A Critical Reflection of using On-Demand Modules for Differentiated Professional Development with Pre-Service Teachers

Section I: Content

Statement of the issue & Literature Review

The driving goal of our program is that we believe every child deserves a teacher who possesses strong pedagogical and relationship building skills. In order to reach that goal, many schools implement a variety of evaluation systems to measure teacher effectiveness. They then rely on professional development to bridge identified gaps in knowledge and skills for their teachers. Unfortunately, we know that many professional development (PD) options often lack transparent, research-based evidence of effectiveness and all too often vary widely in terms of quality and cost. In fact, in many districts low levels of oversight and evaluation of professional development programs often means decisions to adopt PD programs are made with little information beyond what the sales representative shares and little to no formal evaluation system for measuring effectiveness is put in place (Hill, 2009).

In addition to a lack of oversight and evaluation, many districts *and* colleges of education rely upon "one-size-fits-all" PD programs, rather than differentiated and individually targeted support. Research on customized PD continues to show that teachers feel a high sense of agency when adopting customized mobile learning programs (Pachler, Backmair, and Cook, 2009) because they can control the time, place, content and pace of the experience. Rather than sitting through a mandated, day-long seminar on a topic that may or may not address real needs the teacher is having in the classroom, differentiated "just enough, just-in-time, just-for-me" mobile learning can "create a personalized tailored learning journey," (Kearney, Schuck, Burden & Aubsson, 2012) which "lead to a strong sense of ownership of one's learning," (Traxler, 2007).

Because of these benefits, this teacher preparation program has innovatively taken steps to make differentiated PD a hallmark of the support it offers its teacher candidates. Support is now differentiated based upon multiple measures, including: three pre-conferences each semester of the year-long co-teaching residency, three observations per semester, and three post-conference per semester, an investment plan to coordinate opportunities for teacher candidates to motivate students in the classroom and analysis of student survey results. From these multiple data points, areas of strength and areas of refinement are identified and differentiated support is offered via On-Demand Modules created by the teacher preparation program itself by subject matter experts hoping to address the research to practice gap.

On-Demand Modules are 60 minute micro-courses that develop teacher candidates' knowledge, skills and mindsets around specific elements of inspirational teaching. Each module begins with a foundation of research-based background knowledge and then teacher candidates are introduced to the module resource, a tool or strategy they can immediately implement in the classroom. They then have the opportunity to practice using the resource through in-module scenarios or case studies. Finally, an assessment is given to ensure mastery of the content delivered throughout the module, providing feedback when gaps appear.

The ultimate goal in creating a collection of On-Demand Modules for teacher professional development is to improve teacher classroom practices in order to have a positive impact on students. This evaluation plan looks critically at the effectiveness of these modules as a component of a hallmark piece of the teacher preparation program. The formal evaluation of the On-Demand Modules utilizes the 4-level Kirkpatrick evaluation model for systematic review to assure that the PD we are recommending teacher candidates is effective. We know that the On-Demand Modules are an opportunity for the college to model personalized learning via technology tools in the same way we expect our graduates to use technology to help personalize learning for their students once they are in the classroom. This evaluation attempts to assure we are using best practices in the creation and use of the differentiated support.

The Kirkpatrick evaluation model was utilized to assess the effect of the On-Demand Module as an intervention to support teacher candidates' individualized area of refinement in their year-long senior year co-teaching residency. This evaluation model includes 4 levels of education outcomes: participants' reaction to the module, the learning (knowledge, skills or dispositions) that may have taken place, the potential subsequent behavior change to pedagogy and any final results of that change occurring. This model is widely used outside the education field for systematic reviews, even adopted by the Best Evidence Medical Education Collaboration in 2003 (Hill, Yu, Barrow & Hattie, 2009). In order to assure the lowest risk of bias in analysis, researchers conducted the analysis blindly, not knowing which participants completed an On-Demand Module or control activity.

Methods

In order to verify transfer of learning from On-Demand Module to the adult learner, we choose 4 cohorts of teacher candidates in their Senior Year Residency course. The cohorts selected met several study requisites including:
- One cohort from the early childhood program, elementary program, secondary program and special education program
- Fall start cohorts only
- Willingness to engage and partner with research team
- Willingness to provide research team with access to cohort and types of support they recommend to teacher candidates

Because of these specific needs, this was not a random sample from within the university. Future research should revolve around a truly random selection.

In each cohort, Site Coordinator's (trained specialists using a common evaluative template) input scores for each teacher candidates for the first performance assessment. Researchers then pulled the reports, sorted by area of refinement according to the evaluative rubric, and then matched On-Demand Modules designed to support skills in that refinement area. For those teacher candidates who had refinement areas not supported yet by an On-Demand Module, control interventions were suggested to the Site Coordinator. From here, Site Coordinators provided teacher candidates with the suggested On-Demand Modules or control intervention as a "next step" for refinement. When more than one On-Demand Module aligned to the area of refinement, researchers read the in-depth evidence for area of refinement and consulted with the Site Coordinator to best choose the On-Demand Module that would support teacher candidate growth. Researchers then examined the performance assessments that followed for evidence of both short and long-term behavior change. In addition a pre and post-survey were administered before and after completion of the On-Demand Module to measure changes in reaction and learning.

Participants who may have an area of refinement that could be supported by an On-Demand Module were excluded from the study if:
- they have completed previous On-Demand Modules in their area of refinement
- they do not complete the On-Demand Module suggested to them
- they do not complete the correct On-Demand Module
- they are put on an alternate improvement plan
- they are counseled out of the program

Contribution, **Strand III – Programs and Practices: Making Hard Choices Through Critical Reflection, Review, and Innovation**

This proposal is related directly to the Critical Reflection, Review and Innovation pieces of Strand III as it describes an innovative professional development practice under evaluation. The evaluation of this hallmark program practice not only describes a successful innovation, but critically reflects upon it in order to help others adopt a similar program to prepare professional future educators.

Relevance

This proposal relates to two of the relevance perspectives: using qualitative or quantitative evidence to inform policy or practice and successful practices. The study used both qualitative and quantitative data to examine the effectiveness of the differentiated professional development being offered to teacher candidates in the form of On-Demand Modules. This serves to further the discussion around differentiated professional development and the use of On-Demand Modules. It also supports the sharing and replication of exemplary practice, as it will detail for participants how one institution is utilizing the process and how they can also take advantage of the free resource at their institution as well.

Implication for Action

While the results of the study are on a relatively small population of the hundreds of teacher candidates that pass through the program each year, it shows the potential for using On-Demand Modules to differentiate the support we provide future teachers. Calls for research on transfer of learning rather than the theory behind an innovation have been made by all stakeholders, and this was an attempt to meet that demand. The results show there is a potential to not only produce better prepared teachers through differentiated support via On-Demand Modules, but more 'effective' teachers who may stay in the profession longer and eventually help students achieve more

Section II: Outcomes and Methods
Learner/participant outcomes

Discussion around this proposal will provide participants an opportunity to examine how their program supports teacher candidates and what role On-Demand Modules may play in their program. Participants will share ideas around teacher candidate professional development, experience with On-Demand Modules and the feasibility of differentiated support in their own programs.

Methods

This session will be discussion based and open to participant engagement throughout. Questions will be posed to engage participants in conversation during the session with a goal of refining our own current thinking and supporting new understanding among attendees.

References

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