CAEP Standard 4: Program Impact

University of Central Missouri

Pilot Study

Spring 2021 - Spring 2022

Introduction

Impact on P-12 learning and development is a necessary component for determining effectiveness of a teacher preparation program. A pilot multiple case study was conducted from Spring 2021 - Spring 2022 to ascertain the impact of completers on P-12 learning and development. Phase 1 was completed in Spring 2021 and Phase 2 was completed Fall 2021 to Spring 2022. Completers of three different programs (n=6 completers) participated in this case study to determine teaching impact. The results of the case study are summarized below. Overall, completers made a positive impact and were effective in increasing P-12 student learning and development.

Literature Review

Teacher Preparation.

There is a need for teacher education programs to better prepare future teachers to teach in schools, and given the current climate and context climate, this is of paramount importance. The relationship between teacher education and teacher effectiveness has been well researched. Teacher effectiveness is often determined by the two prongs of content knowledge and pedagogy. According to Darling-Hammond (2006), the effectiveness of teacher education programs is often defined as having three critical components: (a) effective integration between coursework and clinical field work, (b) constructive field experiences that are closely supervised and link theory to practice, and (c) collaborative school partnerships that serve diverse populations by providing models of the best differentiated teaching practices. By integrating these critical components into their teacher preparation programs, universities will be able to teach "how to teach" as well as "what to teach teacher licensure programs, universities will be able to teach "how to teach" as well as "what to teach," creating a marrying of teacher effectiveness and teacher preparation program effectiveness.

Teacher Efficacy.

Self-efficacy is defined as people's beliefs regarding their capability to succeed and attain a given level of performance. Bandura (2002) identified four sources of efficacy. These are mastery experiences (experience success firhand), vicarious experiences (success modeled by others), social persuasion (where trusted sources give feedback and encouragement), and affective states (physiological effects). Preservice teacher preparers and school leaders can design intentional support by providing opportunities for the preservice and inservice teachers to experience self-efficacy. John Hattie (2018) found Collective Teacher Efficacy has the highest effect size for impacting student achievement. Collective Teacher Efficacy is a shared belief among teachers in a school that together their efforts will have a positive effect on student learning. Through the collaborative efforts with school district leaders, principals, and teachers collective teacher efficacy is fostered in completers of our program.

Student Learning

It is widely accepted that a teacher impacts student achievement. Yet, the argument can be made that the influence of teachers' university preparation is likely to diminish as teachers gain experience, it is important to study the student achievement and growth of teachers who are considered novice, in their first five years of teaching. While there are many variables in student achievement models, such as poverty, race, or absenteeism, we did not seek to control any variables in this pilot study.

Methodology

This study is a case study using a mixed methods approach. According to Creswell (1994), for the quantitative researcher, the only reality is the one created by the researcher. On the other hand, the qualitative researcher reports the realities and relies on the participants for interpretation. Stake states "we (case study researchers) try not to disturb the ordinary activity of the case, not to test, not to interview, if we can get the information we want by discrete observation or examination of records" (Stake, 1995, p. 12). According to Creswell (1994), case studies are a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals. This case study looked at six completers effectiveness in the classroom and is a multi-site, mixed methods collective case study. Collective case studies offer the advantage of allowing comparisons to be made across several cases and/or replication.

Sample: The school districts included in this case study were a sample of convenience. However, the two school districts employ a large number of new University of Central Missouri (UCM) teacher education graduates. The pilot case study took place in a large urban school district with over 17,000 students and 29 schools as well as a rural school district of approximately 1,000 students and 3 buildings.. This study focused on three school building sites: an elementary school, three middle schools, and a high school. Participants were in their first or second year of teaching.

Description of participants. In the first phase, participants were first and second year classroom teachers in the same district (n=4). There were two elementary teachers, one middle school, and one high school teacher. In the second phase, there were two middle school teachers (n=2) in different districts, one rural and one urban.

Data collection instruments. For the collective case study, semi-structured in-depth interviews were conducted during each phase of the pilot. Classroom observations using the MEES

(Appendix A) were also employed. Teacher-created units of study were submitted, including student pre and post data to see student growth on the identified unit standard. Artifacts were collected for the case study, including teacher candidate responses to reflection questions and perceptual data on to what degree the collective case study gathered the data it needed to determine teacher impact. Participants were provided with Participant Handbooks (Appendix B) at the beginning of the case study.

Table 1: Phase 1 Pilot Case Study Sample

Participant	Gender	Program Area	Other Information
A	Female	Elementary (2nd)	First Year Teacher
B	Female	Elementary (4th)	Second Year Teacher
C	Female	Middle School ELA (6th)	Second Year Teacher
D	Female	HS Engineering (12th)	Second Year Teacher

Table 2: Phase 2 Pilot Case Study Sample

Participant	Gender	Program Area	Other Information
A	Female	Middle Social Studies (6th)	First Year Teacher
B	Male	Middle Science (8th)	Second Year Teacher

Question 1: Are Our Completers Having a Positive Impact on Student Learning Growth?

Data: Pre and post measure for developing a unit and Teacher Interview Data

- Pre and post test results based on one teaching unit for one core subject area.
- Lesson plans that support needed modifications based on student needs and demographics.
- Short written reflection of the unit taught including ideas utilized to improve student learning and an explanation of how effective research-based strategies were utilized throughout the unit based on data.
- Student Survey

Table 3 provides an overview of the units taught by participants during the case study, including the pre and post assessment data. These were the units that were also observed using the MEES instrument.

Table 3: Student Growth as Measured by Assessment Data

	Completer	**Subject**	**Measure**	**Results**
Phase 1	A	Multiplying and Dividing Fractions	Students will demonstrate their understanding of fractions with math operations.	Not provided by participant A.
	B	Math/Fractions and Decimals	By the end of the unit, students will identify and produce equivalent fractions with 80% accuracy through the use of exit tickets and district summative assessments.	Assessment: Unit Test: Multiple Choice and Short Answer *Pretest:* 2/12 (17%)* Average Score: 46% *Posttest:* 10/17 (59%) Average Score: 76% *Teacher Reflection:* The formative assessments (exit tickets) did a good job of providing multiple opportunities through different strategies for students to demonstrate their understanding of the concept. However, for our summative assessment, there was not multiple opportunities to display the understanding and the question that was offered was broad and did not provide guidance on how to solve. Next time, A goal I have for myself in this unit would be to begin working more with small groups of two to three students.
	C	English/Argumentative Writing	By the end, students will draw conclusions, infer, analyze by citing	Assessment was on Illuminate *Pre Assessment:* 10/14 (71%)

			textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text	students received a score of 5 *Post Assessment:* 11/14 (79%) received a score of 6 13/14 (93%) increased their score *Teacher Reflection:* I noticed that many students struggled with the wording of some of the questions. Some questions had difficult words or confusing answer choices. These tests are made up by teachers so there are some errors sometimes. The short answer question shows more of what the students actually know because they have to support their answer with evidence and give their own thinking.
	D	Statics	Students will learn about centroids, vectors, and truss forces.	Data was not available from the pretest. *Teacher Reflection:* "One goal I have with this unit going forward is increasing our unit test scores. This was my first year teaching this class, so I was creating my own assessments and activities to aid in student learning. Students did well on the unit assessment (average score: 81%) But knowing what I know now there will be some parts of the unit, like trusses, that I will spend more time on so that students have a better understanding and are better prepared for the unit test."
Phase 2	E	Belief Systems - Egypt	Learning Objective: Students should will be able to share how the beliefs of the Egyptians impacted their societies	*Assessment:* Illuminate *Pre Assessment:* 64.3 % students received a score of under 70%

				17.9% of students received a score of 70-80% 17.9 % students received a score of 80-90% 0 students scored above 90% *Post Assessment:* 20.9 % students received a score of under 70% 24.8 % of students received a score of 70-80% 38.0% students received a score of 80-90% 16.3 students scored above 90% *Teacher Reflection:* "Students kind of got lost with all the things to learn…It would be good to create a good timeline for students to be able to understand the process…really make Egyptians come alive and be relatable.
	F	Rocks and Minerals	Learning Objective: I can model the cycling of rocks through the 3 types	Assessment: Google form over rock cycle *PreAssessment* Scores (0-4 scale): 0 - 6 students 1- 12 students 2- 6 students 3- 0 student 4- 0 students Average: 1 *Post Assessment:* (0-4 scale): 0 - 0 students 1- 1 student 2- 4 students 3- 14 students

				4- 5 students Average: 2.95 *Teacher Reflection:* I hope to continue to use backwards design. Sometimes when you get in the middle of the school year, it is hard to make sure you have your assessment done before the unit. But it does truly make the unit better.

In Phase 2, we collected student survey data on their perception of learning. The Student Perception Survey (Appendix C) is a 34 question instrument that measures elements of student experience that have been demonstrated to correlate most closely to a teacher's ability to positively impact student growth. Students are asked to indicate how frequently they experience each item with a response scale of always, most of the time, some of the time, and never. The instrument was developed by the Colorado Education Initiative and we received permission to use the valid and reliable instrument.

The data in the table below presents the data as a whole for Phase 2 students (n=106), not aggregated by teacher. The table depicts how the Student Survey was aligned to the MEES indicators and presents the Student Survey in themes. Individual student questions (34) can be found in the Appendix.

Table 4: Student Survey Results

Survey Element	MEES Indicator	Survey Results
Student Learning: How teachers use content and pedagogical knowledge to help students learn, understand, and improve	**Standard 1:** Content knowledge aligned with appropriate instruction. The teacher candidate understands the central concepts, structures, and tools of inquiry of the discipline(s) and creates learning experiences that make these aspects of subject matter meaningful and engaging for students. **Standard 4:** Critical Thinking. The teacher candidate uses a variety of instructional strategies and resources to encourage students' critical thinking, problem solving, and performance skills.	All the time: 40.4% Most of the time: 27.9% Some of the time: 24.5% Never: 7.2%

Student-Centered Environment: How teachers create an environment that responds to individual students' backgrounds, strengths, and interests	**Standard 2**: Student Learning, Growth, and Development. The teacher candidate understands how students learn, develop, and differ in their approaches to learning. The teacher candidate provides learning opportunities that are adapted to diverse learners and support the intellectual, social, and personal development of all students.	All the time: 61.1% Most of the time: 21.8% Some of the time: 12.9% Never: 4.0%
Classroom Community: How teachers cultivate a classroom learning community where student differences are valued	**Standard 5: Positive Classroom Environment.** The teacher candidate uses an understanding of individual/group motivation and behavior to create a learning environment that encourages active engagement in learning, positive social interaction, and self-motivation.	All the time: 40.2% Most of the time: 20.1% Some of the time: 23.9% Never: 14.9%
Classroom Management: How teachers foster a respectful and predictable learning environment.	**Standard 5: Positive Classroom Environment.** The teacher candidate uses an understanding of individual/group motivation and behavior to create a learning environment that encourages active engagement in learning, positive social interaction, and self-motivation.	All the time: 28.5% Most of the time: 31.6% Some of the time: 30.0% Never: 9.9%

To help us answer Question 1 of Standard 4, we interviewed the participants on their experiences at UCM and how they translated those experiences into their current classroom teaching. These responses are captured in Table 5 below.

Table 5: Completer Interview Data

Question	Response Results Summarized Quotes	Identified Actions
Think about your education classes you have taken, which have been the most beneficial in your teaching career and why?	"I took a couple of classes for ELA that were good, the assessment class about looking over data because last school year I had to look over a lot of data in creating some units."	Current plans of study for Elementary, Middle, and High School are beneficial and have provided strategies that were applied in the classroom. Participants want to see tangible connection from university

	"Classroom management course...because I set expectations early." "I would say a lot of the math classes have been helpful because of strategies taught in the blocks... I feel very confident...classroom management was helpful.". "Exceptional Child, The Early Learner ELA...and all the senior block classes" "My methods of teaching Social Studies class…many of the strategies taught in that class are being used in my school district." "I would say the middle school block classes were most helpful. The first class in the series and the Engaging the Middle Level Learner probably helped me the most."	learning to their own classroom.
Of the education classes you have taken, which have been the least beneficial at the time? *What did you not learn in your coursework that would have been beneficial as a teacher?*	I honestly (think).. All of them had some benefit. I wish there would have been more on interacting with parents or how to conduct parent teacher conferences. *One thing I think we are not prepared for is dealing with parents. We talked about it but I think we need more roleplay.* *Because prospective elementary teachers are in the classroom so much, we need more practice on dealing with parents in our blocks in the classrooms.*	Efficacy and understanding of effectively working with parents is an identified gap. Working with struggling students and classroom management could be more strongly embedded in current classes.

	It might be more helpful to talk more about gathering data on struggling students and interventions for them. *Science and social studies* *Acquisition of Language and Literacy was not helpful….I didn't learn much in that one, but that is the only one that stands out. Maybe more classroom management in every class... more of that earlier than senior block.* *I don't think I have used much from the ELL class we took. I think more information on IEP and 504 plans would have been more helpful.* *I think the biggest thing that I did not get was more training on behavior management. The second thing we could use more of is training on communication with parents. The parents here have been very supportive, but I wish we had been asked to prepare written communications to parents or had a chance to participate in simulations of parent communication.*	
Tell us about your success & highlights so far during your teaching career.	I would say that watching the growth over the year….they have growth on assessments and have seen big improvement in reading scores...knowing the "why" of student behavior issues has been good…..trying to figure kids out. Last year was a real challenge…. At the end of the year, I was proud of the relationships we'd made.	Even though the 20-21 school year was full of upheaval and changing dynamics, the completers felt prepared to handle the challenge. The 21-22 school year brought back the ability to build strong relationships with students and mentors. The relationships built then translated into confidence and efficacy.

	I got my Masters last year! Just seeing, even through the chaos of Covid, when some kid got a concept...Seeing kids rise above and move forward has been really cool My principal told me that she had never seen a first year teacher with this good classroom management skills. The relationship building with students had probably been the best thing. Seeing students develop self-confidence has been one of the best things about this year. The social studies department works closely with the language arts teachers in working on writing skills and critical thinking… I have had the opportunity to work with a mentor who visits my classroom on a regular basis. I think the biggest highlight is the opportunities I have had to interact with students in extracurricular activities such as Scholar Bowl and school dances. It has helped me build relationships with students.	
Tell us frustrations you've dealt with during your teaching.	Behaviors are a problem. I have several kids who have no contact orders (with each other). I have five kids with behavior plans in my room. We cannot use buddy rooms and the recovery room is not always available. That is difficult. Parents who don't communicate or over-communicate are a problem. The masks have decreased class	Behavior with students and parents is overwhelmingly frustrating. Additionally, district protocols and materials to teach makes an impact on how successful a teacher feels.

	participation in some ways, so I have used more turn and talk. A lot of them are things out of my control...last year class size was an issue, I had 31 in my last class of the day…..that was the hardest part of the first year. This year we are doing a week on and a week off. I do virtual for one week, and then in person the next week. During the first semester, kids were failing the virtual part of the class. I have made adjustments this semester that have helped. The most frustrating things have to do with Covid protocols. We have been restricted from rearranged seating in our classroom until recently, which limits some class activities that I want to do. I think one frustration has been that the materials we used in my Science methods class are not available to me here and in many other schools. There are things we learned to do that we simply cannot do without the materials we need.	
So you think about your classes that you took during the program impacted your ability to manage classroom experiences.	"X' is a goddess. All the speakers she had come in, all the resources she gave us, everything she talked about was useful. I wish we had had that class earlier. I have learned a lot of classroom management strategies in undergrad and grad courses. I am interested in "morning meetings" with kids as an	Understanding the principles of classroom management is critical to success in the classroom. Completers unanimously agreed classroom management and behavior management was critical to their feelings of success in the classroom.

	approach to classroom management. I really enjoyed learning about how the brain operates and how trauma impacts that. I think that has helped me. The main thing emphasized was routine….the kids thrive off routine. There is something kids can rely on. Making procedures clear really helps making sure that I use the full instructional time. There is really no free time. I would say that my class on classroom management helped me know the language to use with students….role playing situations was helpful. Student teaching really helped with that, also. The class on classroom management with Dr. XX was very helpful. I think in terms of classroom management, I was very well prepared. I knew how to set up procedures for the classroom.	
How do you measure student achievement summative and formative?	We have four units and we do a summative assessment at the end of every unit... We also have formative assessments that look a lot like the summatives...We also have students do book talks for assessment as well as traditional tests. For formative purposes, I do a thumbs up or down, fist of five, etc. to make sure kids are comfortable with where they are learning. I do a lot of assignments that are formative...projects for summative	Formative is teacher driven and summative is district driven.

	assessment. During the first semester, we used more traditional tests for the basic information. Formatively, I use thumbs up and down, exit tickets, and also do it on the computer so I have data. The district has summative assessments that we give in all areas…. pre-assessments in math so we can show growth. Formatively, I use exit tickets. I do a lot of walking around and seeing what they are doing. I use a lot of short informal formative strategies. We have district wide assessments for summative purposes. In social studies we formatively assess by having students write RACE responses to prompts. Summative assessment is done with mini-assessments which are not always pencil-paper "tests." For formative assessment, I look at the % of students who are meeting goals. For summative assessment, I use a spreadsheet with students scores to track student progress. This works very well with standards based grading.	
Is there anything we haven't covered that you would like to share about your preparation in UCM's teacher education program?	I think it was a really great program and I think it really prepared me. I tell a lot of people that they should go to UCM. A lot of it is hands-on and I had a lot of observations in all my classes. I really enjoyed my time there. I transferred from another institution to UCM. One thing that stood out was	The UCM preparation program has been effective for these completers. The clinical model allowed significant time in the classroom prior to the first year of teaching which was paramount to feelings of success. Completers did feel there are small gaps in the student teaching process which could strengthen the program if addressed.

	that teachers and advisors cared about me as an individual...the students seem to be more than just a number. I think the fact that the professors are professional educators makes a difference. I think overall the best thing is the amount of experience we get in the schools is the most helpful thing. You don't really know what a classroom is like until you are there...senior block...I knew the routines and kids and I had already established a relationship with my cooperating teacher. I think professor wise, I never had a bad professor. Every professor cared about students and cared about our growth as an educator. I can't tell you how many of my professors are still in contact over social media. I would suggest that you not let people student teach in the district they attended. You learn more if you student teach in a place where things are done differently. I would like to see secondary education students get more time in the classroom in their content area. I think UCM did a good job. I think one thing that could be improved would be consistency from cooperating teachers during student teaching. I had an excellent cooperating teacher and learned a lot from her. Some of my fellow students were not so lucky and didn't get the same opportunities that I did.	

Across the interview questions, it is clear that participants felt that the plan of study in their individual programs prepared them for classroom instruction. Classroom management emerged as a topic covered in each program that was incredibly important to the success of their classroom. Working with parents and students with diverse needs were identified as gaps in their preparation program. More intensive course and field opportunities around working with parents and diverse learners is suggested to be identified in current programs. Lastly, the clinical program at UCM was considered to have a significant impact on their feelings of readiness to have their own classroom.

Question 2: ***To what extent do completers demonstrate teaching effectiveness that UCM preparation was designed to achieve?***

To answer this question, the project observer utilized the valid and reliable MEES instrument (Appendix A). Given the current climate and context, classroom teaching occurred within the school setting, Phase 1 observations needed to be virtual as the pandemic had limited external guests in the building. Zoom was used to conduct the virtual observations. Teachers connected a classroom device, such as their laptop to zoom so the observer could see the lesson and what was going on in the classroom. While this inherently presents limitations to the extent of the observations, it was the best option for conducting the interviews. UCM staff took steps to prevent the environmental conditions from impacting the interpretation of the teacher's performance. To help limit error and increase reliability with the virtual MEES observation, the observer is a trained MEES observer who has a rich understanding of the performance rubric and has used it in virtual observations in other settings. For Phase 2, UCM staff completed in person observations.

In order to best adapt to the virtual observations, selected indicators of the MEES were used that could be observed virtually. Phase 2 kept the same indicators with the exception of adding Standard 3.1. This was added as it could be more objectively observed in person. The following indicators were used:

Standard 1.2: The teacher candidate is able to articulate the necessary knowledge and effectively demonstrates in performance: *Conveys accurate content knowledge, relevant examples, and content- specific resources to engage students and support learning.*

Standard 3.1: The teacher candidate recognizes the importance of long-range planning and curriculum development. *The teacher candidate implements curriculum based upon student, district and state standards. Implements learning activities aligned to chosen standards and embeds formative assessment.*

Standard 4.1: Critical Thinking. The teacher candidate uses a variety of instructional strategies and resources to encourage students' critical thinking, problem solving, and performance skills: *Implements strategies in which most students convey their ideas or solutions through product or process*.

Standard 4.2: Critical Thinking. The teacher candidate uses a variety of instructional strategies and resources to encourage students' critical thinking, problem solving, and performance skills: *Facilitates opportunities in which most students analyze and discuss problems and possible solutions*.

Standard 5.1: Positive Classroom Environment. The teacher candidate uses an understanding of individual/group motivation and behavior to create a learning environment that encourages active engagement in learning, positive social interaction, and self -motivation: *Implements developmentally appropriate expectations to maintain a respectful and safe learning environment.*

Standard 6.1: Effective Communication. The teacher candidate models effective verbal, nonverbal, and media communication techniques with students, colleagues and families to foster active inquiry, collaboration, and supportive interaction in the classroom: *Conveys clear instructions through verbal AND non- verbal cues or other communication strategies; follows up with students not understanding instructions.*

Standard 7.1: Student Assessment and Data Analysis. The teacher candidate understands and uses formative and summative assessment strategies to assess the learner's progress and uses both classroom and standardized assessment data to plan ongoing instruction: *Uses formative and/or summative assessment data to effectively monitor the progress of individual students and the class as a whole*

Table 6 provides an overview of the observational scores using the MEES across both phases.

Table 6: Indicators of Teaching Effectiveness - MEES Observation

MEES Indicator Summaries of Observation	**A**	**B**	**C**	**D**	**E**	**F**
1.2	3	3	3	2	3	3

3.1					3	3
4.1	2	3	2	3	3	2
4.2	3	3	3	3	3	3
5.1	3	3	3	2	3	3
6.1	3	3	3	3	3	3
7.1	3	3	3	3	3	3

A score of three is the expected level of performance by the end of the student teaching semester. The completers averaged three on most of the MEES indicators. This speaks to the completers effectively aligning content instruction with instruction, applying critical thinking, implements a positive classroom environment, models effective communication, and assesses student growth.

Teachers A, C, and F scored a two for 4.1: Uses strategies for some students to share ideas and generate possible solutions.

Teacher D scored a two for 1.2: Conveys accurate content knowledge, relevant examples, and content- specific resources to engage students and support learning.

Teacher D also scored a two for 5.1: Implements developmentally appropriate expectations to maintain a respectful and safe learning environment.

In relation to Indicator 4.1, the two teachers who scored 2's were due to a lack of critical thinking questioning and challenging students in higher level thinking. Indicator 1.2 pertains to somewhat low student engagement. Indicator 5.1 relates to lower class management techniques which is represented in the Interview findings as well.

Discussion

This multiple case study reveals UCM graduates are ready for classroom teaching, as evidenced by student achievement, observation, and perceptual/anecdotal reflection. For each classroom that submitted pre and post assessment scores, there was growth in student achievement. Teachers also reported a sense of efficacy in being ready to teach. This is important as each of these teachers were confronted with the COVID-19 challenge of teaching virtually and in person during Phase 1. While their school year was far from normal, they each stated their preparation

gave them the foundation they needed. Phase 2 brought about different challenges. Recruitment of completers was more challenging than during Phase 1, and many responses of possible participants stated this school year was indefinitely more challenging than anticipated and this is supported by the national data on teacher vacancies and attrition.

Suggestions for Future

The Case Study Review Team examined the materials submitted as part of the Case Study and recommended the following. In an effort to improve data collection and analysis, the team had the following recommendations:

- Identify more participants to increase the overall data pool.
    - Ensure Special Education, Specials, and Early Childhood are included in the sample.
- Sophisticated statistical analysis of data to determine significance of participant Impact.
    - This would be addressed by asking participants to provide parent surveys, student surveys, and student pre/post assessment scores for the whole class.
- Have teachers build a unit based on Missouri Teacher Evaluation System
- Collect student feedback by teacher on teaching effectiveness and student growth in a more systematic manner.
- Provide an example to participants.

Compelters were anonymously surveyed at the end of the pilot as to the extent that teaching effectiveness and student growth was captured. A 50% response rate was achieved.. Three completers stated, “I thought the CAEP case study was well thought out and gathered a lot of information to inform you about how prepared I was as an educator coming from UCM.” One completer mentioned surveying students to gather their experiences and another stated, “Our unit plans are created by our district so they often are not created by us, we organize based off of those structures and go from there.” District created materials was not something that was accounted for in the pilot but will be addressed in future iterations.

References

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied psychology*, *51*(2), 269-290.

Creswell, J. W. (1994). Research design: Qualitative and quantitative design. Thousand Oaks, CA: Sage Publications, Inc.

Darling-Hammond, L., & Berry, B. (2006). Highly qualified teachers for all. *Educational leadership*, *64*(3), 14.

Donohoo, J., Hattie, J., & Eells, R. (2018). The power of collective efficacy. *Educational Leadership*, *75*(6), 40-44.

Stake, R. E. (1995). *The art of case study research*. sage.

Appendix A: MEES Instrument

Appendix B: Teacher Handbook

Appendix C: Student Survey