

Does Practice Make Perfect? Evaluating the Impact of Deliberate Practice and Coaching in
Teacher Training

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&

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Cato College of Education
University of North Carolina at Charlotte
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Abstract

Faced with declining interest in becoming a teacher, increasing competition from cheaper and faster alternative licensure programs, and growing criticism that teacher training is too theoretical, university-based teacher training programs must evolve to remain viable. Following receipt of a grant to inform and guide its curriculum reform, the Department of Middle, Secondary, and K-12 Education, in the Cato College of Education, has redesigned its graduate initial licensure programs to make them more convenient, cost-effective, and time-sensitive, while improving quality by becoming more practice-based, and attentive to high-leverage (focus) practices and opportunities for candidate rehearsal and coaching. Scheduled to be launched in summer (2019), the Department seeks to investigate the impact of this program re-design. Using a mixed methodology, the research team plans to use interview data, scores from an externally-scored performance-based assessment (edTPA), the Classroom Assessment Scoring System (CLASS), and enrollment numbers to investigate the impact of this re-design on teacher candidate preparation, performance, and enrollment. The project has the potential to a) enhance teacher candidate preparation, b) improve test scores and graduation rates, c) increase program enrollment, and d) guide and inform the re-design of other initial licensure programs in the Department and across the Cato College of Education.

Budget Request for SOTL Grant

Year 2019-20

Joint Proposal? X Yes No

Title of Project Does Practice Make Perfect?: Evaluating the Impact of Deliberate Practice and Coaching in Teacher Training

Duration of Project One year (spring 2019 – summer 2020)

Primary Investigator(s) Dr. Hilary Dack & Dr. Scott Kissau

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UNC Charlotte SOTL Grants Previously Received (please names of project, PIs, and dates) While Dr. Kissau has been the recipient of SoTL grants in the past (see below), Dr. Dack (Lead P.I) has yet to receive a SoTL grant. Co-PIs: Davin, K, & Kissau, S. (2018-19). Advanced Oral Proficiency: An Interdisciplinary Approach to Preparing Spanish Teachers. \$8,500

Allocate operating budget to Department of Middle, Secondary, & K-12 Education

		Year One
Account #	Award	January 2019 to June 2019
Faculty Stipend	Transferred directly from Academic Affairs to Grantee on May 15	
911250	Graduate Student Salaries	\$1,500
911300	Special Pay (Faculty on UNCC payroll other than Grantee)	
915000	Student Temporary Wages	
915900	Non-student Temporary Wages	
920000	Honorarium (Individual(s) not with UNCC)	
921150	Participant Stipends	

925000	Travel – Domestic	
926000	Travel – Foreign	
928000	Communication and/or Printing	
930000	Supplies	
942000	Computing Equipment	
944000	Educational Equipment	
951000	Other Current Services	
YEAR 1 TOTAL		\$1,500

		Year Two
Account #	Award	July 2019 to June 2020
Faculty Stipend	Transferred directly from Academic Affairs to Grantee on May 15	\$3,850
911250	Graduate Student Salaries	\$3,500
911300	Special Pay (Faculty on UNCC payroll other than Grantee)	
915000	Student Temporary Wages	
915900	Non-student Temporary Wages	
920000	Honorarium (Individual(s) not with UNCC)	
921150	Participant Stipends	
925000	Travel – Domestic	
926000	Travel – Foreign	
928000	Communication and/or Printing	

930000	Supplies	
942000	Computing Equipment	
944000	Educational Equipment	
951000	Other Current Services	
	YEAR 2 TOTAL	\$7,350
YEAR 1 and YEAR 2 GRAND TOTAL		\$8,850

Attachments:

1. Attach/provide a narrative that explains how the funds requested will be used.
2. Has funding for the project been requested from other sources? Yes No. If yes, list sources.

The proposed project follows receipt of a Belk Foundation Grant (approximately \$233,000) to conduct a Teacher Education Institute on campus during the summer of 2017 to inform the re-design of teacher preparation programs in the Cato College of Education at UNC Charlotte. A large Teacher Quality Partnership (TQP) grant in excess of \$3 million was also recently submitted (summer 2018) to fund a cohort of new teacher candidates in the completion of the re-designed programs in the Department of Middle, Secondary, and K-12 Education and to investigate the impact of the curricular innovation on their performance. Although we very recently learned that the TQP grant proposal was not funded, we will continue to explore other external grant opportunities. Should any future related grant submissions be successful, the scope of this SoTL project will extend to include other initial licensure programs in other departments across the College that are also embarking upon initial licensure program re-designs.

Budget Narrative

To complete the proposed research study, a total of \$8,850 in financial support is being requested. Since much of the project evaluation will be completed in Year 2 of the proposed project, Budget Option 2 has been selected. The project aligns with the intent of the SoTL grants program by requesting support for research that evaluates a new curricular innovation.

Faculty Stipend (\$3,850)

A stipend of \$3,850 is requested in May of Fiscal Year 2 for Dr. Hilary Dack. Dr. Kissau, as a 12-month employee, is not eligible for a faculty stipend. While both Drs. Dack and Kissau will be actively involved throughout the project (i.e., preparation and submission of IRB proposal in Spring 2019 and over-seeing GRA work), their time and efforts will be primarily devoted to the analysis of the quantitative and qualitative data and the preparation of conference presentations and manuscripts in Summer 2019. So that Dr. Dack's focus remains on the project, she will only teach one course in Summer II of 2019.

Graduate Student Salary (\$5,000)

A graduate research assistant (GRA) will work closely with the research team in both Years 1 and 2 to observe a total of 12 teacher candidates (6 control group and 6 experimental group), interview 36 teacher candidates (18 control group and 18 experimental group), transcribe interviews, and assist the researchers in conducting a review of literature and preparing for future conference proposal and manuscript submissions. A more detailed description of GRA responsibilities is provided below.

Fiscal Year 1 (\$1,500). At the rate of \$12/hour, the researchers request \$1,500 for approximately 125 hours of GRA support (8 hours per week of support) in Fiscal Year 1 (Spring 2019). During this time (spring 2019), the GRA will complete CLASS observation protocol

training, and upon completion, will observe 3 candidates (twice each) from the original programs (control group) deliver instruction during completion of their student teaching internship. The GRA will also interview 6 candidates from the control group and transcribe the interview data, and begin conducting a review of relevant literature in preparation for future conference proposal and manuscript submissions.

Fiscal Year 2 (\$3,500). An additional \$3,500 in support is requested to allow the same GRA to continue providing critical support for the project in Year 2. From this total, \$500 would be allocated for 5 weeks of Summer II work (10 hours per week). During this time, the GRA would interview 6 candidates in the original programs and 6 from the re-designed programs (launch Summer II 2019) and transcribe the interview data. In Fall 2019, \$1,500 (10 hours of support per week) would be earmarked to compensate the GRA for 1) observing 3 candidates (twice each) from the original programs deliver instruction during completion of the student teaching internship (control group), 2) interviewing 6 candidates in the original programs and 6 from the re-designed programs, 3) transcribing the interview data, and 4) assisting the research team in the compilation of data and preparation of conference proposals and manuscript submissions. In Spring 2020, the balance of GRA funds (\$1,500) would be used to compensate him/her for an additional 10 hours of support per week. During this time, he/she would be expected to 1) interview 6 candidates from the re-designed programs, 2) transcribe the interview data, 3) observe 6 candidates (twice each) from the re-designed programs deliver instruction during completion of the student teaching internship (experimental group), and 4) tabulate all edTPA, CLASS, and exit survey data for analysis.



UNC CHARLOTTE

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October 18, 2018

Dear SoTL Committee Members,

I am pleased to offer my support for the SoTL grant proposal, “Does Practice Make Perfect? Evaluating the Impact of Deliberate Practice and Coaching in Teacher Training”, submitted by Dr. Hilary Dack and Dr. Scott Kissau. Following a 2+ year period of data collection, faculty training, and curriculum development, the Department of Middle, Secondary, and K-12 Education is set to launch a new model for preparing future teachers.

This model specifically meets new state mandates, addresses feedback from program completers and school partners, and is intended to compete with alternative teacher licensure programs by being more cost-effective, time-sensitive, and convenient, while still maintaining high quality. We strongly believe in the quality of this work, but need evidence to support our beliefs.

A critical next step is to investigate the impact of this curricular innovation. The project has the potential to enhance teacher candidate preparation, improve licensure test scores and pass rates and, inform the re-design of other initial licensure programs across the state.

The project involves a strong research team. Dr. Dack possesses an impressive record of peer-reviewed publications that include systematic methods of inquiry, and she has published her work in top tier journals. Dr. Kissau is a full professor and department chair, with a long and successful history of using data to inform programmatic decision-making. I have no doubt the study will result in significant findings.

Sincerely,

A handwritten signature in cursive script that reads "Ellen McIntyre".

Ellen McIntyre
Dean, Cato College of Education
UNC Charlotte

Project Narrative

A. Specific Aims

Traditional teacher training programs, like those in the Cato College of Education (COED) at the University of North Carolina at Charlotte (UNCC), are in a period of crisis. Faced with declining interest in becoming a teacher, growing competition from cheaper and faster alternative licensure programs, and increased pressure to prove that their graduates are ready to teach, colleges of education across the country are suffering from dwindling enrollment, and must evolve to remain viable. Between 2010 and 2014, enrollment in traditional university-based teacher preparation programs declined by 31% in the United States (American Association of State Colleges and Universities, 2017). Between 2010 and 2015 in North Carolina, enrollment in teacher preparation programs in the UNC System declined by 30 percent (Granados, 2017). Initial licensure programs in the COED at UNCC have experienced even more dramatic declines. In the Department of Middle, Secondary, and K-12 Education (MDSK), for example, enrollment in its graduate certificate programs for middle and secondary school teachers dropped 50% and 80%, respectively, from fall 2014 to fall 2018.

In response, Drs. Dack and Kissau were part of a successful grant writing team that received a Belk Foundation Grant in 2016, valued at approximately \$233,000, intended to guide and inform the re-design of MDSK's initial licensure programs. The grant provided funds to allow faculty and administrators to 1) participate in "learning tours" of innovative teacher preparation programs, 2) attend related conferences, 3) organize "text talks" to read and discuss influential articles on critical teaching skills, and 4) conduct the inaugural Teacher Education Institute (TEI) in 2017. The TEI involved professional development for teacher education faculty, university supervisors, and mentoring K-12 teachers on high-leverage teaching practices and coaching

strategies to develop these practices among teacher candidates. Complementing the above-mentioned initiatives, the COED sought, collected, and analyzed data and feedback to inform the re-design from a variety of sources including: 1) an all-day event in which teacher candidates showcased what they learned in clinical experiences and coursework (the College of Education Charrette, Nov. 15, 2016); 2) a day-long summit with school partners to review program data and provide recommendations (Data Day, March 21, 2018); 3) program completer exit surveys and focus group interviews of candidates, faculty, supervisors, and mentor teachers (May 5, 2018); 4) candidate performance on a performance-based assessment (edTPA); and 5) EVAAS (Education Value-Added Assessment System) data available on the UNC System Data Dashboard that follows graduates into their classrooms and monitors their impact on student learning. After two years of professional development and data collection, in Summer and Fall 2018, a task force of MDSK faculty completed a major re-design of its graduate initial licensure programs (Middle and Secondary Education [math, science, social studies, English language arts] and K-12 Foreign Language and Teaching English as a Second Language) to make them more convenient (online), cost-effective (fewer required credit hours and distance education pricing), time-sensitive (less than 1 year to complete), practice-based, and attentive to high-leverage (focus) practices and opportunities for candidate rehearsal and coaching. Scheduled to launch in Summer II 2019, the research team aspires to investigate the impact of this curricular innovation. More specifically, it seeks answers to the following research questions:

1. What impact does the program re-design have on teacher candidate preparation?
2. What impact does the program re-design have on teacher candidate performance?
3. What impact does the program re-design have on enrollment?

The project has the potential to a) enhance the preparation of the 120+ teacher candidates each semester in MDSK graduate certificate programs, b) improve test scores and graduation rates of these candidates, c) increase program enrollment, and d) guide and inform the re-design of other initial licensure programs in the Department and across the Cato College of Education, thus potentially impacting more than 500 teacher candidates each semester.

B. Literature Review

At a time of declining enrollment in traditional teacher preparation programs across the nation (AASCU, 2017), many states are experiencing a shortage of qualified teachers (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). This shortage is spurring numerous alternative licensure programs that often lower the standards required to teach, can be completed more quickly than traditional programs, and at a lower cost (AASCU, 2017). While only six percent of the nearly half million candidates nationwide in teacher preparation programs in 2012-2013 were enrolled in alternative, non-university-based programs (AASCU, 2017), and approximately 15% in North Carolina in 2013-2014 (Granados, 2017), these numbers are expected to rise in coming years. The recently approved Senate Bill 599 allows private, for-profit programs to assume some of the teacher training responsibility in North Carolina. In Texas, where similar legislation has been in place for years, alternative programs comprise 50 percent of new teacher certificates (Granados, 2017).

Accompanying this increasing competition is growing criticism of traditional teacher training programs. In a time of instructional reform and increased teacher accountability, teacher preparation programs face increasing pressure to prepare candidates who provide data-based evidence that they are ready to teach (Ball & Forzani, 2010; Cochrane-Smith, Piazza, & Power, 2013). Teacher education has been criticized for being too theoretical and not practice-based

(Grossman, Hammerness, & McDonald 2009). Candidates leaving such programs often have knowledge related to teaching and learning, but little understanding of how to apply this knowledge and little experience practicing the skills they need to be successful (Ball & Forzani, 2010).

The implications of this changing landscape in teacher education are clear. Traditional teacher education programs must evolve to remain viable. In addition to becoming more streamlined and affordable, recent research is suggesting teacher training programs shift away from familiarizing candidates with a wide variety of instructional practices to instead focus on mastery of a small number of skills that all new teachers need to be effective, regardless of grade level or content area expertise. Supporting this claim, the New Teacher Project (2015) investigated best practices in teacher development. The researchers concluded, “We would not expect new teachers to have mastered all aspects of the role on day one, but rather to demonstrate mastery of a core set of skills” (p.39). In a seminal article by Grossman et al., (2009), the authors argue that teacher training programs should focus on modeling and providing opportunities to practice a core set of skills in clinical settings.

Recent research has made headway in identifying high-leverage teaching practices that new teachers should master (Franke, Grossman, Hatch, Richert, & Schulz, 2006; Sleep, Boerst, & Ball, 2007). According to this research, high-leverage practices occur with high frequency in classrooms, span content areas and grade levels, are skills that novices can master, and are research-based practices that can lead to improved student learning (Grossman et al., 2009). Examples include teaching students classroom routines (Lampert, 2001), leading a class discussion (Leinhardt, 2004), fostering critical thinking about texts (Fisher & Frey, 2015),

managing group work (Frey, Fisher, & Allen, 2009), eliciting student thinking (Ball, 1993), and designing lessons and formal assessments of student learning (TeachingWorks, 2017).

Building upon this knowledge, researchers have emphasized that it is not enough for teacher trainees to simply learn about these practices. They need multiple opportunities for “deliberate practice” where they role-play and rehearse skills and competencies in their coursework, and then apply the skills in K-12 classrooms (Deans for Impact, 2016; Ericsson, 2002). The body of research also makes it clear that a shift in focus towards deliberate practice of skills must be accompanied by coaching (Grossman et al., 2009; Ericsson, 2002) that involves candidates receiving immediate feedback from trained coaches. Ericsson and Pool (2017) contend that without expert feedback, candidates may practice and reinforce poor technique. While coaching is a central component of the culminating student teaching internship in many teacher training programs, research is suggesting that it can also serve a critical role in university coursework (Deans for Impact, 2016; Grossman et al., 2009).

C. Methods

A mixed methods approach involving both quantitative (classroom observation protocols, surveys, test scores, and enrollment data) and qualitative (interviews) data will be implemented over the course of one year (Summer 2019 - Summer 2010) to measure the project’s impact. This time frame is ideal in that it will allow for a quasi-experimental design involving both control and experimental groups. Candidates admitted to the original licensure programs prior to the launch of the redesigned programs in Summer II (2019) will be allowed to complete the original program as it is phased out (control group), at the same time as candidates begin the re-designed programs (experimental group) in Summer II (2019).

D. Evaluation

To investigate the extent the re-designed programs impact teacher candidate preparation (research question #1), data will be gathered from candidates (control and experimental groups) at multiple points and in multiple ways. In each of three terms/semesters, 6 candidates from the control group (Spring 2019, Summer 2019, Fall 2020) and 6 candidates from the experimental group (Summer II 2019, Fall 2019, Spring 2020) will be randomly selected to participate in a semi-structured interview, for a total of 36 interviews. During the interviews, the candidates will describe their experience in the program, what they found beneficial or not beneficial, how prepared they feel to teach, and how their program could be improved. Comparisons in regard to how the original and re-designed programs prepare candidates will also be drawn from exit surveys that all graduates complete. The survey collects quantitative and qualitative data on candidates' program experience and their perceived growth as aspiring teachers. Qualitative data generated from the interviews and surveys will be compared, following the principles of Grounded Theory (Glaser, 1992), looking for emerging themes that shed light on differences in how the original and re-designed programs prepare teacher candidates. The quantitative survey data will be analyzed to compare mean scores on survey items for graduates from both the original and re-designed programs.

Data will also be gathered at multiple points to investigate the extent the re-designed programs influence candidate performance (research question #2). Six candidates from both the control (original programs) and experimental (re-designed programs) groups will be observed teaching a lesson on two separate occasions by a trained scorer using the CLASS observation protocol (24 total observations). The CLASS is an observation protocol implemented in 23 states to measure quality teaching (TeachStone, n.d.). All teacher candidates across control and

experimental cohorts will also complete edTPA during the culminating internship semester. edTPA is a validated and reliable performance-based assessment that measures a candidate's ability to plan, instruct, and assess student learning (SCALE, 2014). Components of this standardized, performance-based assessment are uploaded to a data management system, and scored externally by trained Pearson evaluators to enhance reliability. Control and experimental groups' scores on both the CLASS (12 candidates: 6 control and 6 experimental) and edTPA (all member of both cohorts: control and experimental) will be compared by the researchers. Independent group (i.e., original and re-designed programs) comparisons will be completed for the total scores on each instrument as well as on the sub-scores that make up the total.

To investigate the 3rd research question (impact on enrollment), enrollment in the original programs prior to implementation of the re-design programs (Summer II 2017 – Summer I 2019) will be compared with enrollment in the re-designed programs (Summer II 2019 – Summer I 2020) looking for trends. Enrollment data are obtained each semester from Institutional Research and housed in a departmental shared folder (s-drive).

E. Knowledge Dissemination

The project's results will be shared locally with faculty and administration in the Cato College of Education to inform other programs in their re-design efforts and the entire university campus at a SoTL Showcase. At the state level, the investigators will present the study's results at the annual conference of the North Carolina Association of Colleges and Teacher Educators (NC-ACTE) and at the national conference of the American Association of Colleges and Teacher Educators (AACTE). In addition, they will prepare and submit a manuscript to the *Journal of Teacher Education*, a prestigious journal that is especially interested in teacher preparation.

F. Human Subjects

An IRB proposal to conduct this research project will be submitted in January 2019. IRB approval, once granted, will be forwarded.

G. Extramural Funding

The research team met with the Director of the Office of Research Development and Management in the Cato College of Education, to explore external funding opportunities for the project. Following this meeting, a large Teacher Quality Partnership Grant (TQP) was submitted (summer 2018) to fund a cohort of new teacher candidates in the completion of the re-designed programs and to investigate the impact of the curricular innovation on their performance.

Although we very recently learned that the TQP grant proposal was not funded, we will continue to explore other external grant opportunities. Should any future related grant submissions be successful, the scope of this SoTL project will extend to include other initial licensure programs in other departments across the College that are also embarking upon initial licensure program re-designs.

H. Timeline

	Date	Project Task
Year 1	Spring 2019	<ul style="list-style-type: none"> • Research team submits IRB proposal to conduct research project. • Graduate Research Assistant (GRA) completes CLASS observation training and observes 3 candidates (twice each) from the original programs during completion of the student teaching internship (control group).¹ • GRA interviews 6 candidates from the control group and transcribes the interview data. • Candidates in the original programs complete edTPA and exit survey during student teaching internship semester. • GRA begins conducting a review of literature in preparation for future conference proposal and manuscript submissions.
	Summer 2019	<ul style="list-style-type: none"> • GRA interviews 6 candidates in the original programs and 6 from the re-designed programs (launch Summer II 2019) and transcribes the data. • No student teaching internships take place during summer months when

		schools are out of session.
	Fall 2019	<ul style="list-style-type: none"> • GRA observes 3 candidates (twice each) from the original programs during completion of the student teaching internship (control group).¹ • GRA interviews 6 candidates in the original program and 6 from the re-designed programs and transcribes the interview data. • Candidates in the original program in the culminating student teaching internship semester complete edTPA and exit survey.
Year 2	Spring 2020	<ul style="list-style-type: none"> • GRA interviews 6 candidates from the re-designed programs and transcribes the interview data. • GRA observes 6 candidates (twice each) from the re-designed programs during completion of the student teaching internship (experimental group). • Candidates in the original and re-designed programs in the culminating student teaching internship semester complete edTPA and exit survey. • GRA tabulates all edTPA, CLASS, and exit survey data for analysis.
	Summer 2020	<ul style="list-style-type: none"> • Research team analyzes quantitative and qualitative data and begins preparation of conference and manuscript proposals.
	Fall 2020	<ul style="list-style-type: none"> • Research team disseminates results at NC-ACTE (September, 2019) • Submit manuscript describing results to the <i>Journal of Teacher Education</i>.

1. Classroom observations of the 6 control group candidates have been split across Spring 2019 and Fall 2019.

(word count: 2,446)

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