curriculum design* [Paper presentation]. The American Society for Engineering Education Southeastern Conference, Auburn, AL.

Arce-Trigatti, A. (2019, November 6–10). *Collaboration as de-colonizing knowledge construction: Undergraduate student insight regarding social interaction for creating inclusive group projects* [Paper presentation}]. 2019 Annual Conference for the National Association for Multicultural Education, Tucson, AZ.

Baker, J.E., & Meadows, J. (2019, October). *Majestic measurement: A family-focused STEM learning event for young children*. National Council for Teachers of Mathematics Regional Conference, Nashville, TN.

Burch, T. & **Kennedy, K**. (2020, January). *Using blending to increase food acceptance in a young child with autism* [Poster presentation]. 21st International Conference on Autism, Intellectual Disability, and Developmental Disabilities, Sarasota, FL.

Chitiyo, J., Chitiyo, A., Chitiyo, M, & **Chitiyo, G.** (2019, November). *Evaluation of the school-wide positive behavior intervention support model from a diffusion of innovation perspective* [Presentation] The American Evaluation Association Annual Conference, Minneapolis, MN.

Dzenga, C., **Kennedy, K.,** Loftis, E., & Chitiyo, A. (2020, May). *Video modeling in teaching individuals with developmental disabilities to engage in leisure activities* [Poster presentation]. 46th Association for Behavior Analysis International Conference, Washington DC.

Dzenga, C. & **Kennedy, K**. (2019, November 6–7). *An evaluation of factors that predict participation in leisure activities for individuals with developmental disabilities: A review of the literature* [Poster presentation] Columbus State University Graduate Conference, Columbus, GA.

Fidan, P., & **Akenson, A. B**. (2019, April 5–9). *Math interest and identity as mediators of the relationship between self-efficacy and perceived teacher practices*. American Educational Research Association (AERA) Annual Conference, "Leveraging education research in a 'post-truth' era: Multimodal narratives to democratize evidence." Toronto, ON.

Geist, M.J. (2019, September 12). *Transdisciplinary pedagogical strategies to increase student nurses' critical thinking, teamwork, and problem-solving skills* [Presentation]. 18th Congress of the Society of Cuban Nurses Meeting, Havana, Cuba.

Howard, M. (June 2019). *What early intervention means to me* [Keynote Address]. Holland J. Stephens Center for the Prevention of Child Abuse and Neglect.

Jorgensen, S., **Arce-Trigatti, A**., Sanders, J. R., & Arce, P. (2020, March 8–10). *A Focus on functional-based teams in the development of prototypes of innovative technology: Observations from a QEP grant implementation at Tennessee Tech* [Paper presentation]. The American Society for Engineering Education Southeastern Conference, Auburn, AL.

Kennedy, K., Dzenga, C., & Loftis, E. (2020, January). *All aboard: A disability and behavior intervention awareness training for school bus drivers* [Poster presentation]. 14th Annual Association for Behavior Analysis International Autism Conference, Miami, FL.

Kennedy, K. & Pullum, M. (2020, January). *Using structured teaching to increase functional play skills of preschool–aged children with ASD* [Poster presentation]. 21st International Conference on Autism, Intellectual Disability, and Developmental Disabilities, Sarasota, FL.

Littrell, M. N., & **Akenson, A. B.** (2019, November 6–10). *Worthy and complete: Disrupting the colonizing effects of PPE through mindfulness and basic goodness*. National Association of Multicultural Education (NAME) Annual Conference, "Decolonizing minds: Forging a new future through multicultural education." Tucson, AZ.

Littrell, M., **Chitiyo, G.,** Davis, K., Garrett, R, Zagumny, L., & Akenson, A. (2019, November). *Data triangulation in evaluation: a possible key to the holistic measurement of chess-based instruction* [Presentation]. The American Evaluation Association Annual Conference, Minneapolis, MN.

Littrell, M. N., **Chitiyo, G.**, Fidan, I., Cossette, M., Singer, T., & Tackett, E. (2020, June). *Lessons learned: Multi institutional collaboration in additive manufacturin*g [Paper presentation]. The American Society for Engineering Education, Montreal, Quebec, Canada.

Littrell, M. N., Michel, L., Anton, S., & **Chitiyo, G.** (2020, June). *Board game development as a pedagogical approach to teaching undergraduate students in an interdisciplinary course that addresses contemporary societal issues* [Paper presentation]. The American Society for Engineering Education, Montreal, Quebec, Canada.

Mathende, A., **Arce-Trigatti, A**., Jorgensen, S., Sanders, R., & Arce, P. (2019, November 11–16). *Holistic understanding of evaluation practices for student-centered learning: Lessons from a curricular redesign in a STEM postsecondary setting* [Ignite Presentations]. American Evaluation Association Conference 2019, Minneapolis, MN.

Phillips, M. B., & **Richards, J. R.** (2020). *Exploring Protestant Christian perceptions of health behaviors: A qualitative study in Bible Belt churches* [Oral presentation]. Ethnographic & Qualitative Research Conference, Las Vegas, NV.

Pittman, C. & **Spears, A.** (2019, October). *Words on wheels*: *How effective community/school/family partnerships brought to life a vision to bring children's books into rural neighborhoods*. International Literacy Association, New Orleans, LA.

Richards, J. R., & Phillips, M. B. (2020). *Case studies of Protestant Christian leaders: Church culture and health behaviors* [Oral presentation]. Ethnographic & Qualitative Research Conference, Las Vegas, NV.

Silber-Furman, D., Arce-Trigatti, A., & Kelley, J. (2019, November 6 Silber-Furman, D. & Arce-Trigatti, A. 9). *No Longer Confined: Decolonizing Contexts for Teaching and Learning by Centering Diversity* [Panel presentation]. Annual 29th International Conference of the National Association for Multicultural Education, Tucson AZ.

Spears, A., Schmitt-Matzen, C., Braisted, L., & Beach, N. (2020, October). *Taking literacy outside: Outcomes from a year- long observational study.* International Literacy Association, Columbus, OH.

Spears, A., Schmitt-Matzen, C., Braisted, L., Beach, N. (2020, April). *Lessons from a year in Wonderland Woods: How nature-based lessons supported students' interdisciplinary content knowledge.* NSTA National Conference. Boston, MA.

Spears, A., **Isbell, J. K.,** Schmitt-Matzen, C., & Braisted, L. (2019, November). *Enhancing children's literacy, learning, and civic engagement through a summer enrichment program* [Paper presentation]. 29th Annual Conference of the National Association for Multicultural Education, Tucson, AZ.

Wilson, C., & **Anthony, H. G.** (2020, May). ***Preservice math teachers' perceptions of posing geometry problems to rural high school students*** [Paper presentation]. Sixteenth International Congress of Qualitative Inquiry, Urbana-Champaign, IL.

Faculty In-Service Workshops

Adams, B., & **Arce-Trigatti, A**. (2019, October 29). *Innovate to create: Understanding how cognitive diversity influences team efficiency in addressing complex, ill-structured problems.* Workshop session conducted at the College of Engineering at Tennessee Tech University for the Faculty Development Series, Cookeville, TN.

Akenson, J. E. (2019, November 26). *Teaching about TVA: Emphasis on country music.* Warrior Workshop White County High School. Sparta, TN.

Akenson, J. E. (2019, November 26). *The Ken Burns country music documentary: Standards, teaching materials, and teaching strategies. White County High School.* Sparta, TN.

Anthony, H. G. (2019, October). *Using algebra triangles to develop number sense and problem-solving skills*. Workshop at the regional meeting of the National Council of Teachers of Mathematics, Nashville, TN.

Arce, P. E., **Arce-Trigatti, A**., Jorgensen, S., & Sanders, J. R. (2020, March 7). *Developing the facilitator of learning for a holistic-style STEM professional: K-12 practitioners.* Workshop session conducted at the American Society for Engineering Education Southeastern Conference, Auburn, AL.

Arce, P. E., **Arce-Trigatti, A**., Jorgensen, S., & Sanders, J. R. (2020, March 8). *Developing the facilitator of learning for a holistic-style STEM professional: Postsecondary educators.* Workshop session conducted at the American Society for Engineering Education Southeastern Conference, Auburn, AL.

Arce-Trigatti, A., Jorgensen, S., Arce, P. E., & Sanders, J. R. (2020, February 28). *Leveraging the Renaissance Foundry as a tool for Diversity and Inclusion.* Workshop session conducted as a Faculty Development Series in the Center for Innovation in Teaching and Learning, Cookeville, TN.

Arce-Trigatti, A., & Silber-Furman, D. (2020, January 22). *The fluidity of diversity: Lessons from theory to practice.* Workshop session conducted at The Oak Ridge Learning Center for The Oak Ridge Schools Professional Development Series, Oak Ridge, TN.

Arce-Trigatti, A., & Silber-Furman, D. (2019, November 26). *The fluidity of diversity: Lessons from theory to practice.* Workshop session conducted at the Warrior Workshop for White County School Teachers' Professional Development, Sparta, TN.

Arce-Trigatti, A., & Adams, B. (2019, October 5). *Innovate to create: Understanding how cognitive diversity influences team efficiency in addressing complex, ill-structured problems.* Workshop session conducted at The Bell Hall Auditorium, Tennessee Tech University, for the Racism and Diversity IMPACT Series, Cookeville, TN.

Baker, J. & Baker, T. (2020, January 25). *UCWP College, Career, and Community Writers.* Upper Cumberland Writing Project half-day workshop for English teachers grades 6-12, Cookeville, TN.

Baker, J. & Baker, T**.** (2019, September 21). *UCWP College, Career, and Community Writers Program* (with T. Baker). Upper Cumberland Writing Project half-day workshop for English teachers grades 6-12, Cookeville, TN.

Howard, M. (2020, January). *CLASS certification training.* Tennessee Department of Education, Lawrenceburg, TN.

Howard, M. (2019, June). *Adverse childhood experiences*. TTU Child Development Lab Professional Development, Cookeville, TN.

Howard, M. (2019, December). *Really seeing children, part 2*. Foster Grandparent Training, Cookeville, TN.

Howard, M. (2019, October). *The cycle of observation*. Tennessee Early Childhood Training Alliance/TOPSTAR Mentor Training. Nashville, TN.

Howard, M. (2019, July). *Adverse childhood experiences*. Keynote Address at Child Care Resource and Referral Professional Development.

Kennedy, K. (2019, September). *A PBS and disability awareness approach for school bus drivers*. All day training presented to First District RESA, Savannah GA.

Kennedy, K. & Conley, C. (2019, July). *Teaching on the spectrum*. Session presented to the ADA Awareness Conference, Maysville, KY.

Silber-Furman, D., & Arce-Trigatti, A. (2019, October 2). *Understanding Diversity: Part III.* Workshop session conducted at The BizFoundry for the inaugural IMPACT Leadership Conference. Cookeville, TN.

Silber-Furman, D., & Arce-Trigatti, A. (2020, February 22). *Language Acquisition and Growth: Lessons from theory to practice.* Workshop session conducted at Jere Whitson Elementary School for the English as a Second Language Training Series, Cookeville, TN.

Student Publications

Baker, J.C., Brown, A., Hook, C.C., & **Mathende, A.M.** (2019). edTPA essentials for candidate support and success. In: Barron, L. editor. *A Guide for edTPA Implementation: Lessons from the Field*. Charlotte, NC. Information Age Publishing.

Chitiyo, M. Hughes, E. M., Chitiyo, G., Changara, D. M., Itimu-Phiri, A., Haihambo, C., Taukeni, S. G. & **Dzenga, C. G**. (2019). Exploring teachers' special and inclusive education professional development needs in Malawi, Namibia, and Zimbabwe. *International Journal of Whole Schooling, 15*(1), 28-49

Chitiyo, J., May M. E., **Mathende, A.,** & **Dzenga, C. G**. (2019). The relationship between school personnel's confidence with using the school-wide positive behaviour intervention support model and its sustainability. *Journal of Research in Special Educational Needs, 19*(3), 232-240.

Chitiyo, G., Zagumny, L., **Littrell, M**. N., Besnoy, K., Akenson, A. B., **Davis K. M**., & Ablakwa, C. (2020, in press). Students' perceptions of the benefits of scholastic chess instruction. *Journal of Chess Reserch.*

Davis K. M., & Chitiyo, G. (2020, in press). Student voice and engagement as predictors of exclusionary discipline across grade tiers. *Research in the Schools.*

Enix, J. (2020). Student publication strategies that work. *The English Journal, submitted for publication.*

Isbell, J. K., Spears, A., **Schmitt-Matzen, C.,** & Braisted, L. (2020). Everyone off the ship: Children becoming civic minded in a summer literacy program. *Journal of Multicultural Affairs*. (submitted)

King, S. A., **Dzenga, C**., Burch, T., & Kennedy, K. (2020) Teaching partial-interval recording of problem behavior with virtual reality. *Journal of Behavioral Education*, 1-24. doi10.1007/s10864-019-09363-4

Lee, E., Roberts, T., Mabry, J. L., & **Davis, K. M.** (2020). *Development of the simulation-positive learning evaluation (SIM-PLE) rubric for use in medical-surgical nursing high fidelity simulations* [Manuscript submitted for publication]. College of Nursing, Tennessee Tech University.

Littrell, M. (Under review, 2020) *Utilization of the layered ecological model for teaching cybersecurity workshops to typical users.* Evaluation and Program Planning, Elsevier.

Mathende, A.M., Arce-Trigatti, A., Jorgensen, S., Sanders, J. R., & Arce, P.E. (2020). Leveraging observation to evaluate student-centered learning: A theory based analysis of observational models applied to a curricular redesign.

Schmitt-Matzen, C. (2019). The inside-out model: A community reentry program for female inmates upon jail release. *Justice Policy Journal*.

Spears, A., Meadows, J., & **Qualls, M.** (2020). Using growth mindset literature to increase confidence and motivation with young readers. *Tennessee Literacy Journal*. (submitted).

Spears, A., & **Pittman, C.** (2020). Using feminist pedagogy to explore the depiction of female characters in *Jane Eyre* and *Dark Companion*. In. P. Greathouse & V. Malo-Juvera (Eds.), *Young adult and canonical literature: Pairing and teaching* Lanham, MD: Rowman & Littlefield Publishing.

Stratton, E., Chitiyo, G., **Mathende, A. M**., & **Davis, K. M.** (2019). Evaluating flipped versus face-to-face classrooms in middle school on science achievement and student perceptions. *Contemporary Educational Technology, 10*(3), 1–13. doi:10.30935/cet.646888

Student Grants

Isbell, J. K., **Schmitt-Matzen, C.,** & **Qualls, C**. (2019). *Jere Whitson Freedom School* [Grant]. *Believe in Reading Grant*. (Funded. $3,000)

Isbell, J. K., & **Schmitt-Matzen, C.** (2020). *First Horizon Foundation grant for Jere Whitson Freedom School arts activities* [Grant]. TN NAME. ($1,842, pending).

Isbell, J. K., & **Schmitt-Matzen, C.** (2020). *Jere Whitson Freedom School* [Grant]. Scarlett Family Foundation (Letter of intent submitted, pending).

Isbell, J. K., & **Schmitt-Matzen, C.** (2020). *Jere Whitson Freedom School* [Grant]. Jeff Roth Cycling Foundation Community Cycling. ($1,000, Letter of intent accepted, pending).

Isbell, J. K., **Qualls, C**., & **Schmitt-Matzen, C.** (2019). *Jere Whitson Freedom School* [Grant]. Aldi Smart Kids. ($5,000, pending).

Isbell, J., **Qualls, C**., & **Schmitt-Matzen, C.** (2019). *Jere Whitson Freedom School* [Grant]. Awesome Library Foundation. ($1,000, pending).

Littrell, M. N. (2020). *One World Multi Cultural Club* [Grant]. Arun Gandhi: Non-Violence in a Violent World. ($17,660, Funded).

Littrell, M. N. (2018–2020). *One World Multi Cultural Club* [Grant]. Linda Ragsdale: 2008 Mumbai Terrorist Attack Survivor. ($5,000, Funded).

Powell, A. R. (Principal Investigator). (2020–2022). *Substance use treatment navigator marketing campaign* [Grant]. TN Department of Health. (Funded $350,000).

Powell, A. R. (Project Director). (2019–2020). *Opioid education app* [Grant]. TN Department of Finance & Administration. (Funded $50,0000).

Powell, A. R. (Project Director). (2019). *Virtual reality for ENDS education: Darth vaper AR* [Grant]. TN Department of Health. (Funded $75,000).

Spears, A., Isbell, J. K., & **Schmitt-Matzen, C.** (2020). *U.S. Bank grant for Jere Whitson Freedom School field trips* [Grant]. TN NAME (Funded $1,500).

Spears, A., **Schmitt-Matzen, C**., Braisted, L., **Qualls, C**., **Enix, J., Rector, L**., & **Sukowski, D**. (2020). Dollar General Family Literacy Grant. ($10,000, pending).

Wynn, K. L. (2019) *EDGE Creative Inquiry (CI) Curriculum* [Grant]. Tennessee Technological University. (submitted $5000).

Student Presentations

Ablakwa, C., **Littrell, M.,** & **Mathende, A**. (2019, November) *Graduate evaluation programs: A roundtable discussion for achieving desired professional outcomes.* American Evaluation Association (AEA), "Paths to the Future of Evaluation: Contribution, Leadership, and Renewal." Minneapolis, MN.

Akenson, A. B., & **Littrell, M**., (2019, November 7) *Worthy and complete: Disrupting the colonizing effects of PPE through mindfulness and basic goodness.* National Association for Multi-Cultural Education (NAME), "Decolonizing Minds: Forging a New Future through Multicultural Education." Tucson, AZ.

Anthony, H., Clemons, M. P., **Pérez, M., Wilson, C.** (2019, October 2–4). *High school mathematics teacher beliefs and perceptions of integrated mathematics.* NCTM Regional Conference & Exposition. Nashville, TN.

Anthony, H., **Perez, M., Wilson, C., Campbell-Gulley, B., & England, M**. (2020, May 20–23). *Trends in STEM: Content analysis of international STEM education research journals.* Sixteenth International Congress on Qualitative Inquiry, The University of Illinois at Urbana-Champaign, IL, United States. (Conference canceled)

Baker, J., Meadows, J.R., Kennedy, K., Callender, A., Marcum, R., **England, M. P., Pérez, M**. (2020, January 16–17). *Inclusive STEM practices in informal learning: A journey towards STEM education for all.* STEM Education Research Conference. Cookeville, TN.

Davis, K. M. (2020, April 17–21). *It's an American public high school: A reflexive picture of connectedness, engagement, and school climate* [Paper presentation]. American Educational Research Association (AERA) Conference, San Francisco, CA. https://www.aera20.net/ (Conference canceled)

Dzenga, C. G., Kennedy, K, Scarborough, E. (2019, November). *Predicting the participation level in leisure activities for individuals with developmental disabilities: A review of literature* [Presentation]. Columbus State University, GA.

Dzenga, C. G., Kennedy, K, Scarborough, E. (2019, November). *The use of video modeling to teach leisure activities to children with developmental disabilities has proven to be effective in peer reviewed literature* [Presentation]. Tennessee Applied Behavior Analysis Conference in Nashville, TN.

Elizer, N. H. (2020, May 20–23). *Defying gravity: An ethnodrama* [Script presentation]. 16th International Congress of Qualitative Inquiry University of Illinois, Urbana-Champaign, IL.

(conference canceled)

Elizer, N. H. (2019, November 6–7). *Feminism unfinished: A historical analysis of indigenous feminism & reflections of a white women's feminist privilege* [Paper presentation]. National Association for Multicultural Education 2019 International Conference, El Conquistador Tucson, Tucson, AZ.

Elizer, N. H. (2019, July 19). *Literacy guidance for schools serving students impacted by global resettlement* [Poster presentation]. Inaugural Conference of the Tennessee Chapter of the National Association for Multicultural Education Tennessee Technological University, Cookeville, TN. (Accepted; Unable to attend).

Enix, J. M. (2019, May 20). *Liberal education as a pathway to flourishing humanity*. International Congress for Qualitative Inquiry (ICQI). Urbana, IL.

Enix J. (2020, June). *Ethnographic considerations in classroom layout and design*. Upper Cumberland Literacy Association (UCLA) Conference, Cookeville, TN.(Conference cancelled).

Enix. J. M. (2019, July 19). *Public school mockingbirds: Embracing structural ideology through the (hardly) fictional world of Atticus Finch*. Tennessee National Association for Multicultural Education (TN NAME) Conference. Cookeville, TN.

Isbell, J., **Enix, J. M., Rector, L., & Sukowski, D**. (2020, July 17). *Monsters in posthumanism: Exploring the intended and unintended consequences of our actions*. Tennessee National Association for Multicultural Education (TN NAME) Conference. Cookeville, TN. (Conference cancelled).

Isbell, J., Spears, A., **Schmitt-Matzen, C.**, Braisted, L. (2020, July). *Knowing/becoming/doing: Civic minded children in a summer literacy program*. 2020 TN NAME Conference. Cookeville, TN. (Conference cancelled).

Jorgensen, S., Arce-Trigatti, A., **Mathende, A. M.,** Cain, S.B., Anfal, H., Sanders, JR., Arce, P.E. (2019). *An activity to illustrate teamwork: An introduction to the Renaissance Foundry Model through mindful abstraction* [Presentation]. ASEE Southeastern Section Conference: American Society for Engineering Education, Raleigh, NC.

Littrell, M., Michel, L., Anton, S., & Chitiyo, G. (2020, June). *Board game development as a pedagogical approach to teaching undergraduate students in an interdisciplinary course that addresses contemporary societal issues*. American Society for Engineering Education (ASEE).

Littrell, M., Chitiyo, G., Fidan, I., Cossette, M., Singer, T., & Tackett, E. (2020, June). *Lessons learned: Multi institutional collaboration in additive manufacturing. American Society for Engineering Education.* American Society for Engineering Education (ASEE).

Littrell, M., Chitiyo, G., Davis, K., Garrett, R, Zagumny, L., & Akenson, A. B. (2019, November 14). *Data triangulation in evaluation: A possible key to the holistic measurement of chess-based instruction.* American Evaluation Association (AEA), "Paths to the Future of Evaluation: Contribution, Leadership, and Renewal." Minneapolis, MN.

Mathende, A.M., Arce-Trigatti, A., Jorgensen, S., Sanders, R., Arce, P.E., (2019, November). *Holistic understanding of evaluation practices for student-centered learning: Lessons from a curricular redesign in a STEM postsecondary setting* [Presentation]. American Evaluation Association Annual Conference in Minneapolis, MN.

Perez, M., Campbell-Gulley, B. M., Wilson, C., & **England, M**. (2020, April 29). *Content analysis of international STEM education research journals* [Poster session]. Annual Research and Creative Inquiry Day Tennessee Technological University, Cookeville, TN. https://publish.tntech.edu/index.php/PSRCI

Perez, M., Campbell-Gulley, B. M., Wilson, C., & **England, M**. (2020, January 16–17). *Content analysis of international STEM education research journals* [Conference presentation]. Tennessee STEM Education Research Conference Tennessee Technological University, Cookeville, TN.

Pérez, M., Wilson, C. (2020, February 22). *Productive problems.* MTMT Conference. Nashville, TN.

Pittman, C., Spears, A. (2019, October 11–13) *Synergistic community partnerships transform a rural community with a mobile book bus*. International Literacy Association, New Orleans, LA.

Qualls, C. (2020, May). *Autoethnography as rebellion* [Round Table Presentation]. International Congress of Qualitative Inquiry 2020. (ICQI), Urbana, Illinois. (Conference canceled)

Qualls, C. (2020, June). *The proposal room*. Upper Cumberland Literacy Association 2020 Conference (UCLA), Cookeville, TN. (Conference canceled).

Qualls, C. (2019, September). *LGBTQ+ experience*. Cookeville Impact Diversity Training Seminar, Cookeville, TN.

Qualls, C. & Smith, M. R. (2020, July). *Inclusive sexual education reform* [Paper presentation]. Tennessee Chapter, National Association for Multicultural Education 2020 Conference. (*Tennessee NAME)*, Cookeville, TN. (Conference Cancelled).

Rector, L. C. (2020, October 7–11). *Monsters in posthumanism: Exploring the intended and unintended consequences of our actions* [Panel member]. National Association for Multicultural Education 2020 International Conference, Montgomery, AL. (Conference canceled).

Rector, L. C. (2020, May 20–23). *Teacher's views on flexible seating in 2nd grade* [Paper presentation]. 16th International Congress of Qualitative Inquiry, University of Illinois, Urbana-Champaign, IL.

https://icqi.org/wpcontent/uploads/2020/02/QI2020-First-Preliminary-Program.pdf (Conference canceled)

Schmitt-Matzen, C. (2019, June). *The inside-out model: A community reentry program for female inmates upon jail release*. National Association for Community and Restorative Justice. Denver, CO.

Spears, A., **Schmitt-Matzen, C**., Braisted, L., & Beach, N. (2020, October). *Taking literacy outside: Outcomes from a year-long observational study.* International Literacy Association. Columbus, OH.

Spears, A., **Schmitt-Matzen, C.,** Braisted, L., Beach, N. (2020, April). *Lessons from a year in Wonderland Woods: How nature-based lessons supported students' interdisciplinary content knowledge.* 2020 NSTA National Conference. Boston, MA. (Conference cancelled).

Wilson, C., & Anthony, H. (2020, May). *Preservice math teachers' perceptions of posing geometry problems to rural high school students* [Paper presentation]. 16th International Congress of Qualitative Inquiry, Champaign-Urbana, IL. (Conference canceled).

Wilson, C. (2020, February): *Transformational quilting* [Presentation]. MT^2 Conference, Hendersonville, TN.

Wilson, C., & Anthony, H. (2020, February): *Mathematical letter writing*. [Presentation]. MT^2 Conference, Hendersonville, TN.

Wilson, C., & Pérez, M. (2020, February): *Productive problems*. [Presentation]. MT^2 Conference, Hendersonville, TN.

Wilson, C. (2019, November): *Effects of x-ray radiation on chromosome structure and radiation dose* [Presentation]. TSTA/TMTA Conference, Murfreesboro, TN.