College of Education Graduate Programs IE Self Study Report

Tennessee Tech University
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Table of Contents

Mission, Vision, & Goal Statement

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), Literacy, Health Behaviors & Wellness Education (HBWE), Program Planning and 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.

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. Faculty routinely monitor current practices in core, research, and concentration courses—through attending academic and professional conferences, examining theory, and reviewing evidence-based literature—and assess how they align with program goals and outcomes.

Program Goal 1: Course Instruction

Provide course instruction that models evidence-based practices in the respective program areas.

Strategic Plan Connections

Core Principles: *Academic Excellence*, *Meaningful Innovation*, *Student Success*, *Value Creation*

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

Program Goal 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.

Strategic Plan Connections

Core Principles: *Academic Excellence*, *Community Engagement*, *Meaningful Innovation*, *Student Success*, *Supportive Environment*, *Value Creation*

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

Program Goal 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.

Strategic Plan Connections

Core Principles: *Academic Excellence*, *Community Engagement*, *Meaningful Innovation*, *Student Success*, *Supportive Environment*, *Value Creation*

Strategic Goals: SG1–PA D; SG4–PA A, B, C, D

Student Learning Outcomes (SLO)

SLO 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 (SLO1).

Strategic Plan Connections

Core Principles: *Academic Excellence*, *Community Engagement*, *Meaningful Innovation*, *Student Success*, *Supportive Environment*, *Value Creation*

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

SLO 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 (SLO2).

Strategic Plan Connections

Core Principles: *Academic Excellence*, *Community Engagement*, *Meaningful Innovation*, *Student Success*, *Supportive Environment*, *Value Creation*

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

Tables 1 & 2. 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

Course	*Title*	*Content Mastery (SLO 1)*	*Scholarly Research Activities (PG 2)*	*Professional Skill Development (PG 3, SLO 2)*	*Evidence-based Practices (PG1)*
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

Assessments

Goal/ Outcome/ Objective: Upon successful completion of the ELPhD 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 (SLO 1) and demonstrate the development of professional skills in the areas of teaching, research, and service (SLO 2).

IDEA evaluations (PG 1)

a. **description & rationale**: 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. **threshold**s:

i. *Acceptability*: 3.5 score
ii. *Expectation*: 3.6–3.9 score
iii. *Exceptionality*: ≥ 4.0 score

ELPhD Scholarly Activity Report (PGs 2 & 3; SLOs 1 & 2)

a. **description & rationale**: 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.

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

a. **description & rationale**: 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 below 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 As or all As; 90–100)

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

a. description & rationale: 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.

Students are 1) required to read extensively, including scholarly writings related to epistemologies and theories that influence and inform social science research, and exemplary studies; 2) expected to submit polished, scholarly papers that undergo intense review, with the expectation of publishing and presenting; and 3) undergo faculty and peer review during class presentations of work in preparation for presenting at discipline-specific conferences and other scholarly forums.

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*, course 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.

Please note: *in the research courses, there are no attendance grades or other non-coursework related scores. Scores are based solely on final exams, research projects, project proposals, all of which require mastery of appropriate research content/theoretical knowledge and skills. Course grades solely reflect students' progress in research content knowledge and skill mastery.*

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

a. **description & rationale**: Grant proposals are crafted each Summer semester in *Program Planning and Proposal Development* (EDU 7040). 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 undertaken 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.

Grades are monitored and in-class and informal feedback about the grant proposal process and collaboration (development of professional skills) is used to ensure progress toward SLOs and PGs and to improve student success.

Please note: *in EDU 7040, there are no attendance grades or other non-coursework related scores. Scores are based solely on program planning and grant proposal projects that require mastery of appropriate research skills. Course grades solely reflect students' progress in program planning and grant proposal content knowledge and skill mastery.*

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

c. **frequency**: annually

d. **thresholds**:

i. *Acceptability*: successful completion of a grant proposal as part of *Program Planning and Proposal Development* (EDU 7040) with a grade of *B* or better.

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

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

Comprehensive Examination (SLOs 1 & 2)

a. **description & rationale**: 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 (SLOs 1 & 2). Rigorous comprehensive examinations provide an opportunity for ELPhD students to provide evidence of proficiency in and mastery of expected learning outcomes (SLOs 1 & 2). 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.

Dissertation Prospectus Defense (SLOs 1 & 2)

a. **description & rationale**: The dissertation prospectus is presented each semester as needed, in conjunction with or immediately following *Research Seminar in Education*, EDU 7920 (successful written and oral prospectus defense to graduate advisory committee). **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 25–35 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**: graduation rate, *ELPhD Academic Achievement Table*

c. **frequency**: every semester

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.

Dissertation Defense (SLOs 1 & 2)

a. **description & rationale**: 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

Program Goal 1 Course Instruction Results

Results: IDEA evaluations allow for comparison against similar courses on a national level. Scores indicate faculty and curricula are successful in achieving learning outcomes and objectives. Summer 2021 average score was 4.7, fall 2021 average was 4.5 on a 5-point scale, and spring 2022 average was 4.6. The academic year average was 4.6. This exceeds the *Threshold of Acceptability* (3.5); ELPhD students report that faculty performing at the *Threshold of Exceptionality* (≥4).

Table 3. Exceptional Learning Ph.D. Course IDEA Evaluations 2021–2022

Faculty	*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*	
	Raw	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*	*Raw*	*Adj*
Summer 2021	4.5	4.5	4.9	4.9	4.7	4.8	4.8	4.8	4.6	4.7
Fall 2021	4.1	4.1	4.6	4.7	4.6	4.6	4.6	4.6	4.4	4.4
Spring 2022	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6

Program Goals 2 (*Scholarly Research*) & 3 (*Leadership Personnel*) Results

Results: 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, a dip, however, was noted for this academic year. This may be due in part to a) continued increased time devoted to restructuring and revising class delivery, pacing, and content; b) changes in travel and conference structure and availability due to the COVID–19 pandemic; and c) fewer responses from faculty confirming their activities.

Students took part in fewer presentations than in the previous four years. The COVID–19 pandemic has continued to affect presentations to some extent (e.g., travel restrictions, funding, changes to delivery modes, cancellations and postponements). With two large cohorts admitted the last two academic years, many of the students have not yet finished their research sequence, and so do not yet have original work to present. It also correlated with a slight drop in faculty scholarly activity. Despite this, overall, students consistently 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 in the appendix.

Note: *in Tables 4 and 5, publications and presentations in which multiple faculty or students took part are only counted once. For example, four students may have published a paper together; it is reported as one publication rather than four.*

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

	Exceptional Learning Ph.D. Faculty Activity						
	In-Service Workshops	Grant Proposals Funded	National Presentations	International Presentations	Books	Book Chapters	Peer-Reviewed Publications
2017–2018	5	30	37	5	10	2	42
2018–2019	8	20	29	10	1	3	34
2019–2020	21	16	28	15	2	6	57
2020–2021	11	21	20	18	3	16	30
2021–2022	0	11	7	5	0	1	10

Table 5. Exceptional Learning Ph.D. Student Scholarly Activity

	Exceptional Learning Ph.D. Student Activity							
	In-Service Workshops	Grant Proposals Crafted	Regional Presentations	National Presentations	International Presentations	Book Chapters	Peer-Reviewed Publications	Pending Peer-Reviewed Publications
2017–2018	2	15 *(7 funded)*	19	12	10	0	5	8
2018–2019	0	5 *(1 funded)*	24	12	16	0	3	4
2019–2020	1	14 *(7 funded)*	18	11	10	2	7	5
2020–2021	1	17 (7 *funded*)	15	5	10	0	7	7
2021–2022	2	12 (*4 funded*)	10	6	6	1	11	9

SLO 1 (*Course Competency*) & SLO 2 (*Professional Skills*)

All data discussed in referenced in the tables above & below.

- The majority of students (≥90%) maintain an A (3.5 or higher GPA equivalent) throughout the duration of the program. In 2021–2022, ELPhD students maintained an A average in the key courses listed in the table above (overall score across all courses: 3.78 out of 4.0). This is consistent with performance of the previous five years. At the PhD-level, course scores *do not* include attendance or other scores that are not a reflection of progress on appropriate learning outcomes, content knowledge, and skill mastery. Students are performing at or above the *Threshold of Expectation*. (See Table 7 below)

- 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. In 2021–2022, 12 grant proposals (including collaborative grants written outside of EDU 7040) were crafted and submitted proposals; 4 of these were funded. Students consistently performed or above the *Threshold of Expectation*, with several attaining the *Threshold of Exceptionality*. [*reminder: EDU 7040 scores are based solely on program planning and grant proposal projects that require mastery of appropriate research*

skills. Course grades solely reflect students' progress in program planning and grant proposal content knowledge and skill mastery.]

- During the 2021–2022 academic year, ELPhD students belonged to over 45 professional organizations and disseminated original work (either their own or part of an active research collaboration with faculty &/or peers) at 22 scholarly/professional conferences (10 regional presentations, 6 national presentations, 6 international presentations) (see Table 5 above). The COVID–19 pandemic has continued to affect presentations to some extent (e.g., travel restrictions, funding, changes to delivery modes, cancellations and postponements). With two large cohorts admitted the last two academic years, many of the students have not yet finished their research sequence and so do not yet have original work to present. There is also a larger number of working adults with additional job demands in response to the pandemic, which may also affect capacity to participate in and present projects. It also correlated with a slight drop in faculty scholarly activity. Despite this, overall, students consistently performed or above the *Threshold of Expectation*, with several attaining the *Threshold of Exceptionality*. This trend will be monitored, and additional support addressed in the *Modifications & Continuous Improvement* section.

- Students enrolled in the ELPhD program during the 2021–2022 academic year submitted 22 manuscripts (article, book chapter, or other scholarly work), seven of which have been published (see Table 5). Students consistently performed or above the *Threshold of Expectation*, with several attaining the *Threshold of Exceptionality*.

- Quantitative research course sequence data—EDU 7420, EDU 7430, EDU 7300—(SLOs 1 & 2) demonstrate students' acquisition and mastery of knowledge of quantitative methods, instruments, analysis, and research design. Results across courses show consistency with each respective student. The higher number of scores in the 80–89 score/ 3.0 GPA range in EDU 7430 is expected considering the degree of difficulty with cumulative knowledge and application of research analysis skills. During the 2021–2022 academic year, the majority of students maintained scores ≥ 90 out of 100 / 4.0 GPA. A greater number of scores ranging from 80–89/3.0 GPA were seen in EDU 7420, but performance demonstrating content mastery remained consistent. No student earned ≤79/2.0 GPA (see Tables 6 & 7 below). Overall, students are performing at or above the *Threshold of Expectation* (see Tables 6 & 7 below). *[reminder: Research course scores and course grades are based solely on final exams, research projects, & project proposals, all of which require mastery of appropriate research skills. Course grades solely reflect students' progress in research content knowledge and skill mastery.]*

- Qualitative research course sequence data—EDU 7010, EDU 7330, EDU 7340—(SLOs 1 & 2) 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). The majority of students (94%) maintained scores ≥ 90 out of 100 / 4.0 GPA (three students this academic year earned a score ranging from 80–89/3.0 GPA in one of the three courses) and no student earned ≤79/2.0 GPA. (see Tables 6 & 7 below). The average score for students beginning the qualitative series in spring 2022 was 4.0/4.0. Overall, students are performing at or above the *Threshold of Expectation*. *[reminder: Research course scores and course grades are based solely on final exams, research projects, project proposals, all of which require mastery of appropriate research skills. Course grades solely reflect students' progress in research content knowledge and skill mastery.]*

- 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, while only 3 have required a retake since 2009 (see Tables 6 & 7 below).

- All Ph.D. candidates in the last academic year passed their dissertation prospectus defense on the first attempt. All students in 2021–2022 performed at or above the *Threshold of Expectation*. Dissertation prospectus data show successful completion of presentations on the first attempt for all ELPhD students (see Tables 6 & 7 below).

- All Ph.D. candidates in the 2021–2022 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 (see Tables 6 & 7 below).

Table 6. Exceptional Learning Ph.D. Student Academic Achievement (5-year)

Exceptional Learning Ph.D. Academic Achievement										
	EDU 7010	*EDU 7330*	*EDU 7340*	*EDU 7420*	*EDU 7430*	*EDU 7300*	*EDU 7040*	*Comps*	*Prospectus*	*Defense*
2017–2018	3.8	4.0	3.7	3.9	3.8	3.9	4.0	8/8 passed on 1st attempt	8/8 passed on 1st attempt	7/7 passed on 1st attempt
2018–2019	4.0	4.0	4.0	3.8	4.0	3.8	4.0	5/5 passed on 1st attempt	5/5 passed on 1st attempt	3/3 passed on 1st attempt

	EDU 7010	*EDU 7330*	*EDU 7340*	*EDU 7420*	*EDU 7430*	*EDU 7300*	*EDU 7040*	*Comps*	*Prospectus*	*Defense*
2019–2020	4.0	4.0	3.7	3.5	3.3	3.8	3.7	4/4 passed on 1st attempt	4/4 passed on 1st attempt	3/3 passed on 1st attempt
2020–2021	3.8	4.0	3.7	3.8	3.8	3.8	4.0	–	–	–
2021–2022	4.0	–	–	3.7	3.8	4.0	–	–	–	–

Please note that for Tables 6 & 7, from fall 2018 forward, there are still cohort members actively working through the program. Data reflect the scores or total # of cohort members who have 1) completed a course and 2) attempted comps/prospectus/dissertation and of those how many passed. As such, the cohort averages and comps/prospectus/dissertation attempt data listed may change as the remaining cohort members move through the program.

Table 7. ELPhD Historical Academic Achievement (2009–present)

Exceptional Learning Ph.D. Historical Academic Achievement										
Cohort	*EDU 7010*	*EDU 7330*	*EDU 7340*	*EDU 7420*	*EDU 7430*	*EDU 7300*	*EDU 7040*	*Comps*	*Prospectus*	*Defense*
2009–2010	3.5	4.0	3.5	3.8	3.5	4.0	4.0	3 passed on 1st attempt; 1 passed on 2nd	all passed on 1st attempt	all passed on 1st attempt
2010–2011	3.7	3.7	3.7	4.0	3.3	3.3	4.0	2 passed on 1st attempt; 1 passed on 2nd	all passed on 1st attempt	all passed on 1st attempt
2011–2012	3.9	3.7	3.7	4.0	3.5	3.8	3.7	all passed on 1st attempt	all passed on 1st attempt	all passed on 1st attempt
2012–2013	3.5	3.9	3.7	4.0	3.4	4.0	3.8	all passed on 1st attempt	all passed on 1st attempt	all passed on 1st attempt
2013–2014	4.0	4.0	3.7	3.9	3.4	4.0	3.6	5 passed on 1st attempt; 1 passed on 2nd	all passed on 1st attempt	all passed on 1st attempt
2014–2015	3.6	3.7	3.8	3.8	3.4	3.8	3.7	all passed on 1st attempt	all passed on 1st attempt	all passed on 1st attempt

	EDU 7010	*EDU 7330*	*EDU 7340*	*EDU 7420*	*EDU 7430*	*EDU 7300*	*EDU 7040*	*Comps*	*Prospectus*	*Defense*
2015–2016	3.6	3.6	3.8	3.7	3.9	3.3	4.0	all passed on 1st attempt	all passed on 1st attempt	all passed on 1st attempt
2016–2017	3.4	3.6	4.0	3.6	4.0	3.8	3.7	all passed on 1st attempt	all passed on 1st attempt	all passed on 1st attempt
2017–2018	3.9	3.8	3.9	3.8	4.0	3.7	4.0	8/8 passed on 1st attempt	8/8 passed on 1st attempt	7/7passed on 1st attempt
2018–2019	3.8	4.0	3.8	4.0	4.0	4.0	4.0	5/5 passed on 1st attempt	5/5 passed on 1st attempt	3/3 passed on 1st attempt
2019–2020	4.0	4.0	3.7	3.5	3.3	3.8	3.7	4/4 passed on 1st attempt	4/4 passed on 1st attempt	3/3 passed on 1st attempt
2020–2021	3.8	4.0	3.7	3.8	3.8	3.8	4.0	–	–	–
2021–2022	4.0	–	–	3.7	3.8	4.0	–	–	–	–

Modifications and Continuous 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. 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. 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. It is important that all students take part in presenting original work. 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.

In response to qualitative data from annual semi-structured interviews with each student as well as informal 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. This began in Spring 2019. The Director 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) 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, and 3) provided feedback on proposal and publication submission drafts on an ad hoc basis. 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 will continue this program in the 2022–20232 academic year and solicit feedback to evaluate the initiative's efficacy (paired with *ELPhD Student Scholarly Activity table*) and ensure students feel prepared.

During qualitative program evaluation interviews conducted annually, students report that these measures help them feel more confident in finding opportunities for collaboratively participating in and presenting/publishing research with peers and faculty. Those that are not yet ready to present and publish have noted they keep a list of these regular opportunities (such as conferences) and journals so that they are "prepared to submit when my work is ready" and "know where I want to go."

(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)

In 2021–2022, scholarly activity demonstrated a drop when compared with previous years' performance, as discussed earlier. The Director of Graduate Programs has further increased dissemination of conference and publication CFPs, as well as offering additional ad hoc help sessions for proposals and publications. The Director of Graduate Programs is also asking faculty members to encourage students to disseminate their work and offer opportunities to collaborate on their (faculty) own projects, providing valuable professional experience and mentorship. Students are also being surveyed to identify any barriers to participation in ongoing research and presenting their own original work. A rise is anticipated in the over the next 2–3 academic years as students complete their research sequences and the associated projects.

Link to assessments. Though the associated assessments (*ELPhD Academic Achievement table, 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, qualitative student feedback is solicited annually for the express purpose of program improvements such as 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*), formative assessment done through discussions with students in those courses and in the annual semi-structured interviews revealed anxiety around course success and the need for additional support. In response, study support sessions for quantitative research courses were implemented in the 2018–2019 academic year as a pilot program. All students earned ≥80 out of 100. In 2019–2020, support for quantitative research courses continued. Students in this cohort reported more anxiety around the courses. Three earned between 80–89 and three earned ≥ 90 out of 100. No student earned ≤79, and those who expressed additional concern received extra sessions and were connected with peer mentors. The three students who earned between 80–89 points 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. In 2020–2021, however, there were more scores in EDU 7430 in the 80–89/3.0 GPA range than in previous years and one student earned a 2.0 (C). This slight dip may be related to the challenges of teaching applied statistical content via video conferencing during the pandemic. The three students who earned *B*s and one who earned a C also self-reported as weaker in quantitative methods initially. The student who earned a C was also given extra supports.

In the 2021–2022 academic year, the majority of students maintained scores ≥ 90 out of 100 / 4.0 GPA. A greater number of scores (4 out of 13) ranging from 80–89/3.0 GPA were seen in

EDU 7420, but performance demonstrating content mastery remained consistent. No student earned a 2.0 (C).

The Director has received informal (via email or conversation) and formal feedback through the qualitative program evaluation interviews, students report that the study sessions and shared resources are "lifesavers," "vital to my success," "really appreciate your effort and time for Quant study sessions—I learned so much there," "I learned more in your sessions than I could have believed possible," and "those sessions gave me the support I needed to learn and succeed."

The Director will continue this program in the 2022–2023 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 is 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. Students reported that "the level of detailed feedback and encouraging comments along with critique really helped me develop," "the time you invested really helped—my understanding of expectations was cleared and my writing improved," and "my peer mentor was great! She really cared and was there every step of the way." The Director will continue this program in the 2021–2022 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)

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.

Appendix

Faculty & Student Scholarly and Professional Activity 2021–2022

Faculty Publications

Akenson, A. B., Arce-Trigatti, A. L., & Akenson, J. E., (2022). Roots and growth: Threading the ethos of personal, social, and political transformations. *Journal of Transformative Education*, special issue "*Civic Education as Transformative Education.*" (*in press)*

Akenson, A. B., Arce-Trigatti, A. L., & Akenson, J. E. (2022). Waking up: The transformative artistry of wide open knowledge environments (WOKE) in higher education. In H. King (Ed.), *Exploring expertise in teaching in higher education.* London, UK: SEDA–Routledge. (*in press*)

Chitiyo, G., Zagumny, L., Littrell, M. N., Besnoy, K., Akenson, A. B., Davis, K. M., Ablakwa, C., & Lastres, M. R. (2021). Students' Perceptions of the Benefits of Scholastic Chess Instruction. *Brock Education Journal: A Journal of Education Research and Practice*, *31*(1), 39–51.

Akenson, J. E., & Arce-Trigatti, A. L. (2021). The historical blind spot: Guidelines for creating educational leadership culture as old wine in recycled, upscale, and expanded bottles. *Educational Studies*, 55(4),

Spears, A., Isbell, J. K. Chitiyo, G., Braisted, L., Espinosa, C., & Langford, E. (2022). Elementary children's perspectives on experiences during a summer literacy program. Submitted to *Reading Horizons* (submitted 4-8-22; in review).

Osaro, A., Gambrell, J., Isbell, J. K., Scott, L. M., Ellis-Hervey, N. M., & McParker, M. (2021). Microaggression: My story as a higher education professional. *Journal of Multicultural Affairs*, *6*(10). https://scholarworks.sfasu.edu/cgi/siteview.cgi/jma/vol6/iss1/8

Silber-Furman, D. & Arce-Trigatti A. (2021). *Riding the Pan(aca)demic Waves: A One Year Portrait of Two Educator's Experiences Teaching in Higher Education through the 21st Century Pandemic.* American Education History Journal.

Silber-Furman, D. & Arce-Trigatti A. (2021) *Empathy and Flexibility in Teaching in the Era of COVID-19.* Kappa Delta Pi, Teacher Advocate, The Quarterly Magazine for Professional Teachers.

Silber-Furman, D., Gaulden S., & Arce-Trigatti A. (2021*) Exacerbating the Digital Divide – Roadblocks to Teaching and Learning during COVID-19,* Looking Forward: Reimagining Schooling for Social Justice and Equity During and Post the COVID Pandemic mini-series, American Journal of Education Forum Editorial Board (AJE Forum).

Silber-Furman, D. (2022). *You cannot be a teacher.* Journal of Multicultural Affairs.

Arce-Trigatti A. & Silber-Furman, D. (2022) *Your job is horrible!": Postsecondary reflections of virtual learning transitions from the field.* Kappa Delta Pi Record Journal.

Meadows, J. & Spears, A. (2022). *All of the Above: Building community and self-confidence one tetrahedron at a time.* In. P. Greathouse, H. Anthony, & B. Eisenbach (Eds.), *Developing Mathematics Literacy through Adolescent Literature.* Lanham, MD: Rowman & Littlefield Publishing.

Faculty Grants

Anthony, H. G. (PI), Akenson, A. B, (Co–PI), & Potter, D. W. (Co–PI). (2022). *Collaborative, Applied, and Sustainable STEM Education Research Opportunities (CAS²ERO)*. National Science Foundation STEM Education Postdoctoral Research Fellowships (STEM Ed PRF). ($1,250,000–*submitted*)

Arce-Trigatti, A. L. (PI), & Akenson, A. B., (Co–PI). (2021). *Where are we on the path of healing? Examining the mechanisms of transformation for students and educators experiencing and implementing equity-minded initiative at a two-year college*. Spencer Foundation Racial Equity Special Research Grant. ($75,000–*submitted*)

Anthony, H. G. Co-Principal Investigator, National Science Foundation, PFE: Research Initiation in Engineering Formation (PFE: RIEF), *Research Initiation: Effects of Learner-Centered Pedagogy and Authentic Experiences on Identity Formation Among Early Computer and Electrical Engineering University Students* with Dr. J.W. Bruce (Electrical/Computer Engineering), ($198,290; submitted November 2021).

Baker, J. C. (PI). (2021) Tennessee Tech Grow Your Own (GYO) Project. Co-PIs: Lisa Zagumny, Jeremy Wendt, Amy Brown. TDOE Grow Your Own Competitive Grant. ($500,000; funded).

Howard, M. J. (PI). (2018-2023) Milestones Eligibility Evaluation Grant. Department of Intellectual and Developmental Disabilities Tennessee's Early Intervention System Co-PI: Amy Callender, Education (Funded: $7,100,000)

Howard, M. J. (PI). (2016-2024). BRIDGES Early Intervention Resource Agency. Department of Intellectual and Developmental Disabilities Tennessee's Early Intervention System (Funded: $4,056,000)

Howard, M. J. (PI). (2021-2022). American Rescue Plan Act Stabilization Subgrant. Department of Human Services (Federal flowthrough) (Funded: $244,624)

Isbell, J. K. (2022). FY 23 Congressional Directed Spending Request for Elinor Ross CDF Freedom School operation for 2023–2025 ($600,000, pending).

Isbell, J. K. (2022). Dollar General Literacy Foundation grant for Elinor Ross CDF Freedom School STEM literacy initiative ($2,970, funded).

Isbell, J. K., & Spears, A. (2022). Food Lion Feeds grant via IMPACT Cookeville for Elinor Ross CDF Freedom School nightly nutrition project ($5,100, funded).

Isbell, J. K. (2022). Publix Charities grant via IMPACT Cookeville for Elinor Ross CDF Freedom School summer meals project ($18,000, pending).

Isbell, J. K., & Ponomarenko, A. (2022). Jeff Roth Cycling Foundation grant via TN NAME for Elinor Ross CDF Freedom School cycling program ($1,000, submitted, pending).

Isbell, J. K. (2022). US Bank Foundation Community Possibilities grant via TN NAME for Elinor Ross CDF Freedom School field trips ($5,000, submitted, pending).

Isbell, J. K., Spears, A., & Langford, E. (2022). Believe in Reading grant to fund Elinor Ross CDF Freedom School STEM literacy initiative ($3,880; submitted, pending).

Isbell, J. K., & Spears, A. (2022) Nora Roberts Foundation grant to fund Elinor Ross CDF Freedom School literacy and art activities ($1,740; submitted, pending).

Isbell, J. K. (2022). The Lisa Libraries, new children's books for Elinor Ross CDF Freedom School classroom libraries ($450, funded).

Potter, D. W. (PI). (2022). *Improving Student Success through Teamwork, Engagement, Activities, and Mentorship (i-S²TEAM)*. TBR: Student Engagement, Retention and Success Grant. Co-PIs: Charria Campbell, Brittany Elmore, Carlos Galindo, Christy Killman, Ajit Korgaokar, David Mann, Michael Phillips, Bobbi Severt, Christina Turnbow, Bradley Westrick. (Pending: $50,000)

Potter, D. W. (Senior Personnel). (2022). *DESTini-TN: Developing Golden Eagle Scholars to enhance STEM education in Rural Under-developed Communities of Tennessee (TN)*. NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) from the National Science Foundation (NSF 22-527). PI: Syed Hasan; Co-PI: Ismail Fidan. (Pending: ±$1,500,000)

Potter, D. W. (PI). (2021). *Careers in STEM*. TSIN Hub Operations and Innovative Educator Workshops Grant. Co-PI: Carlos Galindo. (FUNDED; $35,000)

Silber-Furman, D. (Co-PI). 2022 Bridges to Equity: The Rights of the LGBTQIA2S+ Community and Other At-Risk Populations, and the Quest for a Better Tomorrow, $38,448.00, U.S. Mission to Spain and Andorra U.S. Embassy Madrid and U.S. Consulate General Barcelona, Public, Diplomacy Section (PD Spain) *(pending).*

Hinkel, S., Ponomarenko, A., Willis, H. S., & Spears, A. (2022). Literacy Association of Tennessee Family Literacy Grant. ($600)

Willis, H. S., Spears, A., Hinkel, S., & Ponomarenko, A. (2022). Literacy Association of Tennessee Diversity Committee Book Grant. ($300)

Spears, A. (2022). Rally to Read 100-book Sweepstakes Recipient. Reading is Fundamental. ($400)

Faculty Presentations

International

Akenson, A. B., & Arce-Trigatti, A. L. (2022). *Asleep or awake: Cultivating mindful evaluation and Wide Open Knowledge Environments (WOKE) to support inclusive, responsive, context-driven evaluation* [half-day workshop]. American Evaluations Association (AEA) Summer Institute. Atlanta, GA. June 5–8

Anderson, S. L., Womack, P.A., Wisinger, K. L., Akenson, A. B., Arce–Trigatti, A. L., & Akenson, J. E. (2021). *Waking up: Lessons learned from doctoral students' experiences with Wide Open Knowledge Environments (WOKE).* International Society for the Scholarship of Teaching & Learning (ISSoTL) annual conference, "Sustainable Education through SoTL: Practices and Cultures." Perth, Western Australia. October 26–29

Anthony, H. G., & Robinson, S. J. (2022, May). *Supporting STEM teachers for success*. Poster presented at the Eighteenth International Congress of Qualitative Inquiry, Urbana-Champaign, IL.

Silber-Furman, D. (2022). *Multicultural Education and Classroom Equities in the Era of COVID-19: Perspectives of a High School Student, K-12 Teacher, and university instructor*, co-presenter with Kathryn Wisinger & Mia Furman, 31th Annual International Conference of the National Association for Multicultural Education, March 10-12, 2022, online.

Silber-Furman, D. (2022). *Żydowska nekropolia w Kłodzku* (*Jewish Cementry of Klodzko*), co-presenter with Magdalena Malik, I Interdisciplinary Congress of Cemetery Research, University of Kardynal Stefan Wyszynski, Warsaw, Art & History Institute, October 20-21, 2022, online.

Spears, A., Isbell, J. K., & Rector, L. (2022, May). Hiding behind tradition: How posthumanism challenged onto-epistemological presumptions about children's literacy learning. Paper accepted for presentation at 18th International Congress of Qualitative Inquiry (virtual), Champaign-Urbana, IL.

National

Monaco, M., Akenson, A. B., Boyd, K. & Bullock, A. (2022). *Maximize Standard R1: The data engine*. [Invited panel presentation]. CAEPCon. Washington, DC. March 14 (*virtual*)

Wilson, C., & Anthony, H. (2022, March). *Preservice math teachers' perspectives of mathematics during a mathematical letter writing exchange*. Paper presented at the 34th annual Ethnographic & Qualitative Research Conference (EQRC), virtual.

Anthony, H., & Greathouse, P. (2021, November). *Developing mathematical literacy through young adult literature*. Presentation at the National Council of Teachers of Mathematics (NCTM) Virtual Conference (also hosted 20-minute Roundtable discussion as follow-up to the 1-hour live session).

Robinson, S. J., & Anthony, H. G. (2021, July). *Affordances of a Noyce Program-STEM Center Partnership*. Poster presented at the American Association of Physics Teachers (AAPT) Summer Meeting (virtual).

Potter, D. W. & Simone, K. B. (November, 2021). *Understanding the college path decision process of rural Tennessee students*. Presentation made at the 2021 National Forum to Advance Rural Education in Indianapolis, IN.

Silber-Furman, D. (2021). *Multidisciplinary Strategies to Increase Pre-Service Teachers' Intersectional Awareness Through Perception & Simulation Based Activities*, co-presenter with Andrea Arce-Trigatti Scholarship Teaching & Learning Summit (SoTL), Kennesaw State University Center for Teaching Excellence, 10:00 - 10:50 am, Friday, October 8th, 2021

Silber-Furman, D. (2021). *Balance is a Click Away: Innovative Teaching Techniques Centered on Empathy and Flexibility in the era of COVID-19 Virtual Learning*, co-presenter with Andrea Arce-Trigatti Scholarship Teaching & Learning Summit (SoTL), Kennesaw State University Center for Teaching Excellence, October 6-7, 2022, online.

Regional

Anthony, H., & Greathouse, P. (2022, March). *Developing mathematical literacy through young adult literature*. Presentation at the National Council of Teachers of Mathematics (NCTM) Regional Conference, Indianapolis, IN.

Anthony, H., & Greathouse, P. (2022, February). *Developing mathematical literacy through young adult literature*. Presentation at the National Council of Teachers of Mathematics (NCTM) Regional Conference, New Orleans, LA.

Robinson, S. J., & Anthony, H. G. (2022, January). *Lessons learned: TTU STEM majors for rural teaching (SMaRT) Noyce scholarship program*. Poster presented at the Southeastern STEM Education Research Conference (S^2ERC), Murfreesboro, TN.

Howard, M. J. (August 2021). Keynote Address: *What early intervention means to me*. Holland J. Stephens Center for the Prevention of Child Abuse and Neglect.

Potter, D. W. & Galindo, C. (May, 2022). *Regional STEM Support.* Presentation made at the TSIN STEM Innovation Summit in Nashville, TN.

Potter, D. W., Baker, J. C., & Sukowski, D. (November, 2021). *Ambassadors for Rural Innovation & STEM Education (ARISE)*. Presentation made at the 2021 Inaugural Tennessee Board of Regents Access & Diversity Grant Spotlight Series via Zoom.

Richards, J. R. (2021). Healthy hints and tips: Staying healthy at home. College of Education Student, Alumni, and Faculty series at Tennessee Technological University, Cookeville, TN.

Silber-Furman, D. (2021). Building & rebuilding equity in the ELL classroom, co-presenter with Kathryn Wisinger, TNTESOL, October 22-23, 2021 virtual.

Spears, A., Rector, L., & Isbell, J. K. (2021, November). Graffiti sparks community activism: Children's democratic engagement through a posthumanist lens. Paper presented at American Educational Studies Association Annual Conference, Portland, OR.

Student Publications

Pérez, M., **Campbell-Gulley, B. M., Wilson, C., & England, M.** (2022). Content analysis of international STEM education research journals. *Journal of Higher Education Theory and Practice.* [Accepted.]

Chitiyo, A., & **Dzenga, C. G.** (2021). Special and Inclusive Education Policy in Botswana, Malawi, Zambia, Zimbabwe, and Namibia. *Journal of Special Education Practice*.

Chitiyo, A., King, S., Krizon, M., & **Dzenga, G.** (In review). An Evaluation of Reading Interventions Research for Students with EBD using CEC Quality Indicators. *Behavioral Disorders*.

Chitiyo, G., **Lastres, M**., **Potter, K.,** & Zagumny, L. (2021). Students' perceived benefits of chess: Differences across age and gender. *Journal of Global Education and Research*. (under review).

Chitiyo, G., Zagumny, L., Littrell, M. N., Besnoy, K., Akenson, A. B., Davis, K. M., Ablakwa, C. N. & **Lastres, M**. (2021). Students' perceptions of the benefits of scholastic chess instruction. *Brock Education Journal, 31*(1).

Lastres (Smith), M. (2021). Gender Microaggressions: Experiences from a Doctoral Student. *Journal of Multicultural Affairs*, 6(1), article 3.

Simone, K., & Chitiyo, G. (2022). Moderating effects of risk factors and instrumental motivation on students' fulfillment of educational expectations. *International Journal of Curriculum and Instruction (under review).*

Chitiyo, G., Zagumny, L., Davis, K., Littrell, M., Akenson, A., Besnoy, K., ... & **Potter, K.** (2021). Teacher perceptions of using chess as a heuristic pedagogical method: Teacher perceptions of using chess. *International Journal of Curriculum and Instruction*, *13*(3), 2482-2496

Potter, D. W. & **Potter, K.** (November 2021). *Understanding the college path decision process of rural Tennessee students*. Presentation made at the 2021 National Forum to Advance Rural Education in Indianapolis, IN.

Sukowski, D. & Potter, D. (2021). Impact of COVID-19 on middle school student achievement in rural education system. *American Educational Research Journal*. (submitted).

Spears, A. & **Sukowski, D.** (2021). Enriching literacy development within the home: Strategies from parent voices. *The Reading Teacher*. (submitted).

Student Grants

Isbell, J. K., & **Ponomarenko, A**. (2022). Jeff Roth Cycling Foundation grant via TN NAME for Elinor Ross CDF Freedom School cycling program ($1,000, submitted, pending).

Isbell, J. K., Spears, A., & **Langford, E.** (2022). Believe in Reading grant to fund Elinor Ross CDF Freedom School STEM literacy initiative ($3,880; submitted, pending).

Potter, D. W. (PI). (2022). *Improving Student Success through Teamwork, Engagement, Activities, and Mentorship (i-S²TEAM).* TBR: Student Engagement, Retention and Success Grant. Co-PIs: Charria Campbell, Brittany Elmore, Carlos Galindo, Christy Killman, Ajit Korgaokar, David Mann, Michael Phillips, **Bobbi Severt**, Christina Turnbow, Bradley Westrick. (Pending: $50,000)

Hinkel, S., Ponomarenko, A., Willis, H. S., & Spears, A. (2022). Literacy Association of Tennessee Family Literacy Grant. ($600)

Willis, H. S., Spears, A., **Hinkel, S., & Ponomarenko, A**. (2022). Literacy Association of Tennessee Diversity Committee Book Grant. ($300)

Howard, M. (Principal Investigator), & **Colquitt, A.** (Senior Personnel). (July 2021-June 2024). *BRIDGES Early Intervention Resource Agency* [Grant]. Tennessee Department of Education. https://www.tntech.edu/education/bridges/index.php ($1,579,500 – Renewed 3-year Contract)

Martin, C. and **McCoy, M.** (Principal Investigators). (2022-2023). *Re-Charge (students with a GPA less than 2.0 with an enhanced focus on plans of study)* [Grant]. Tennessee Board of Regents Student Engagement, Retention, and Success (SERS) Grant. (*$44,357.60, applied April 28, 2022*)

Martin, C. and **McCoy, M.** (Principal Investigators). (2021-2022). *Men Experiencing, Networking, Trying Optional Resources - M.E.N.T.O.R. II.* [Grant]. Tennessee Board of Regents Student Engagement, Retention, and Success (SERS) Grant. (*$49,025.90, not funded*)

Railling, S. (Author and Project Manager). (2019-2022) *Student and Staff Wellness Fitness Center and Outdoor Challenge Course.* Project Diabetes. Tennessee Department of Health Project Diabetes; funded $250,000

Severt, B. A. (2022). Tennessee Board of Regents Student Engagement, Retention, and Success Grant 2022-2023. $50,000 pending.

Silber-Furman, D. (PI), Pérez, M., Simone, K. Co-PIs) & **Simone, K.** (2021). *Bridges to Equity: The rights of the LGBTQIA2S+ Community and Other At-Risk Populations, and the Quest for a Better Tomorrow.* Pending funding by ESP22APS: Mission Spain Public Diplomacy 2022 Annual Program Statement. (pending)

Student Presentations

International

Adade-Yeboah, V. (2022). Tolerance for Delay as an Evidence-based Procedure: A Review of Literature. co-presented with James Fox, Ph.D., BCBA & Krystal Kennedy, Ph.D., BCBA-D, LBA, Association for Behavior Analysis International, 29th May 2022

Anderson, S. L. Womack, P. A., Wisinger, K. L., Akenson, A. B., Arce-Triggatti, A. L., & Akenson, J. E. (October, 2021) *Waking up: Lessons learned from doctoral students' experiences with Wide Open Knowledge Environments (WOKE).* International Society for the Scholarship of Teaching Y Learning (ISSoTL) annual conference, "Sustainable Education through SoTL: Practices and Cultures." Perth, Western Australia (virtual).

Howle, T. B. (2022, May). *Teacher Perspectives on the Effectiveness of Theory of Mind Strategies in Children with Autism***.** Paper Presentation at the International Congress of Qualitative Inquiry.

Chitiyo, G., **Potter, K., Lastres, M**., & Zagumny, L. (2021, November). Perceived Benefits of Chess Among Students: Examining Differences by Age and Gender. *FIDE Chess in Education Commission (EDU), International Online Conference*

Lastres, M (2021, October). Gender microaggressions: Experiences from a doctoral student. *International Society for the Scholarship of Teaching and Learning 2021.* Perth, Australia. (Virtual Format)

Spears, A.., **Rector, L.,** & Isbell, J. (2022, May). Hiding behind tradition: How posthumanism challenged onto-epistemological presumptions about children's literacy learning. International Congress of Qualitative Inquiry, Urbana-Champaign, Illinois.

National

Anderson, S. L., Chitiyo, G., **Potter, K., & Smith, M.** (May, 2021). Insights about Equity and Social Justice Learned through Engaging in Academic Content: Emerging Evaluator Perspectives. Presentation made virtually at the Emergent Voices in Evaluation (EViE) Conference, hosted by the University of North Carolina at Greensboro.

Elizer, N. H. (2022). *Monsters Look Different in the Light: Generation Z & Fourth Wave Feminism–An Ethnodrama*. Dissertation presented at the National Association for Multicultural Education 2019 International Conference, Anaheim, CA, March 2022.

Spears, A., **Rector, L.,** & Isbell, J. (2021, November). *Graffiti sparks community activism: Children's democratic engagement through a posthuman lens.* American Educational Studies Association Annual Conference. Portland, Oregon.

Rector, L., Spears, A., & Isbell, J. (2021, November). *Cultural capital, classism, & lived experiences: Teachers' decision-making in literacy education.* National Association of Multicultural Education. California.

Potter, K., & Chitiyo, G. (2021). *An Evaluation of Impacts of COVID on Instructional Delivery and Effectiveness of Workshops.* [Virtual Conference presentation]. Broadening Impact through Innovation 2021 Virtual ATE Conference, hosted by the American Association of Community Colleges.

MacAllister, A. **Willis, H. S.**, & Knieling, A. (2022, April 18-21). *Tennessee together: State resources for substance misuse treatments* [Conference booth]. 2022 RX Drug Abuse & Heroin Summit. Atlanta, GA, United States.

Regional

Adade-Yeboah, V. (2021). Tolerance for Delay as an Evidence-based Procedure: A Review of Literature. co-presented with James Fox, Ph.D., BCBA & Krystal Kennedy, Ph.D., BCBA-D, LBA, Tennessee Association for Behavior Analysis, Virtual Conference, 28th October 2021

Colquitt, A. (2022, April 20-21). The Relationship of Adverse Childhood Experiences, Protective and Compensatory Experiences and Children's Flourishing [Poster session]. Tennessee Tech University Research and Creative Inquiry Day, Cookeville, TN, United States.

Barlow, A. (2021 July). Can kids learn when they are hungry? Presented at Tennessee Association of Family and Consumer Sciences State Meeting. Virtual.

Coutinho, A. & Hutson, S. (2022 June). Staying up-to-date: Health and wellness media resources for TAFCS professionals. Presented at Tennessee Association of Family and Consumer Sciences State Meeting. Murfreesboro, TN.

Hinkel, S. M., **Ponomarenko, A., & Willis, H. S.** (2022, June 2). Dispelling the myth: Inclusive Literacy Practices [Conference presentation]. 2022 Upper Cumberland Literacy Association Summer Literacy Conference, Cookeville, TN, United States.

Lastres, M. & Chitiyo, G. (2022, April). Effects of social, professional, and spiritual support on anger and irritability among physical abuse survivor. *Research and Creative Inquiry Day Tennessee Tech University*, Cookeville, Tennessee.

Railling, S., Galyon, K., & Roberts, L. (2022, February 28). *Mental Health and Staff Wellness in Schools* [Conference Session]. Tennessee Coordinated School Health Institute, Embassy Suites, Murfreesboro, Tennessee.

Railling, S., Galyon, K., & Roberts, L. (2021, November 17). *Mental Health and Staff*

Wellness in Schools [Pre-Conference Session]. Tennessee Rural Health Association Annual Conference, Music Road Hotel, Pigeon Forge, Tennessee.

Rector, L. (2021, December 7th). Journaling monsters. 50th Annual Literacy Association of Tennessee Conference. Murfreesboro, Tennessee.

Simone, K., & Chitiyo, G. (2022). *Risk Factors, Instrumental Motivation, and Students' Fulfillment of Academic Expectations: A Moderation Analysis.* [Poster presentation]. Tennessee Technological University Annual Research and Inquiry Day, Cookeville, TN, United States.