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## Teacher Effectiveness Research in Physical Education: The Future Isn't What It Used to Be

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This commentary was written in response to the Rink (2013), McKenzie and Lounsbury (2013), and Ward (2013) articles published earlier on teacher effectiveness in physical education (PE). The historical analyses of teacher effectiveness research in PE (TER-PE) presented in those 3 articles are briefly described, particularly as they represent a collective agenda in the first 3 decades in this line of inquiry. That collective agenda was primarily driven by physical education researchers and P–12 teachers, who developed and explored empirically based best practices for effective teaching and learning in physical education, which informed much of the content knowledge and pedagogical content knowledge learned in physical education teacher education programs. Based on 2 recent policy developments in many states, external threats to the previous agenda for TER-PE are presented by the author, who concedes that the lead for the future agenda for TER-PE will soon be taken out of the hands of researchers, teachers, and teacher educators and transferred to educational agencies in the form of new policies on initial teacher certification and the evaluation of in-service teachers in a growing number of states.

**Keywords:** physical education teaching, teacher education, teacher effectiveness research, teaching policy

To varying degrees, the three articles by Rink (2013), McKenzie and Lounsbury (2013), and Ward (2013) offer a historical treatment of teacher effectiveness research in physical education (TER-PE). McKenzie and Lounsbury's description mostly focuses on the analysis of teaching and learning behaviors that contribute to public health outcomes and is predictably the briefest of the three. Ward provides a more extensive treatment of that history using the foundational work of Dunkin and Biddle (1974) to reveal the need for more and better analyses of teacher content knowledge (CK) in studying the relationships embedded in the presage–product, process–product, and mediating process–product paradigms in research on teacher effectiveness. Within the limitations of length, Rink (2013) offers the fullest description of the history of TER-PE, also acknowledging its origins in research on teaching in

classroom-based subjects, while citing Dunkin and Biddle and Brophy and Good (1986) as seminal works that greatly influenced the development and proliferation of teacher effectiveness research in our field.

Evidenced from research reviews on teacher effectiveness in physical education (Graber, 2001; Silverman & Skonie, 1997), it can be argued that the heyday of this line of inquiry in physical education began in the early 1980s and was extended through the next 20 years, progressing from Larry Locke's (1977) laments about the “dismal science” of research on teaching physical education with its distinct paucity of legitimate teaching research studies being published annually (and the majority of those being conducted as doctoral dissertations). Kulinna, Scrabis-Fletcher, Kodish, Phillips, and Silverman (2009) reported that by the mid-2000s, physical education researchers were publishing more than 200 such studies annually. McKenzie and Lounsbury (2013), Ward (2013), and Rink (2013) point out that only a small fraction of those studies could be correctly categorized within the teacher effectiveness paradigm because most studies lacked one or more of the

essential components of that paradigm required by Dunkin and Biddle (1974) and Brophy and Good (1986): a description of the teacher's intended learning outcome/s; definitions and systematic observations of the teacher's and/or learners' behavior; and an objective measure of student learning. In most studies, physical education researchers provided valid and reliable descriptions of teacher and/or learner behaviors but lacked outcome measures that could be used to verify that certain processes contributed to learning or student growth. Lacking sufficient outcome measures, many researchers turned to the general education research literature to adopt proxy measures of learning in a quasi-teacher effectiveness paradigm. For example, the relationship between student time on task and learning had been well established in classroom research (Brophy & Good, 1986). Those who studied time on task or related variables, such as academic learning time in physical education (Metzler, 1989), would measure those variables and posit that teachers who provided higher rates of those variables were more effective compared with teachers who provided lower rates.

#### POSSIBLE FUTURE AGENDAS FOR TER-PE

Even with that necessary bit of “truth in advertising” revealed, physical education researchers conducted a large number of process–process and process–product studies that contributed greatly to our body of knowledge about teaching and learning that would lead to evidence-based best practice in P–12 programs and define CK and pedagogical content knowledge (PCK) to inform physical education teacher education (PETE) programs. The enterprise of TER-PE grew rapidly in the 1980s and 1990s, in no small measure fueled by the intellectual excitement of exploring an expanding array of variables that might connect teaching and learning processes with student-learning outcomes (SLOs). It was not long before we became less dependent on variables adopted from general education research and developed some of our own: content development (Rink, French, Werner, Lynn, & Mays, 1992), value orientations (Ennis & Chen, 1995), and pedagogical knowledge structures (Housner, Gomez, & Griffey, 1993). In my opinion, as one whose own research career started in this milieu, much of that excitement came from the physical education research community's autonomy to theorize, conceptualize, and explore new and promising variables within process–process and process–product paradigms; the agenda for research on teacher effectiveness was ours to determine, by and large. The results of that autonomy are reflected in Rink's (2013) statement: “The work done in the paradigm of process–product studies has become part of the effectiveness teaching literature in physical education and is used extensively to train teachers and observe teaching” (p. 409). Rink's (2013) reflection validates that the future of

research on teacher effectiveness in physical education was not only promising, but years later, there would be much evidence that it had actually come to fruition (Graber, 2001; Silverman & Skonie, 1997). Although we borrowed heavily from classroom research to get us started, we eventually steered ourselves to a place we could claim as a self-determined destination.

The set of articles under discussion here provides some suggestions for a future agenda in TER-PE; I will briefly review those and add one of my own. McKenzie and Lounsbury (2013) recommend that our agenda be focused on teaching and learning processes that have some relationship to public health outcomes in physical education, as represented in the Health-Optimizing Physical Education (HOPE) curriculum framework (Metzler, McKenzie, van der Mars, Williams, & Ellis, 2013). For studies of teacher effectiveness within HOPE to proliferate, there first must be a wider adoption of comprehensive school physical activity programs (American Alliance for Health, Physical Education, Recreation and Dance, n.d.) and other whole-of-school approaches like those advocated by the Institute of Medicine (2013).

Ward (2013) advocates that we include analyses of teacher CK in future studies of TER-PE. One could argue that CK is included in the array of presage variables in paradigms of teacher effectiveness research, so we would not need to add a fifth component to Dunkin and Biddle's (1974) model. Either way, Ward's point is well taken that we do not study CK enough in teacher effectiveness research, and increasing our understanding of CK makes a worthy agenda item for the future.

Rink (2013) explores both the promise and the pitfalls of setting an agenda for teacher effectiveness research that is: (a) based on student performance; and (b) aligned with an emerging national movement to use instructional observation systems designed to study effectiveness for high-stakes teacher evaluation purposes. She cites some of the problems inherent to this agenda: subject matter marginalization, poor program resources, a lack of consensus in both defining and measuring student performance indicators, and our field's general ambivalence to assessment. On the positive side, her agenda would promote a shared vision, better advocacy, focused teacher development, and increased accountability.

I will add a fourth possible agenda for TER-PE. This is not a new agenda item; it is one that has already begun to emerge and in my estimation should receive greater attention. As Rink (1996) states, much of the research on teacher effectiveness conducted in the 1980s and 1990s was based on teaching and learning processes, and (when identified) outcomes strongly aligned to the direct instruction model. What was considered effective instruction and then translated into best practice originated predominantly from that single instructional design. In recent years, we have developed and adopted a variety of

other instructional models for physical education instruction (Metzler, 2011), many of which feature effective teaching and learning processes that are antithetical to direct instruction (e.g., task framing, personalized instruction, nonmastery learning tasks; Gurvitch & Metzler, 2013).

With the increased use of model-based instruction (MBI) in physical education came a similar increase in the number of studies that contextualized and defined effective teaching within the design parameters of each model, such as sport education (Hastie, de Ojeda, & Luquin, 2011), cooperative learning (Dyson & Casey, 2012), and tactical games (Griffin & Butler, 2005). What has emerged is a body of knowledge about how to instruct with certain models more effectively and in turn how to train teachers to use those models to the fullest potential of their respective designs (Gurvitch, Metzler, & Lund, 2008). Although it might sound as if this agenda has been fully accomplished, in reality, we still need many more studies of these and other models in the future. We are only now scratching the surface of what we need to know about effective teaching in the various models used in physical education today.

## A PERFECT POLICY STORM IN GEORGIA

Although useful in many other ways, the primary purpose of TER-PE is to explore and identify relationships between teaching and learning processes and SLOs. Once one or a combination of teaching/learning processes has been shown to lead to certain SLOs, those processes are then promoted as best practice and are included in the CK and PCK needed by preservice and in-service physical education teachers. As Rink (2013) points out, these relationships are very complicated and can rarely be generalized into “rules for teaching” that are valid across content, contexts, instructional models, student groups, and learning outcomes. These processes also cannot be validly monitored and measured with generic observation systems or by observers who are not familiar with subject-specific CK and PCK. The agendas suggested by McKenzie and Lounsbury (2013), Ward (2013), Rink (2013), and me all hinge on one assumption—that the future of teacher effectiveness research will be determined primarily by the combined communities of professors/researchers and P–12 professionals who together would generate a base of evidence to guide instructional best practice in physical education. For the rest of this article, I will argue that this assumption is no longer valid.

For better or worse, policy has always been a driving force in education and teacher education. On one hand, we recognize the power and benefits of good policy; on the other hand, we recognize the blunt reality of having bad policy imposed on teachers and teacher educators (Metzler, 2009). Georgia is now witnessing the simultaneous implementation of two major sets of policies that will steer educational practice well into the future. One set of these policies is being

applied to the evaluation of in-service teachers and will no doubt influence what is considered best practice in teaching physical education. The second set of policies is being applied to the initial certification of all teachers in Georgia and will have a direct impact on the conduct of all teacher education programs, including PETE at the Georgia State University.

## Race to the Top and TKES

The history of teacher accountability is a long one, but it can be argued that its modern era began with the publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983), in which the perceived failures of American schools were directly attributable to poorly prepared and underperforming teachers. Directly and indirectly, the resulting call for better teachers in our schools contributed to the need for and expansion of research on effective teaching. However, for many years, the pursuit of research on effective teaching and the movement toward teacher evaluation took separate courses: The former looked for evidence that linked instruction with learning, while the latter looked for ways to identify and reward “good” teachers while simultaneously identifying “bad” teachers with the ultimate goal of eliminating them from the teaching profession.

The high-stakes teacher evaluation movement gained momentum in the 1990s with the use of value-added models (VAMs) to measure teaching performance. In subjects that included standardized testing for consecutive years, statistical models could be applied to previous results to project student performance on future tests. Teachers whose students performed at or above those projections “added value,” while those teachers whose students performed below those projections did not. An increasing number of states use VAMs as a way to differentiate between more- and less-effective teachers; some states use VAMs to evaluate teacher education programs (National Council on Teacher Quality, 2012). Interestingly, although VAMs use product measures to determine teacher effectiveness, they use no measures of the teaching and learning process, which violates one of the major tenets of teacher effectiveness research established by Dunkin and Biddle (1974) and Brophy and Good (1986). Because physical education does not have valid standardized measures of student learning, our teachers have typically not been included in applications of VAMs for evaluation purposes.

Even as the merits of VAMs were being debated across the nation and applied in a growing number of states, the next major development in modern teacher evaluation occurred—one that will no doubt have an effect on TER-PE and best practice for physical education in P–12 schools. In 2010, the U.S. Department of Education announced a state-level grant competition for \$4.35 billion to fund its Race to the Top (RTTT) initiative. Nineteen states were awarded RTTT grants in 2010 and 2011, including Georgia, which

received \$400 million. Among the provisions for awarded grants was the direct assurance that a state “. . . must have no legal or regulatory barriers to measuring teacher/administrator performance based on student performance” (RTTT, 2010). Fast-forwarding, the Georgia Legislature in 2013 approved the Teacher Keys Effectiveness System (TKES) as the official statewide teacher evaluation system, thereby complying with the mandates of the RTTT grant award. It is TKES that now drives the definition, design, and measurement of teacher effectiveness for all teachers in Georgia, in the name and purpose of high-stakes teacher evaluation. Therefore, it is worth taking a close look at TKES to analyze its likely impact on best practice in physical education in Georgia and the future of TER-PE.

All teachers in Georgia public schools will be evaluated annually with TKES, which includes three major components<sup>1</sup>: (a) observations and documentation of instructional practice; (b) student-completed surveys of instructional practice; and (c) measures of student learning/growth. Two formal observations (one announced, one not) and three “drop-by” observations of instructional practice will be conducted by trained observers (most likely assistant principals) using a common set of 10 indicators for all subject areas. Teacher performance on each indicator will be scored on a rubric with points ranging from 0 (“ineffective”) to 3 (“exemplary”). Students in Grades 3 through 12 will complete generic (i.e., not subject-specific) online surveys for each teacher who has instructed them. An example from the survey for Grades 3 through 5 is, “My teacher says it is OK for me to make mistakes, as long as I try my best.” Students in Grades K through 2 will respond to a similar set of items, read to them aloud and completed with paper and pencil. Student learning/growth will be measured by performance on standardized tests for those subjects with approved tests; it will be measured by student performance on approved SLOs for “nontested” subjects, including physical education. Each school district was allowed to develop its own set of SLOs in nontested subjects, subsequently approved by the State Department of Education, resulting in a wide range of types of outcomes and metrics being used across the state. Each component of TKES results in a numeric score for each teacher; those scores are then summed to determine a teacher’s overall Teacher Effectiveness Measure (TEM; score) each year. Each teacher’s TEM will be compared to those of other teachers in the same subject and across all subjects and then will be used to determine rewards such as merit-pay adjustments, professional advancement, and ultimately retention.

When 26 volunteering school districts piloted TKES in 2012–2013 and reported their results to the Department of Education, TKES fared poorly in its ability to differentiate between more- and less-effective teachers; nearly 95% of all

teachers received overall scores in the “proficient” or “exemplary” ranges (Georgia Department of Education, 2012). Driven by the state’s commitment to RTTT and facing impending sanctions by the U.S. Department of Education (Galloway, 2013), Georgia proceeded with full implementation for the 2013–2014 school year.

In the summer of 2013, I conducted a professional development workshop for all physical education teachers in a Metro Atlanta school district. The topic of the workshop was using MBI, but it soon became apparent that the teachers had no interest in MBI if it could not provide a direct benefit to them as they prepared to be evaluated with TKES this year. As I presented descriptions of two innovative models, the question I was asked repeatedly was, “What will happen if I’m teaching this [new] way and my assistant principal comes to my class for an unannounced TKES visit?” It was clear to me that TKES was going to drive their plans for how to instruct in the future—not selecting and using evidence-based instructional models.

### Teacher Performance Assessment (edTPA)

Concurrent with the implementation of TKES were new policies applicable to the initial certification of teachers in Georgia. In 2013, the Georgia Professional Standards Commission (PSC) adopted new rules that will require all teacher certification candidates to pass a second licensure test, in addition to the existing Georgia Assessments for the Certification of Educators<sup>2</sup> test of teacher CK. The PSC passed these new rules with essentially no input from teachers, teacher educators, or professional education associations. Starting in 2015, all candidates for initial teacher certification must take and pass the Teacher Performance Assessment (edTPA), which was developed at Stanford University, endorsed by the American Association of Colleges of Teacher Education, and will be administered by Pearson. Currently, all teacher education program faculty in Georgia are becoming familiar with edTPA and are developing plans to assist their students in preparing for and passing this assessment.

Most likely, teacher candidates will complete edTPA during their student teaching placement term.<sup>3</sup> They must submit a large electronic portfolio of artifacts and evidence to be gathered while they implement a three- to five-lesson “learning segment” to one intact class of students. During the implementation of their learning segment, they will be evaluated on five components: planning, instruction, assessment, analyzing teaching, and academic language. In addition to extensive written documentation, candidates will submit a 20-min video sample of their teaching, taken during

<sup>2</sup>It is the equivalent of Praxis II in other states.

<sup>3</sup>All descriptions of edTPA are taken from the *edTPA Handbook for Physical Education* (Stanford Center for Assessment, Learning and Equity, 2013).

<sup>1</sup>All descriptions of TKES are taken from the TKES Handbook (Georgia Department of Education, 2013).

one or more of their included lessons. Trained scorers will score the five components and the video sample using a series of 15 generic (non-subject-specific) rubrics. Each rubric produces a numeric score; the sum of all 15 scores determines the candidate's overall score and their pass/fail status.

Many of the operational details of edTPA are still unknown, but as teacher educators look to full implementation in 2015, many of us in Georgia are already making major decisions about when and how to prepare our candidates for this evaluation. It is notable that questions about "Why?" have not even been raised—we were never asked for input and to machinate about it now would be both a futile effort and a waste of the time needed to get our candidates ready for edTPA.

The PETE program at Georgia State University has been built on the CK and PCK needed for effective MBI (Gurvitch et al., 2008). Our candidates complete two comprehensive units of MBI during student teaching that demonstrate their ability to plan, teach, assess, and reflect on instructional units while using instructional models they learned previously in the program. From our projections of the time and other resources needed by candidates to plan for and complete edTPA, we have already concluded that edTPA will supplant one of those MBI units—and we will need to make special arrangements to ensure our candidates are assigned to schools that provide some contextual advantages for passing edTPA. We have also concluded that we will need to make major changes in several of the lead-up pedagogy courses to give our candidates advance planning opportunities for edTPA. In short, the edTPA "tail" will soon be wagging the PETE program "dog."

As we examined the expectations embedded in edTPA and reviewed the evaluation rubrics, one of the stark realities for our faculty was that we should advise our candidates to endorse the "KISS" philosophy. Rather than plan to display their abilities to use innovative MBI, they would be wise to default to simplistic, traditional, direct instruction for their edTPA lesson segments. The stakes for edTPA are too high to risk displaying CK and PCK that might not be obvious to the non-physical education personnel who will score their lesson segments from the standard, generic rubrics. Asking the edTPA evaluators to recognize and approve innovative instructional plans, learning activities, and assessments in physical education lesson segments would greatly increase the risk for failing edTPA and jeopardizing our candidates' initial certification license.

### HAS POLICY TRUMPED EVIDENCE-BASED PRACTICE FROM TER-PE?

Based on the policies that established TKES and edTPA in my home state and other states across the country, I am conceding that the future agenda for TER-PE will be determined less and less by our researchers, teacher

educators, and P-12 professional community. Subtly at first, but now fully apparent, any evidence-based agenda we might offer to define and guide best practice has been co-opted by policymakers and other external forces in the name of teacher evaluation, accountability, and quality. Simply put, the future of deriving best practice from TER-PE is not what it used to be. In a perfect world that no longer exists, our researchers would uncover strong relationships between certain instructional processes and well-defined learning outcomes and would disseminate those findings to other researchers, teacher educators, and practitioners. That evidence-based knowledge would become part of the CK and PCK taught in our PETE programs and adopted as best practice in P-12 school programs. That scenario is vanishing because best practice in P-12 programs will be driven in the future by policies like TKES and edTPA, not research on teacher effectiveness. Even if TER-PE continues to produce robust results that can improve CK, PCK, and learning in physical education, those results may have little or no chance to inform best practice in the future. That is a dire assessment of the future of TER-PE, but one that appears to be inescapable in the current policy environment.

That assessment should not lead researchers, PETE faculty, and P-12 teachers to abandon the pursuit of evidence-based best practice for instruction in physical education. We must continue to search for relationships between teaching and learning behaviors that could lead to improved student learning, and when we find them, we should promote them as needed CK and PCK for PETE programs and P-12 instruction. In doing so, we can keep alive the hope that these robust variables in the future will find their way into teacher certification tests like edTPA and teacher evaluation systems like TKES, once again giving TER-PE a prominent role in determining best practice in our field.

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