Quest for Quality: Exemplary Faculty Practices Nomination

Empowering Pre-Service Teacher Candidates to Use Instructional Technology to Engage, Assess, and Differentiate Instruction for Diverse Student Populations

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In partnership with
Spring Valley Elementary:
A Midway Independent School District/Baylor University
Professional Development School

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Background/Establishment of Need:

In an effort to provide equitable resources to students, the integration of instructional technology into PK-12 classrooms is gaining momentum at an astonishing rate. Consequenlty, the number of school districts embracing 1:1 technology learning initiatives is also growing. The success of such educational initiatives appears to be linked, in large part, to the attitudes that teachers have towards using instructional technology in their classrooms (Teo, 2008; Abbitt, 2011), as well as the need for professional development in order to gain confidence in using such devices and applications. Seemingly, it is essential that pre-service teaching candidates experience opportunities to increase their self-efficacy to use instructional technology as an avenue to engage, assess and differentiate for diverse student populations.

Purpose of the Practice:

In response to the aforementioned need, the overarching purpose of the instructional technology series at the heart of this nomination was designed to ultimately help my students (preservice teacher candidates in the School of Education at Baylor University) increase their self efficacy to use instructional technology in elementary classrooms. As faculty and instructor of record for TED 3620, my intent was to design a series of 10-12 instructional technology sessions to engage my preservice teacher candidates *in active exploration and actual use of* various instuctional technology apps (primarily iPad compatible) that would assist them in designing and implementing effective instruction.

The Technological Pedagogocial Content Knowledge (TPACK) model was the conceptual framework for my series design. This model supports the incorporation of *technology, pedagogy, and content knowledge* in design and implementation of instructional technology in classrooms (Mishra & Koehler, 2006). Additionally, Bandura's self-efficacy theory (1997) guided my actions to incorporate this series into

my course, as it suggests that teachers' pedagogical decisions are potentially influenced by their self-efficacy beliefs pertaining to their own capabilities.

Context of Practice:

The instructional technology series at the heart of this nomination was designed to be a component *within one section of an existing course* that our pre-service teacher candidates at Baylor take during their junior year- TED 3620. I teach this course *on-site* at Spring Valley Elementary, one of our professional development school (PDS) campuses, located in Miday Independent School District (MISD), a 1:1 technology initiative school district.

During my course (which meets four days per week for two hours each day), my Baylor students have the opportunity to plan and teach actual ELAR and Social Studies lessons to small groups of K-4 students at Spring Valley on a regular basis. Afterwards, they participate in a one hour class with me to engage in further pedagogical training. It is during this time that I designed this technology series to occur, for one hour each week.

Strategy/Approach

I enlisted the assistance of the campus instructional technology specialist and our PDS site-based coordinator to design this series- they were both key resources in the overall design and implementation. Early sessions in the series pertained to basic elements of instructional technology, and, with the ISTE standards as a guide, evolved into elements of digital citizenship, workflow, and basic iPad applications. Our focus was to especially include apps that would be platforms for elementary students to collaborate, communicate, create, and engage in critical thinking. As such, we also focused on other apps that pertained to assessment, Challenge-Based Learning, and research, all of which were relevant to the K-4 classrooms within which my Baylor students were teaching small groups.

In each series (Slide #2-3), the campus instructional technology specialist (or another specialists from MISD) presented a brief overview of the scheduled topic. Then, my Baylor students were provided iPads to actively use and troubleshoot with these apps (Slide #4-5). Next, they were encouraged to brainstorm ways they could use the apps in their planning and teaching within their small groups. Finally, as a follow-up for ensuring

they actually used the apps to differentiate instruction, I required them to *use* at least one example of instructional technology each week in their teaching (Slide #6-10).

Key Criteria: Exemplary, Creative, and Innovative

This instructional technology series designed as a part of my TED 3620 course meets all three criteria. It is exemplary in that, based on preliminary, qualitative findings, it appears to have positively impacted my pre-service teacher candidates' self-efficacy to use instructional technology to assess, scaffold and differentiate K-4 instruction (Slide #11). Still further, the series was one in which my Baylor pre-service teacher candidates not only *learned about* specific technology tools, they were required to actually *use* those tools on a regular basis- making their own learning more concrete. It was creatively designed in presentation to actively engage my students in learning new ways to use instructional technology- through task cards, flipped classroom model (Strayer, 2012), inductive inquiry and hands-on learning.

This faculty practice is innovative in that it involved many campus and district constituents to ensure that experts in the technology field were involved with me in delivering instruction to my students. I wanted the series to not only be a professional development opportunity for my own students, but to in-service teachers and staff on the Spring Valley (PDS) campus, as well. Therefore, our series was posted on the campus website, in the campus newsletter and other appropriate venues inviting all campus staff to attend. As such, my class was often host to district and campus professionals who wanted to learn more about instructional technology. It became a true model of professional development involving in-service teachers and pre-service teacher candidates learning *together* to use instructional technology to engage, assess and differentiate instruction for K-4 diverse students.

Goals Accomplished:

As a result of this series (faculty practice), these outcomes appear to be evident:

*Pre-service teacher candidates (students of my course) reported their self-efficacy to use instructional technology did increase over the semester

*In-service teachers informally reported how *they* were empowered to use instructional technology more, simply by observing pre-service teachers candidates do so with success

*Lesson plans of pre-service teacher candidates indicated instructional technology was used regularly to engage students in effective learning (Slide #12)

*K-4 students observed in active, differentiated instruction

*Neighboring districts inquired about creating similar series (for staff)

*As a result of sharing this series at the NAPDS annual conference, many participants from across the nation inquired about its' use in their PDS work (Slide #13)

Note: The mixed methods data collection of this instructional technology series is on-going, as this study has been granted approval by IRB.

References

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