Examining a Music Education School-University Partnership in Relation to the Development of Pedagogical Content Knowledge/Knowing

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ABSTRACT: Many music researchers have studied School-University Partnerships with most investigations demonstrating how universities and colleges involve schools to support music teaching candidates. However, there is not clear evidence about how preservice music teachers, those that are aspiring music teachers, view their own pedagogical development as a participant in secondary school partnership. Using secondary analysis, we examined the descriptions of preservice music teachers' experiences participating in a music education school-university partnership in direct relation to the literature on Pedagogical Content Knowing/Knowledge. Findings are presented within the domains of Cochran et al.'s (1993) pedagogical content knowledge model of preservice teacher development including: (a) pedagogy, (b) subject matter content (c) student characteristics, and (d) environmental context. This secondary analysis revealed opportunities and obstacles within most of the domains, the exception being environmental context. By knowing more about how preservice music teachers describe their pedagogical development within the previously described framework, this new knowledge will likely inform how structuring future music education school-university partnerships may contribute to reciprocity among stakeholders as well as challenge assumptions that university faculty are the sole creators and holders of pedagogical expertise.

NAPDS Nine Essentials: Clinical Preparation; Reflection and Innovation; Research and Results

> *Prospective teachers learn just as other students do: by studying, practicing, and reflecting; by collaborating with others; by looking closely at students and their work; and by sharing what they see. For prospective teachers, this kind of learning cannot occur in college classrooms divorced from schools (National Commission on Teaching & America's Future, 1996, p. 31).*

Many music researchers have studied School-University Partnerships (SUPs) with most investigations demonstrating how universities and colleges involve schools to support music teaching candidates (those whom are aspiring music teachers). From this research, there are two prominent characteristics of music education SUPs, which are to provide preservice music teachers (PSMTs) access to school-aged youth through fieldwork experiences and offering various professional development opportunities for preservice and in-service music teachers. Kruse (2012) reported that SUPs may support preservice music teacher development. However, there is not clear evidence about how preservice music teachers view their own pedagogical development as a participant within a SUP. Therefore, the purpose of this study was to examine the descriptions of preservice music teachers' experiences participating in a music education SUP between The University of Utah School of Music and Jordan School District (West Jordan, Utah) in direct relation to the literature on Pedagogical Content Knowledge/Knowing.

School-University Partnerships within Music Education Research

The topic of SUPs within music education research has been investigated by multiple researchers exploring several themes, most commonly, the benefits and challenges of establishing a partnership (Conkling, 2007; Henry, 2001; Kruse, 2011a; Rawlings et al., 2019; Robinson, 2001), a professional development partnership (Conkling & Henry, 1999), as well as an informal partnership (Burton & Greher, 2007). From this range of music education SUPs documented in research, Brophy (2011) discussed that SUPs have the potential to create conflicts in enacting a partnership and interpersonal communication among stakeholders. Moreover, Kruse (2011a) reported that cooperating music teachers have a significant amount of preparatory work associated with a partnership and that this finding may influence their willingness to collaborate. Given that there are documented benefits and challenges to maintaining a SUP, these and other researchers encouraged future investigation on this topic to fully understand the motivations for and details of collaborations between secondary schools and

university music teacher preparation programs (Brophy, 2011; Burton & Greher, 2007; Kruse 2011b; Robinson, 2001).

Framework

We selected a commonly utilized framework in teacher education: Pedagogical Content Knowledge/Knowing (Cochran, et al., 1993; Shulman, 1986). Pedagogical Content Knowledge/Knowing (PCK) is documented within the corpus of research located in content-areas, such as mathematics, science, technology (Ching et al., 2013; Graham, 2011; Mishra & Koehler, 2006; Zhang & Birdsall, 2016), and within the teacher education research literature at large (Ball, et al., 2008). Cochran et al. (1993) documented four domains with respect to pedagogical content knowing (p. 266): Integrated knowledge of (a) pedagogy – how one teaches; (b) subject matter content; (c) student characteristics – understanding students, their abilities, attitudes, motivations etc.; and (d) environmental context.

We are framing this paper with pedagogical content knowing which is a combination of what PSMTs know about instrument pedagogy (subject), how they teach instrumental music (pedagogy), their knowledge of students, and their knowledge of environmental contexts. Pedagogical content knowing, as originally described by Cochran et al. (1993), is the nexus in which these four knowledges overlap. This framework was initially hypothesized for use within teacher education and fits our purposes as we attempt to unravel the descriptions of PSMTs' experiences participating in a music education SUP. As such, we are interested in how PSMTs may use their pedagogical content knowing to make clear their understandings within specific music learning contexts.

Our earlier investigation (Rawlings et al., 2019) provides support for continued examination in this area as the results illustrated how and to what extent some PSMTs perceive benefits and challenges of SUPs in relation to their development as music educators. In that study, we sought to uncover multiple stakeholders' descriptions of a SUP. For that investigation, we primarily considered four data points including: (a) 10 PSMT teaching episode reflections, (b) two high school musician focus group interview transcripts (School A and School B), (c) one PSMT and in-service teacher panel discussion transcript, and (d) one researcher log book. We reported that participants: (a) valued the partnership for the musical benefits, (b) valued the partnership because of the "awakenings" that occurred, (c) valued the partnership because of the strengthened relationships among stakeholders and feelings of reciprocity, (d) identified musical challenges, (e) identified developmental challenges with the partnership, (f) identified logistical challenges, and (g) identified challenges with PSMT psychological projection. Moreover, our respondents described multiple concerns with the sequence of field experiences in their preparation and education experiences. Going forward, we suggested several recommendations for enhancing SUPs and ideas for future research examining PSMT development.

Our primary finding from this previous investigation (Rawlings et al., 2019), that SUPs may cause developmental challenges, is critically important. To build on this work, we are conducting a secondary analysis of these data in relation to the PCK framework. Research questions for the current investigation are:

(a) How did PSMTs' descriptions of the SUP experiences relate to the PCK framework?
(b) How can PCK be used to illuminate the opportunities and obstacles between a qualitative comparison of the responses from PSMT participants?

Method

We conducted a secondary analysis (Heaton, 1998, 2004, 2008, 2012) of interview transcripts, teaching reflections, and observation data previously collected for the study of the benefits and challenges of a music education SUP (Rawlings et al., 2019) mentioned above. The use of secondary data analysis is a commonplace in fields including psychology, sociology, and educational psychology (Heaton, 1998, 2012; Trzesniewski, et al., 2011). Heaton (1998) suggested:

> Secondary analysis involves the use of existing data, collected for the purposes of a prior study, in order to pursue a research interest which is distinct from that of the original work; this may be a new research question or an alternative perspective on the original question.

Within music education literature, secondary analysis was discussed in the *Bulletin of the Council for Research in Music Education* (Roberts, 1996). Roberts (1996) provides a rationale for the need for "secondary analysis" stating:

> Large-scale qualitative research projects tend to produce vast data pools from observation notes, interview transcripts, and other field notes and data-generating techniques intended to provide the research with a comprehensive body of information from which the analysis can proceed. This appears generally to be a major point of differentiation between qualitative research and quantitative research in that the number collectors because they must formulate their hypotheses before the construction of their data collection instruments, tend to collect much more narrowly defined data than is possible (or probably desirable) in qualitative paradigms. (p. 44)

Researchers in music education have previously utilized pre-existing datasets for secondary data analysis (Elpus, 2014; Elpus & Carter, 2013; Gardner, 2006; Miksza, 2010). These studies have primarily focused on analyzing national or longitudinal datasets, while the current study utilized a pre-existing dataset to analyze a targeted population from a large, in-progress study.

Additional examples of secondary analysis in music education appear in Conway and Eros (2016) and Conway et

al. (2017). Conway and Eros (2016) used secondary analysis to examine the second stage of the teaching career. Participants were in their 10th or 11th years of teaching and data had originally been collected for studies of mentoring and induction when participants had been beginning teachers. Conway et al. (2017) used secondary analysis to examine the descriptions of workplace experiences in relation to the literature on micro-politics. These data revealed that the vast differences in the negotiations and challenges of beginning and more experienced music teachers was that experienced music teachers learned to share power with the stakeholders in their settings.

Details of the Original Study[1]

The purpose of Rawlings et al. (2019) was to explore the benefits and challenges of a SUP. Research questions included: (a) How do experienced music teachers, their students, and preservice music teachers describe the benefits of a SUP? and (b) How do experienced music teachers, their students, and preservice music teachers describe the challenges of a SUP? The SUP under investigation involved multiple stakeholders and has existed for two years between The University of Utah and the Jordan School District. Larsen and Weimer approached Rawlings to explore possible options for establishing a SUP that aimed to: (a) provide high school musicians with multiple opportunities to perform wind band repertoire that was not selected for curricular purposes or programmed for performance and (b) provide multiple teaching experiences for PSMTs to lead high school musicians in performing new music notation (i.e., sight-reading). The result of this partnership was creating an after-school event that was hosted by the Jordan School District. There was one pilot event and this event was held at one of the high school partner's home building. All stakeholders decided to continue the partnership, modify the event, and formally study and document the benefit and challenges at the next event (2019). Details about the second event may be found in Appendix A.

High School Partners. Two instrumental music programs from one school district were involved in the partnership. Herriman High School enrolls, on average, 2,500 students each academic year, grades 10–12. Within the band program, there are 200 youth participating in five large ensembles (three concert bands and two jazz bands). Two full-time faculty teach within the band program. Riverton High School enrolls, on average, 2,200 students each academic year, grades 10–12. Within the band and orchestra programs, there are 250 youth participating in seven large ensembles (two concert bands, three orchestras, two jazz bands, and three percussion ensembles). Two full-time faculty teach within the band program.

University Partner. The University of Utah is the state flagship institution of higher education and is labeled a Carnegie Research One institution. With an estimated student enrollment of 36,000 students (26,800 Undergraduate; 9,250 Graduate), the NASM-accredited School of Music is housed within a large College of Fine Arts. Approximately one-third of the music majors are studying music education and there are three faculty teaching within this degree program. The PSMT participants ($n = 10$) were third-year students enrolled in an *Instrumental Rehearsal Techniques* course and volunteered to participant in this partnership event, which was not considered as a part of their grade. These students represented 56% of the entire course enrollment and Rawlings was the instructor of this course. Multiple safeguards associated with limiting teacher-student power differentials were essential and although these were required by the university institutional review board, it may be possible that PSMTs felt it necessary to participate.

Data Sources. The perceptions of PSMTs, secondary musicians, and in-service music teachers were documented and analyzed. For our investigation, we primarily considered four data points including: (a) 10 PSMT teaching episode reflections, (b) two high school musician focus group interview transcripts (Herriman High School and Riverton High School), (c) one PSMT and in-service teacher panel discussion transcript, and (d) one researcher log book. These data points were influenced by recommendations from previous researchers (Brophy, 2011; Kruse, 2012).

Secondary Analysis. In the first phase of analysis, we examined teaching reflections, interview transcripts and observation notes not previously quoted in the initial study to draw out the voice of these participants in relation to the a priori PCK domains. First, we began with an open-ended coding protocol while examining the PSMT reflections. Each researcher explored these data separately and as an approach to build internal credibility for the analysis of these data, we independently agreed on the final coding structure. The final themes converged through an axial coding procedure (Patton, 2015).

Two assistants from the University Undergraduate Research Opportunity Program assisted us in this secondary analysis protocol. Rawlings had conducted the interviews for the original study and was only involved as a secondary analyst so we purposefully chose Rawlings and the two assistants for the secondary analysis and then had Larsen and Weimer act as auditors for new themes and discussion.

Findings

The purpose of this study was to examine the descriptions of PSMTs' experiences participating in a music education SUP in direct relation to the literature on Pedagogical Content Knowing/Knowledge (Cochran et al., 1993). Using a dataset from a previously published investigation, we developed our deep layer coding structure upon the basis of the research questions and organized our findings with Cochran et al.'s (1993) four domains of integrated knowledge: (a) pedagogy, (b) subject matter content, (c) student characteristics, and (d) environmental context (p. 266). Findings suggest that PSMTs perceive learning opportunities and obstacles within all domains except their environmental context as we could not locate

[1] Full details of the original study appear in Rawlings et al. (2019).

evidence. The findings are reported according to Cochran et al.'s domains. Miles et al. (2015) recommends presenting themes according to their uniqueness, frequency, and intensity. We reordered the domains to reflect their recommendation (Knowledge of Students, Knowledge of Pedagogy, and Knowledge of Subject Matter). Within each domain, two prominent themes appeared in our coding: the *obstacles to* and *opportunities for* music teacher development. Although obstacles and opportunities may not be mutually exclusive, for the purposes of data categorization, we have attempted to treat them as such.

Knowledge of Students

This domain focuses on understanding students, their abilities, attitudes, and motivations within the context of music education. The PSMTs were asked to reflect on the SUP experience using a modified Eyler and Giles (1999) reflection protocol (What?; So What?; and Now What?) (see Appendix B for a copy of the reflection protocol). All of the PSMTs commented about how the SUP challenged their knowledge of students. Moreover, the secondary student musicians commented about their knowledge of the PSMTs.

The first code was identified as an opportunity for music teacher development within the SUP. Interactions with secondary students provided PSMTs knowledge about them. One PSMT commented "This [the SUP] was a useful exercise not only for my own skills but also having an opportunity to watch the students and how they responded to the many different teaching styles in a relatively short period of time" (PSMT 8). Another PSMT wrote "Those kids brought so much joy to my life in a short amount of time I was with them and it reaffirms my decision to be a music teacher. . .It was an experience I really needed" (PSMT 9).

From this evidence about student-teacher interactions, we turn to how an SUP may reveal an unknown priority with understanding classroom engagement techniques. Classroom management or engagement was only mentioned a few instances in the dataset; however, it is worthy of reporting. One PSMT wrote "classroom talking was distracting me [from teaching]. Classroom management will be something I look forward to practicing as I student teach" (PSMT 4). On the other hand, a different PSMT commented that "I struggled a little bit with engagement. . .it was after the school day" (PSMT 1).

Another code that was identified as an obstacle for music teacher development within a SUP, was using student-friendly and/or appropriate language. During the Riverton High School focus group interview, a small group of secondary students commented about one PSMT, in particular, with one student stating "[she] treated us like elementary students. We are high school students not 5 year olds" (Riverton High School focus group interview transcript). Overall, secondary analysis revealed evidence supporting that an SUP supports PSMT development, specifically with gaining understanding some nuances of students, their abilities, attitudes, and motivations.

Knowledge of Pedagogy

This domain focuses on examining how one teaches. Several PSMT wrote about their frustrations with not being able to providing adequate student feedback. He wrote "I was not effective in asking questions or getting the sound that I wanted. It was discouraging walking off that podium realizing that I didn't do anything the way I wanted" (PSMT 8). Another PSMT wrote about effectively sequencing instruction "The second teaching [opportunity] was better, but the sequencing was not effective and I didn't guide the students to improve their sound from start to finish" (PSMT 10). Located in the transcript data, there was a topic of discussion that centered on feelings of inadequacy or "not feeling ready" for the SUP (panel discussion transcript). During the panel discussion, several PSMTs discussed how they did not feel as prepared as they should have. More specifically, they cited not knowing enough rehearsal techniques to feel prepared to teach; however, this feeling was only "during and after our teaching with the high school bands" (teacher panel discussion transcript).

While these PSMTs chose to reflect about their frustrations during the SUP, four other PSMT participants wrote about opportunities for their own growth and improvement. One PSMT commented about the importance of conceptual teaching within a school-based music ensemble classroom (PSMT 2). She discussed how all of her feedback to the group of student musicians centered around the fundamentals of musicianship (tone production and ensemble balance, intonation and blend, tempo and steady beat, rhythm, and music expressivity). A unique code that emerged indicated that many secondary musicians, who volunteered to participate in the focus groups, were excited to watch and learn from the university PSMTs. In particular, one student commented on the PSMT abilities to use metaphor in describing abstract concepts. For instance, "when Mr. _____ would use [the color] purple to describe the blend of a chord at measure 15, I found that very interesting and new" (Herriman High School focus group interview transcript).

Knowledge of Subject Matter

This domain focuses on music content knowledge (music theory, music history and literature, conductor movement, etc.) and instrument-specific content. Using the same reflection prompt, PSMTs commented on their use of music content knowledge during the SUP. A prominent code within the dataset mentioned conductor movement. According to Nápoles and Rawlings (2020), "conducting is a nonverbal form of communication between music educator and student. As such, there is a vocabulary that is associated with the discipline that is understood by members who study it" (p. 465). Of the 10 PSMTs, eight of the ten labeled their conducting movement as inadequate. More specifically, both School A and School B focus groups commented that there were concerns with nonverbal cueing and a lack of eye contact from PSMT to student.

During the SUP, the PSMTs had multiple opportunities to lead large-group instrumental ensemble rehearsals. Alongside comments about conductor movement were comments about a lack of hearing and music notation error detection or a term we are adopting as, *podium deafness*[2]. During a teaching episode, PSMTs would lead an instrumental music ensemble in rehearsing music notation. Next, the PSMT would give verbal feedback to the secondary student musicians to improve their performance of the music notation. As a result of this protocol, one PSMT wrote "I couldn't hear the [French] horns at all" (PSMT 7). Another PSMT mentioned this phenomenon with more detail "I was really nervous and my ears shut off because I was focusing so much on making sure I was conducting the sound I wanted and making sure that I did not look like a fool in front of them. I forgot to listen" (PSMT 9).

Discussion and Future Research

For Research Question One (How did PSMTs' descriptions of the SUP experiences relate to the PCK framework?), we considered the PCK framework of Cochran et al., (1993) with our data analyses. We predominantly found evidence of the first three of the four domains of integrated knowledge pedagogy, subject matter content, and student characteristics; however, we did not identify evidence of environmental context among these data. The most prominent domain within these data were student characteristics (or knowledge of students). Participants (both PMSTs and secondary student musicians) wrote and spoke about how the SUP challenged their overall perception of the other participant population.

From the research on music education PSMT development, reported benefits of student-PSMT interaction in teaching episodes include increased confidence in teaching and classroom management abilities (e.g., Bergee, 2006; Haston & Russell, 2012; Hourigan & Scheib, 2009; Reynolds & Conway, 2003), the opportunity to practice teaching skills learned in university classes in authentic school settings (e.g., Bergee, 2006; Conkling, 2003; Hourigan & Scheib, 2009; Parker, Bond, & Powell, 2017; Powell, 2011; Schmidt, 2010), positive support of cooperating teachers (e.g., Bergee, 2006), positive socialization into the music teaching profession (e.g., Bergee, 2006; Draves, 2014; Haston & Russell, 2012), development of reflective practice (e.g., Conkling, 2003; Hourigan, 2009; Powell, 2016), and increased comfort and confidence working with students with special needs (e.g., Bartolome, 2013, 2017; Hourigan, 2009; VanWeelden & Whipple, 2005, 2007). From this corpus of research, we consider this unique finding to be positive contributing factor for establishing SUPs as a part of an undergraduate music teacher preparation program.

[2] This term is jargon used among musicians referring to a conductor or music leader who is not accurately perceiving the performance of notation. For instance, errors in performing music notation are not heard by the conductor or music leader and therefore, not corrected.

Researchers in teacher education explain that "field experiences are the key components of preparation where prospective teachers learn to bridge theory and practice, work with colleagues and families, and develop pedagogical and curricular strategies for meeting the needs of a diverse population" (Hollins & Guzman, 2005, p. 493). These data demonstrated evidence of loosely grouped pedagogical strategies (questioning techniques, lesson planning, instructional sequence) and minimal references to the use of a common or shared vocabulary around music content knowledge.

Specifically, we found these themes within the participant reflections from their teaching episodes and this is intriguing. The PSMT participants did not report much evidence related, specifically, to their content area and upon reflecting on our own music teacher preparation programs, we remember a very robust curriculum focused on music content knowledge acquisition. Indeed, the National Association of Schools of Music Handbook ([NASM], 2020) states that music education "curricula normally adhere to the following structural guidelines: studies in music, including basic musicianship and performance normally comprise at least 50% of the total program; general studies, 30–35%; and professional education, 15–20%" (p. 119).

Although the findings from our secondary analysis may be intriguing, they may be an outcome influenced by the structure of this particular SUP. Given this disparate finding, perhaps an audit of music teacher preparation program curricula is needed to determine the veracity of these data. Another possible reason for this outcome is that perhaps a lack of focus on music content knowledge was because our participants already understand the value of music content knowledge for the improvement of teaching and learning, rather than only compliance or accountability. Regardless, we must acknowledge that we do not have enough data to make a claim, either way.

A prominent theme resulting from secondary analysis of these data is not unique and it corroborates past research in music education. Most of the PSMTs in this study reported feeling unprepared to teach by themselves. Previous research in music education demonstrates that:

> The usefulness of methods class in teacher preparation is related to the respondents' number of years of experience...While this can be cautiously interpreted to indicate that undergraduate methods classes may be becoming more practical for beginning teachers, the 32.84% "least useful" response rate among the teachers who presumably have taken their methods courses within the past 10 years suggests that as many as one in three undergraduates continue to begin their careers feeling unprepared by their methods classes. (Brophy, 2002)

In relation to our findings, the PSMTs reported not knowing enough rehearsal techniques to feel prepared to teach after

participating in the SUP. One aspect of data that was not collected or probed during the panel discussion was if participating in the SUP caused this realization or did the PSMTs feel this way prior to the partnership beginning. In the future, we want to encourage researchers to collect data relating to music teacher self-efficacy. Efficacy comprises judgments, or beliefs, that an individual holds about their capabilities in certain areas and stems from the motivational work of Bandura (1977). Teacher efficacy includes beliefs about outcomes of student learning and are explained as a teacher's "judgment of his or her capabilities to bring about desired outcomes of student engagement and learning" (Tschannen-Moran & Woolfolk Hoy, 2001, p. 783). Additionally, researchers should apply this hypothesis to PSMT efficacy in regards to classroom engagement.

For Research Question 2 (How can PCK be used to understand the opportunities and obstacles between a qualitative comparison of the responses from PSMT participants?), this examination of a SUP through a PCK framework has divulged some new understandings regarding the nexus of these domains.

There are many challenges for beginning music teachers. Most of them mirror the challenges faced by teachers in general but the music context often changes the setting in subtle ways. The literature has documented many of the challenges faced by beginning music teachers but there are just a few studies, several of which are quite dated, and others with very small sample sizes.

It is not new in music teacher education research to document that preservice music teachers may feel unprepared to teach (Kruse, 2012). However, understanding a plausible reason for this feeling may not be related to their acquisition of music content knowledge is a new contribution. Despite taking many content-specific classes, approximately 50% of their undergraduate coursework (NASM, 2020), PSMTs rarely commented on their development with regards to the knowledge of subject PCK domain. Previous research referenced pedagogical reasons for feelings of not being ready to teach; however, this research was unclear about details motivating the labeling of data as pedagogical versus music content knowledge. By using a PCK framework to code these data, there is clear evidence that suggests a "rehearsal technique" may, in fact, be a merger of a pedagogical strategy specific to a musicianship fundamental. While music content knowledge is important to the preparation of PSMTs, our participants may understand the value of music content knowledge for the improvement of teaching and learning and this could be a reason why the subject matter domain was not more prominent in our findings.

Pedagogical content knowing, as originally described by Cochran et al. (1993), is the nexus in which these four knowledges overlap – no evidence of fourth domain. The absence of evidence relating to the environmental context is a new contribution to the field of music teacher education and suggests that with this dataset, PSMTs may not understand the influence of the environmental context on music teaching and learning. This new contribution also informs university/college faculty on how they may draw on practitioner expertise as an approach to creating a reciprocal experience for all stakeholders of a SUP.

Lastly, the PCK framework allows for the use of a shared language when discussing the complexities of PSMT development while participating in an SUP. Using the PCK terminology holds promise for the future of enacting PSMT coursework. As practitioner- researchers, modeling the terminology as a way of building a shared language may be a simple pedagogical approach to incorporate throughout music teacher preparation coursework. Such an approach is sometimes informally referred to, by practitioners, as *I do-We do-You do*. Modeling, as a pedagogical strategy, is often utilized to ensure a "gradual release of responsibility" (Bruner, 1977). In other words, the process itself is differentiated in that it works through three tiers (I-we-you) that challenge students to adopt a shared language. In future research, researchers must address how we can, as a music teaching profession, advance the use of commonly accepted PCK terminology with high fidelity to unravel the complexities of music teaching and learning.

Conclusion

Teaching is complex work that requires a continuous cycle of acquiring and retrieving knowledge (Berliner, 1986; Lampert, 2000). Moreover, teaching demands instantaneous decision making and problem-solving skills within the context of a dynamic environment. In the case of music teaching and learning, these complexities are exacerbated by the temporal nature of the subject matter. Given that the purpose of this study was to examine the descriptions of PSMTs' experiences participating in a music education SUP in direct relation to the literature on Pedagogical Content Knowledge/Knowing (Cochran et al., 1993), our findings hold promise for understanding how PSMTs describe their development and for the music teacher education field to move toward incorporating SUPs with prolonged engagement with K-12 students in schools during a music teacher preparation program.

It may be that the participant voices included in this investigation do not represent a larger cohort of PSMTs at other institutions, carrying with them particularities of geographic location, school culture, and band culture, and thus generalizations beyond this sample are made cautiously. On the other hand, we sense that the pedagogies mentioned above probably do represent, more or less, what is happening with music education SUPs within the US but we are unable to make that claim nor generalize with the current study findings. By considering these data presented in the current study, these actions may allow us to develop a more visible set of shared language and pedagogical practices with in music teacher preparation programs and lead to more multi-directional and reciprocal SUPs to study in the future. SUP

References

Rawlings, J. R., Larsen, B. K., & Weimer, J. (2019). The benefits and challenges of a school-university partnership. *New Directions in Music Education, 4,* https://www.newdirectionsmsu.org/issue-4-special-focus-issue-imte2019/rawlings-et-al/

Ball, D. L., Thames, M. H., and Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education*, *59*(5), 389–407. doi: 10.1177/0022487108324554

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84* (2), 191–215. doi: 10.1037//0033-295x.84.2.191

Bartolome, S. J. (2013). Growing through service: Exploring the impact of a service-learning experience on preservice educators. *Journal of Music Teacher Education, 23*(1), 79-91. doi:10.1177/1057083712471951

Bartolome, S. J. (2017). Comparing field-teaching experiences: A longitudinal examination of preservice and first-year teacher perspectives. *Journal of Research in Music Education, 65,* 264-286. doi:10.1177/0022429417730043

Bergee, M. J. (2006). Description and evaluation of experiences at a new early field site. *Journal of Music Teacher Education*, *15*(2), 21–28. doi:10.1177/10570837060150020104

Berliner, D. C. (1986). In pursuit of the expert pedagogue. *Educational Researcher*, *15*(7), 5–13. doi:10.3102/0013189X015007007

Brophy, T. S. (2002a). Teacher reflections on undergraduate music education. *Journal of Music Teacher Education, 12*(1), e19–e25.

Brophy, T. S. (2011). School-university partnerships in music education: A status report. *Arts Education Policy Review, 112*, 149–153. doi:10.1080/10632913.2011.566092

Bruner, J. (1977). *The process of education*. Cambridge, MA: Harvard University Press.

Burton, S. L. (2011). Perspective consciousness and cultural relevancy: Partnership considerations for the re-conceptualization of music teacher preparation. *Arts Education Policy Review, 112*(3), 122–129. doi:10.1080/10632913.2011.566082

Burton, S. L., & Greher, G. R. (2007). School-university partnerships: What do we know and why do they matter? *Arts Education Policy Review, 109*(1), 13–22. doi:10/3200/aepr.109.1.13-24

Ching Sing, Chai., Hwee Ling Koh, J., & Chin-Chung Tsai. (2013). A Review of Technological Pedagogical Content Knowledge. *Journal of Educational Technology & Society*, *16*(2), 31–51.

Cochran, K. F., DeRuiter, J. A. and King, R. A. (1993). Pedagogical Content Knowing: An Integrative Model for Teacher Preparation. *Journal of Teacher Education, 44*(4), 263–272.

Conkling, S. (2003). Uncovering preservice music teachers' reflective thinking: Making sense of learning to teach. *Bulletin of the Council for Research in Music Education*, *155*, 11–23.

Conkling, S. W. (2007). The possibilities of situated learning for teacher preparation: The professional development partnership. *Music Educators Journal, 93*(3), 44–48.

Conkling, S. W., & Henry, W. (1999). Professional development partnerships: A new model for music teacher preparation. *Arts Education Policy Review, 100*(4), 19–23.

Conway, C., & Eros, J. (2016). Descriptions of the second stage of music teachers' careers. *Research Studies in Music Education*, *38*(2), 221–233. doi:10.1177/1321103X16672607

Conway, C. M., Rawlings, J. R., & Hibbard, S. (2017). Music teachers' descriptions of their workplaces in relation to micropolitics. *Music Education Research, 20*(3), 305–316. doi: 10.1080/14613808.2017.1366436

Draves, T. J. (2014). Under construction: Undergraduates' perceptions of their music teacher role-identities. *Music Education Research, 36,* 199-214. doi:10.1177/1321103X14547982

Elpus, K. (2014). *Arts education and positive youth development: Cognitive, behavioral, and social outcomes of adolescents who study the arts*. Manuscript in preparation.

Elpus, K., & Carter, B. A. (2013, April). Are arts students more likely to be bullied? The prevalence of bullying among arts participants. Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.

Eyler, J., & Giles Jr, D. E. (1999). *Where's the Learning in Service-Learning? Jossey-Bass Higher and Adult Education Series*. San Francisco, CA: Jossey-Bass.

Gardner, R. D. (2006). *The development of a theoretical model to predict retention, turnover, and attrition of K-12 music teachers in the United States: An analysis of the Schools and Staffing Survey and Teacher Follow-up Survey (1999-2001)*. (Unpublished doctoral dissertation). University of Rochester.

Graham, C. R. (2011). Theoretical considerations for understanding technological pedagogical content knowledge (TPACK), *Computers & Education, 57*(3), 1953–1960.

Haston, W., & Russell, J. A. (2012). Turning into teachers: Influences of authentic context learning experiences on occupational identity development of preservice music teachers. *Journal of Research in Music Education, 59*, 369-392. doi:10.1177/0022429411414716

Heaton, J. (1998). Secondary analysis of qualitative data. *Social Research Update*, 22.

Heaton, J. (2004). *Reworking qualitative data*. London: Sage Publications

Heaton, J. (2008). Secondary analysis of qualitative data. In P. Alasuutari, L. Bickman and J. Brannen (eds.) *The Handbook of Social Research Methods*, Thousand Oaks, CA: Sage. http://sru.soc.surrey.ac.uk/SRU22.html.

Heaton, J. (2012). What is secondary data analysis? In J. Goodwin (Ed.) *SAGE secondary data analysis* (pp. 1–21). London, UK: Sage.

Henry, W. (2001). Music teacher education and the professional development school. *Journal of Music Teacher Education, 10*(2), 23–28.

Hollins, E., & Guzman, M. T. (2005). Research on preparing teachers for diverse populations. In M. Cochran-Smith & K. Zeichner (Eds.), *Studying teacher education* (pp. 477-588). New York: Routledge.

Hourigan, R. (2009). Preservice music teachers' perceptions of fieldwork experiences in special needs classrooms. *Journal of Research in Music Education*, *57*, 152–168. doi: 10.1177/0022429409335880

Hourigan, R. M., & Scheib, J. W. (2009). Inside and outside the undergraduate music education curriculum: Student teacher perceptions of the value of skills, abilities, and understandings. *Journal of Music Teacher Education*, *18*(2), 48-61. doi:10.1177/1057083708327871

Kruse, N. B. (2011a). Navigating on-site teaching experiences: Multiple perspectives from two school university partnerships. *Visions of Research in Music Education, 19*. Retrieved from http://www.usr.rider.edu/vrme~/

Kruse, N. B. (2011b). Sociological perspectives of school-university partnerships: Contextual learning through three lenses. *Arts Education Policy Review, 112*(3), 115–121. doi: 10.1080/10632913.2011.566080

Kruse, N. B. (2012). Silent partners: Uncovering middle school and high school students' perceptions of their roles in two school-university partnerships. *Update: Applications of Research in Music Education*, *31*(1), 63–71. doi: 10.1177/8755123312458438

Lampert, M. (2000). Knowing teaching: The intersection of research on teaching and qualitative research. *Harvard Educational Review*, *70*(1), 86–99.

Miksza, P. (2010). Investigating relationships between participation in high school music ensembles and extra-musical outcomes: An analysis of the Education Longitudinal Study of 2002 using a bioecological development model. *Bulletin of the Council for Research in Music Education, 186,* 7–25.

Miles, M.B., Huberman, A.M., & Saldaña, J. (2015). Qualitative data analysis: A methods sourcebook. (3rd Ed.). Thousand Oaks, CA: Sage Publications Inc

Mishra, P. & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. Teachers College Record, *108*(6), 1017–1054. doi: 10.1111/j.1467-9620.2006.00684.x

Nápoles, J, & Rawlings, J. R. (2020). Conducting coursework. In C. M. Conway, A. M. Stanley, K. Pellegrino, & C. West (Eds.) *Oxford Handbook for Preservice Music Teacher Education in the United States* (pp. 465–482). New York: Oxford University Press.

National Association of Schools of Music (2020). Basic competency index. Retrieved from https://nasm.arts-accredit.org/accreditation/standards-guidelines/basic-competency-index/

Parker, E. C., Bond, V. L., & Powell, S. R. (2017). A grounded theory of preservice music educators' lesson planning processes within field experience methods courses. *Journal of Research in Music Education, 65,* 287-308. doi:10.1177/0022429417730035

Patton, M. Q. (2015). *Qualitative research & evaluation methods*. (4th Ed.). Thousand Oakes, CA: Sage.

Powell, S. R. (2011). Examining preservice music teachers' perceptions of initial peer- and field-teaching experiences. *Journal of Music Teacher Education*, *21*(1), 11–26. doi:10.1177/1057083710386751

Powell, S. R. (2016). The influence of video reflection on preservice teachers' concerns in peer- and field-teaching settings. *Journal of Research in Music Education, 63*, 487-507. doi:10.1177/0022429415620619

Reynolds, A. M., & Conway, C. M. (2003). Service-learning in music education methods: Perceptions of participants. *Bulletin of the Council of Research for Music Education*, *155*, 1–9.

Roberts, B. (1996). Secondary analysis in qualitative research: Thoughts on data obsolescence. *Bulletin of the Council for Research in Music Education, 130,* 44–51.

Robinson, M. (2001). From visitors to partners: The evolution of a methods course. *Journal of Music Teacher Education, 11*(1), 21–26.

Schmidt, M. (2010). Learning from teaching experience: Dewey's theory and preservice teachers' learning. *Journal of Research in Music Education*, *58*, 131–146. doi:10.1177/0022429410368723

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*(2), 4–14.

Trzesniewski, K. H., Donnellan, M., & Lucas, R. E. (2011). *Secondary data analysis: An introduction for psychologists*. Washington, DC: American Psychological Association.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783–805. doi: 10.1016/s0742-51x(01)00036-1

VanWeelden, K., & Whipple, J. (2005). The effects of field experience on music education majors' perceptions of music instruction for secondary students with special needs. *Journal of Music Teacher Education*, *14*(2), 62–68. doi:10.1177/10570837050140020109

VanWeelden, K. & Whipple, J. (2007). An exploratory study of the impact of field experiences on music education majors' attitudes and perceptions of music for secondary students with special needs. *Journal of Music Teacher Education, 16*(2), 34-44. doi:10.1177/10570837070160020105

Zhang, W., & Birdsall, S. (2016). Analyzing early childhood educators' science pedagogy through the lens of a pedagogical content knowing framework. *Australasian Journal of Early Childhood, 41(*2), 50–58.

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Appendix A School-University Partnership Event

Site Location: Herriman High School

Ensemble	Location	Time Slot	PSMT	Repertoire
Riverton	Choir	5:00 p.m.	1	Salvation is Created
Herriman	Band	5:00 p.m.	2	Toccata (for Band)
Riverton	Choir	5:17 p.m.	3	March of the Belgian Para.
Herriman	Band	5:17 p.m.	4	Yorkshire Ballad
Riverton	Choir	5:34 p.m.	5	Satiric Dances
Herriman	Band	5:34 p.m.	6	Cajun Folk Songs
Riverton	Choir	5:51 p.m.	7	Joy
Herriman	Band	5:51 p.m.	8	Australian Up-Country Tune
Riverton	Choir	6:08 p.m.	9	Kentucky–1800
Herriman	Band	6:08 p.m.	10	Albanian Dance
	6:25 p.m.		BREAK	
Riverton	Choir	6:40 p.m.	2	Toccata (for Band)
Herriman	Band	6:40 p.m.	1	Salvation is Created
Riverton	Choir	6:57 p.m.	4	Yorkshire Ballad
Herriman	Band	6:57 p.m.	3	March of the Belgian Para.
Riverton	Choir	7:14 p.m.	6	Cajun Folk Songs
Herriman	Band	7:14 p.m.	5	Satiric Dances
Riverton	Choir	7:31 p.m.	8	Australian Up-Country Tune
Herriman	Band	7:31 p.m.	7	Joy
Riverton	Choir	7:48 p.m.	10	Albanian Dance
Herriman	Band	7:48 p.m.	9	Kentucky–1800

Schedule

4:45 p.m.	University PSMTs arrive
	HS Musicians in place (Band Room & Choir Room) for warm-up with in-service music teachers – Orientation with University-based teacher educator.
5:00 p.m.	Rotation 1 begins
6:25 p.m.	Rotation 1 ends & Break
6:40 p.m.	Rotation 2 begins
8:05 p.m.	Rotation 2 ends/clean-up (we all leave when the directors do).

Teaching Description

The aim of this teaching practicum is to provide preservice instrumental music teachers an opportunity to sight-reading experience with high school musicians. Preservice music teachers will conduct one (1) selection indicated above using the teaching procedure below. Additionally, these preservice teachers will prepare folders for the ensemble musicians (e.g., Flute 1, Flute 2, Trumpet 1) according to the instrumentation provided (folders are to be completed and submitted to university-based teacher educator by March 4, 2019. Both teaching demonstrations will be video recorded for informal self-evaluation and, if necessary, coaching with university-based teacher educator. In-service teachers will provide verbal coaching and the University instructors may provide written comments.

*Please bring a primary or secondary instrument, scores, and baton. PSMTs will perform in the ensemble if not assisting with video recording or other logistical tasks.

Teaching Procedure:

Each PSMT will have 17 minutes total for each score (12 minutes teaching/5 minutes coaching/transition). The PSMT will prepare a lesson plan for this teaching practicum. PSMTs will instruct the players. This instruction includes:

- Identifying the goal of the sight-reading rehearsal, explaining and modeling the procedures, and assessing the musical outcome. Teachers will reteach, if appropriate improvement has not been achieved (Hint: the goal of sight-reading is not always to run through the entire piece).
- You may **select any** notation to rehearse as long as you directly apply the levels of listening and rehearsing.
  - Tone, Balance, Blend
  - Rhythm & Tempo
  - Pitch & Intonation
  - Articulation & Style
  - Expression & Musicianship
- Following the 12-minute teaching segment, in-service music teachers will provide 5 minutes of verbal coaching.
- While one PSMT teacher is offering instruction, please assist in the following tasks:
  - Video recording each teaching demonstration for future reflection.
  - Instructional time keeping
  - Additional logistical support

This will be an exciting evening with multiple missions being accomplished and multiple layers of music education simultaneously occurring.

Appendix B

Reflection for Partnership Event

SECTION 1. WHAT did you learn? –Drawing from your observations and conducting the high school musicians, list and describe what you learned from leading the ensembles rehearsals in terms of the following:

Demonstrates acceptable understanding of music context and skills:

1. An ability to hear and current music notation errors.
2. Knowledge of music terminology and symbols.
3. Appropriate score analysis techniques (harmonic, rhythmic, structure, understanding of musical styles).

Demonstrates acceptable understanding of conducting skills:

1. Executes clear conducting patterns that include appropriate size, style, and tempo.
2. Displays a high level of musicality
3. Facilitates student performance through clear gestures, independence of hands, and eye contact

Delivery of the message:

1. Diagnoses specific student music performance challenges.
2. Presents effective solutions to student music performance challenges.
3. Uses a variety of musical rehearsal techniques and displays effective conducting skills.
4. Describe the nature and effectiveness of questioning techniques used in the lesson.
5. Sequence – in what ways did the design and delivery of information and execution of activities function to support the students' understanding of the concept?

SECTION II. "SO WHAT?" Write 3-5 sentences address the following question in each of the categories above:

Why is this important going forward to your future teaching presentation?

SECTION III. "NOW WHAT?" Write 3-5 sentences address the following question in each of the categories above: