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Implementation of the Teacher Professional Growth and Effectiveness System in Rural Kentucky High Schools

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Abstract A focus on improving teacher quality and student achievement led many states to implement teacher effectiveness systems. The Charlotte Danielson Framework for Teaching was adapted by Kentucky as the Teacher Professional Growth and Effectiveness System (TPGES). This study examined educator viewpoints concerning the impact of TPGES on improving teacher quality and student achievement, educator attitude for implementation, time requirement, and the potential to impact teacher growth and student learning.

Teacher and principal triangulated data indicated mixed viewpoints concerning the impact of TPGES implementation on improving teacher quality and improving student learning. The data did not indicate positive educator attitudes for the implementation and time requirement for TPGES. Study implications focused on five identified dispositions relevant for all educators striving to implement innovative change initiatives.

Keywords TPGES; teacher quality; student achievement; dispositions

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Purpose of the study

The purpose of this study was to examine how the viewpoints of rural Kentucky high school teachers and principals changed during the Teacher Professional Growth and Effectiveness System (TPGES) implementation year in regards to improved teacher quality and student achievement. In addition, the study addressed issues of educator attitude toward implementation, the time requirement of implementation, and the potential for TPGES implementation to improve the teaching/learning process and student achievement. Analysis of study data enabled the researchers, three retired rural public school administrators and an experienced special education teacher, all current assistant professors of education at a public state university, to identify teachers' and principals' dispositions that supported successful TPGES implementation. The researchers have extensive experience in teacher quality development and student achievement.

Significance of the study

This study led researchers to identify several teacher and principal dispositions that supported successful TPGES implementation in rural Kentucky high schools. Study findings are not generalizable to all schools. However, teachers and principals who are striving to implement difficult change initiatives in public schools could benefit by the demonstration of identified leadership dispositions.

Literature review

The focus: Teacher quality and student achievement

In an era of focus on improving student achievement in United States public schools, the quality of instruction teachers provide is a national issue. Parents, educators, and communities expect schools to sustain educational environments designed to prepare students to become well-educated, successful members of our dynamic American society. Student achievement is the primary mission of public schools, and those schools continue to implement reform efforts designed to improve teacher quality, which supports improved student achievement. More than two decades of research supported the connection between teacher quality and student achievement. The National Commission on Teaching and America's Future (1996) presented teaching as the core of a blueprint for reforming the nation's schools. According to this report, what teachers know and can do were the most important influences impacting student achievement. The report identified the definition of an effective teacher as one whose students showed high levels of learning while under that teacher's direction. In addition, the study noted that a competent, quality teacher for every child was the most important ingredient in education reform; however, this component was often the most overlooked. Additionally, in this era others noted that teacher behavior was the dominant factor impacting student academic achievement (Wright, Horn, & Sanders, 1997). Later, Robert Marzano and J. Timothy Waters (2009) indicated quality teachers were teachers who impacted student achievement and noted that educational policy needed to be directed toward improving aspects of teaching, such as instructional practice.

No Child Left Behind Legislation (Klein, 2002) focused on the need for high-quality teachers for all students, regardless of socioeconomic status. Barbara Nye, Spyros Konstantopoulos, and Larry Hedges (2004) reported that all United States children, no matter where they lived, were academically endangered when they had incompetent teachers for three consecutive years. They (Nye et al., 2004) also reported that low-income elementary students with quality teachers three years in a row produced test scores similar to those of middle-class students. Additional compelling evidence of the impact of quality teachers on student achievement came from the Center for Public Education (2005), which highlighted three primary findings. The effect of quality teachers on student learning was greater than that of student ethnicity, family income, the school attended, or class size. The effect of quality teachers was stronger for poor and/or minority students than for their more affluent and/or white peers, although all groups benefited from effective teachers. In addition, the effects of quality teaching accumulated over the years. Others noted that quality teachers performed well among both low- and high-ability level students, while ineffective teachers were ineffective with students of all ability levels (Aaronson, Barrow, & Sander, 2007).

The literature concerning teacher quality and student achievement has continued to expand. James Stronge (2013) focused on the crucial role of the teacher and noted that to improve the quality of all schools and positively affect the lives of every student, educators must change the quality of teaching practices. Although curriculum changes periodically, it is the teachers who must implement the new curriculum with effective teaching practices. Professional development must be provided, for teachers to implement new learning. Christopher Day and Qing Gu (2014) reported that educational values and practices were under intense scrutiny during this time of high-stakes testing, particularly concerning the progress and achievement of students, despite the diverse communities and student populations schools served. One core responsibility of every teacher was to engage students in tasks assisting them in their personal, social, and intellectual development. Teachers had to be knowledgeable and persistent in their commitment to students and learning.

The Kentucky initiative: Teacher professional growth and effectiveness system

When Kentucky education officials drafted the commonwealth's first application for Race to the Top funding, they included plans to develop a system for improving educator performance. Although Kentucky did not receive a Race to the Top award during the initial phase, officials, armed with findings concerning teacher quality and student achievement, decided to move ahead with the effectiveness system component. The new teacher effectiveness system, the Teacher Professional Growth and Effectiveness System (TPGES), was designed to measure teacher effectiveness and to serve as a catalyst for professional growth and continuous improvement (Prichard Committee for Academic Excellence, 2013).

During TPGES development, the Kentucky Department of Education sought guidance and recommendations through stakeholder steering committees. The TPGES implementation timeline was deliberate, allowing time for field tests, feedback, a statewide pilot, and evaluation/revision. Phase one implementation in the

2010–2011 school year included teachers and administrators from 25 school districts participating by providing feedback, defining multiple measures of effectiveness, and recommending revisions to the process and evaluation tool. Educators from 55 districts participated in phase two during the 2012–2013 school year. Phase three, during the 2013–2014 school year, was a statewide pilot, with the Kentucky Department of Education providing professional development, and the framework and processes were finalized. In the 2014–2015 school year, TPGES was implemented throughout the Commonwealth of Kentucky. All districts were mandated to implement TPGES or another research-based system that was approved by the Kentucky Department of Education.

The TPGES emphasized multiple measures of evaluation, noting that teaching was too complex for an accurate measure of performance from any single measure. The TPGES process included administrator observation, peer observation, reflection, and student growth (Prichard Committee for Academic Excellence, 2013). A TPGES-trained school-level administrator and each teacher to be observed met for a pre-observation conference designed for the discussion of special classroom circumstances, lesson goals, objectives, strategies, and assessment. Following the observation, teachers reflected on the lesson and rated themselves on each TPGES indicator, preparing self-assessment data to share during the post-conference. During post-conferences, observers and teachers reviewed the documentation observers collected during the lesson, discussed the teacher's self-reflections, and cooperatively determined indicator ratings. In addition, peer observers, TPGES-trained teacher colleagues, observed and documented other teachers' professional practice to provide supportive, constructive feedback. Another of the multiple measures of teacher effectiveness was student growth, the impact a teacher has on students as measured by multiple data sources over time (Prichard Committee for Academic Excellence, 2013).

Obstacles to effectiveness and evaluation systems implementation

Despite research that linked student achievement to teacher quality and supported valid and reliable evaluation procedures for educators, other studies indicated that educators often did not support new effectiveness and evaluation systems. They were more likely to mistrust new evaluation systems, although a system that was clearly explained and based, in part, on educator feedback caused less anxiety (Council of the Great City Schools, 2012). Many teachers said current evaluation systems were flawed; however, Sarah Rosenberg and Elena Silva (2012) noted that many believed evaluations were beginning to reflect their performance more accurately. In addition, teachers responded better when they understood why something changed and what the change was intended to accomplish. The Bill and Melinda Gates Foundation (2012) reported that some teachers assumed the purpose of the new evaluation systems was to rank teachers. They recommended informing teachers that the purpose of new systems was to improve student achievement through the evaluation, professional support, and development of educators.

Kentucky educators voiced time-requirement issues concerning TPGES implementation. For example, according to the Louisville *Courier-Journal*, "Teachers, administrators, and state officials agreed: some parts of the new state mandated teacher

evaluation system, which districts are rolling out this year, are a 'time suck' for educators" (Clark, 2015). In addition some teachers and administrators said the system required time-consuming data entry into an electronic state database that often did not work. Kentucky Department of Education personnel acknowledged "data grudges" and noted the department was working to alleviate unnecessary tasks that took additional time (Clark, 2015). Jerry Patterson (1997) noted that when challenged to implement significant change, a natural human reaction was often to resist, even to the point of considering personal interests before school interests, and not really try to understand reasons for the change. Naturally, TPGES implementation efforts often met apprehension and distrust.

Interpreting teacher evaluation policy and planning for implementation can be especially challenging in rural school districts. According to Kathleen Budge (2010), rural schools often had limited capacity for change implementation, and policy mandates tended to be designed for suburban and urban settings. Jane Gilles (2015) noted that rural schools often experienced challenges concerning limited training opportunities. Newly adopted teacher-evaluation policies involved complex changes to administrative and classroom practices, and required teacher and evaluator professional development designed without consideration of limited supports commonly available in rural districts.

Research questions

1. How have teacher viewpoints and principal viewpoints changed during the implementation year concerning the impact of the TPGES process on teacher quality and the impact of the TPGES process on student achievement?
2. How have teacher viewpoints and principal viewpoints changed during the implementation year relating to the crucial TPGES process issues concerning educator attitude for TPGES implementation, TPGES time requirement for educators, the potential for TPGES implementation to improve the teaching/learning process, and the potential for TPGES implementation to improve student learning?

Procedures

Participants for this study were selected by purposeful sampling, with each of the 77 Kentucky high schools identified by the Kentucky Department of Education as "rural" invited to participate. Teacher and principal data were collected in this sequential mixed-method study by the use of survey and interview methodology. John Creswell (1995) identified a sequential study as a work in which a qualitative component and a quantitative component are completed as two separate phases of the study. According to Abbas Tashakkori and Charles Teddlie (1998), mixed-methods studies combine the qualitative and quantitative approaches within different phases of the research process. Results in mixed-methods studies might, or might not, provide stronger evidence for study implications. Focus groups or interviews can usefully be viewed as the qualitative counterpart to the quantitative survey research to obtain a broad range of information about events.

All professionally certified staff in participating schools had the opportunity to complete two surveys, the first at the beginning of the TPGES implementation year, and the second at the end of the TPGES implementation year. These surveys were designed to collect data from teachers and principals concerning their viewpoints about TPGES implementation in their schools. From 77 eligible schools, 15 participated in the study, representing a 19.5 percent response rate. In addition, researchers requested that principals of three participating schools, selected purposefully to represent different Kentucky geographic areas, participate in face-to-face interview sessions to obtain clarification and follow-up information from the first survey. Each principal agreed to participate in the interview and also allowed researchers to invite teacher volunteers to participate in small-group interviews focused on TPGES implementation. Twenty-eight teachers and three principals participated in TPGES interviews, and 125 teachers and 15 principals submitted surveys.

Descriptive statistical analysis of survey data and qualitative analysis of interview data were the primary methods of analysis for this study. Survey data were used to determine differences in both principals' and in teachers' viewpoints concerning the impact of TPGES on teacher quality and the impact of TPGES on student achievement, from the beginning of the implementation year to the end of the implementation year using a five-point Likert scale. On both the Early Year Survey and Year-Ending Survey, researchers noted the percentage of respondents indicating Minimal-Impact Response (1 or 2), Noncommittal Response (3), or High-Impact Response (4 or 5) for impact of TPGES on teacher quality, survey item five, and impact of TPGES on student achievement, survey item six. Comparison of the percentage of responses at each impact response level from the two surveys enabled researchers to determine the percentage of respondents that changed their viewpoint concerning TPGES impact on teacher quality (survey item five) and their viewpoint concerning TPGES impact on student achievement (survey item six) from the beginning of the implementation year to the end of the implementation year.

In addition, survey data were used to determine the differences in both teachers' and principals' viewpoints concerning TPGES issues of educator attitude for TPGES implementation, TPGES time requirement for educators, and potential for TPGES implementation to improve the teaching/learning process, and potential for TPGES implementation to improve student learning (survey item seven) from the beginning of the implementation year to the end of the implementation year. Interview data were recorded, transcribed, and grouped into themes, and were used to gain an in-depth understanding of teachers' and principals' viewpoints concerning TPGES implementation. Survey and interview data were triangulated to identify implications for additional focus, as rural Kentucky high schools and other schools continue to implement innovative change.

Results

Study terminology

- TPGES: Teacher Professional Growth and Effectiveness System
- Teacher Group: All classroom teachers who participated in the surveys, including peer-observer teachers

- Principal Group: Building principals, who all completed TPGES evaluator training
- Early Year Survey: Data collection at the beginning of the implementation year, fall 2014
- Year-Ending Survey: Data collection at the end of the implementation year, spring 2015
- Minimal-Impact Response: A respondent Likert survey rating of 1 or 2
- Noncommittal-Impact Response: A respondent Likert survey rating of 3
- High-Impact Response: A respondent Likert survey rating of 4 or 5

Research question one

How have teacher viewpoints and principal viewpoints changed during the implementation year concerning the impact of the TPGES process on teacher quality and the impact of the TPGES process on student achievement?

Teacher group: Improvement of teacher quality

From the Early Year Survey to the Year-Ending Survey, the percentage of Teacher Group respondents who indicated Minimal-Impact Response concerning the impact of TPGES on teacher quality decreased 6.6 percent. From the Early Year Survey to the Year-Ending Survey, the percentage of respondents who indicated High-Impact Response concerning the impact of TPGES teacher quality increased 2.8 percent. On the Year-Ending Survey, 42.5 percent of respondents indicated High-Impact Response (see Table 1).

Table 1: Teacher group: improvement of teacher quality

Survey	Early year	Survey	Year ending	Survey	Year ending
Rating	*N*	*%*	*N*	*%*	*Gain-loss%*
1	5	4.7	4	4	-.7
2	17	16	10	10.1	-5.9
3	42	39.6	43	43.4	+3.8
4	34	32.1	35	35.4	+3.3
5	8	7.6	7	7.1	-.5
	N = 106		*N* = 99		

One teacher interviewee noted the impact of feedback by sharing that on her mini observation she received her worst scores ever. However, she stated that the process was very beneficial and her principal's feedback was crucial. She also stated that she now looks at instruction differently and believes she could actually improve her teaching. Other interviewees noted that growth was the focus. Teachers received specific feedback that enabled them to improve their instructional practice.

Principal group: Improvement of teacher quality

From the Early Year Survey to the Year-Ending Survey, the percentage of Principal Group respondents who indicated Minimal-Impact Response concerning the impact

of TPGES teacher quality decreased 6.65 percent. From the Early Year Survey to the Year-Ending Survey, the percentage of respondents who indicated High-Impact Response concerning the impact of TPGES on teacher quality increased 4.2 percent. On the Year-Ending Survey, 90.9 percent of respondents indicated High-Impact Response concerning the improvement of teacher quality (see Table 2).

Table 2: Principal group: Improvement of teacher quality

Survey	Early year	Survey	Year ending	Survey	Year ending
Rating	*N*	*%*	*N*	*%*	*Gain-loss%*
1	0	0	0	0	0
2	1	6.65	0	0	-6.65
3	1	6.65	1	9.1	+2.45
4	6	40	6	54.5	+14.5
5	7	46.7	4	36.4	-10.3
	N = 15		*N* = 11		

A powerful statement from one principal interviewee indicated her belief that TPGES implementation leads to improved teacher quality, "TPGES is a real observation, the real deal … we are doing the right thing." Other interviewees agreed that teachers want specific feedback, not just "meets expectations," which means nothing related to real growth. One interviewee also noted that when she provided accurate feedback, and when she and the teacher shared ideas concerning specific feedback, not only did teacher quality improve, but she also learned and grew as an instructional leader.

Teacher group: Improvement of student achievement

From the Early Year Survey to the Year-Ending Survey, the percentage of Teacher Group respondents indicating Minimal-Impact Response on the improvement of student achievement decreased 2.6 percent. From the Early Year Survey to the Year-Ending Survey, the percentage of respondents who indicated High-Impact Response concerning the impact of TPGES on student achievement decreased 3.6 percent. On the Year-Ending Survey, 36 percent of respondents indicated High-Impact Response concerning the improvement of student achievement (see Table 3).

Table 3: Teacher group: Improvement of student achievement

Survey	Early year	Survey	Year ending	Survey	Year ending
Rating	*N*	*%*	*N*	*%*	*Gain-loss%*
1	8	7.6	4	4	-3.6
2	17	16	17	17	+1
3	39	36.8	43	43	+6.2
4	32	30.2	26	26	-4.2
5	10	9.4	10	10	+.6
	N = 106		*N* = 100		

A common theme among teacher interviewees focused on the schools' goal of increasing student achievement. One interviewee noted that they are all about student achievement, and TPGES is a great tool that enables teachers and administrators to focus on components of teaching that impact student achievement.

Principal group: Improvement of student achievement

On both the Early Year and Year-Ending surveys, zero Principal Group respondents indicated Minimum-Impact Response concerning the improvement of student achievement based on TPGES implementation. From the Early Year Survey to the Year-Ending Survey, the percentage of respondents who indicated High-Impact Response concerning the impact of TPGES on student achievement increased 11 percent. On the Year-Ending Survey, 91 percent of respondents indicated High-Impact Response concerning the improvement of student achievement (see Table 4).

Table 4: Principal Group: Improvement of student achievement

Survey	Early year	Survey	Year ending	Survey	Year ending
Rating	*N*	*%*	*N*	*%*	*Gain-loss%*
1	0	0	0	0	0
2	0	0	0	0	0
3	3	20	1	9	-11
4	5	33.3	5	45.5	+12.2
5	7	46.7	5	45.5	-1.2
	N = 15		*N* = 11		

A statement by one principal reflected the mindsets of other principal interviewees, "We focus on student achievement, and TPGES supports what we do every day."

Research question two

How have teacher viewpoints and principal viewpoints changed during the implementation year relating to the crucial TPGES process issues concerning educator attitude for TPGES implementation, TPGES time requirement for educators, the potential for TPGES implementation to improve the teaching/learning process, and the potential for TPGES implementation to improve student learning?

Teacher group: TPGES positives

On the Year-Ending Survey 8.5 percent of Teacher Group respondents, seven percent fewer than on the Early Year Survey, noted positive educator attitude for TPGES implementation. In addition, 7.4 percent of respondents noted the time requirement for the TPGES process as positive on the Year-Ending Survey, 1.2 percent more than on the Early Year Survey. The potential to improve the teaching/learning process was considered to be a positive component on the Year-Ending Survey by 61.7 percent of respondents, a drop of 16.7 percent from the Early Year Survey. On the Year-Ending Survey, the potential to improve student learning was considered to be a positive component of the TPGES process by 58.5 percent of respondents, a drop of 5.4 percent from the Early Year Survey (see Table 5).

Table 5: Teacher group: TPGES positives

Survey	Early year	Survey	Year ending	Survey	Year ending
Rating	*N*	*%*	*N*	*%*	*Gain-loss%*
Educator attitude for implementation	15	15.5	8	8.5	-7
Time requirement	6	6.2	7	7.4	+1.2
Potential to improve teaching/learning process	76	78.4	58	61.7	-16.7
Potential to improve student learning	62	63.9	55	58.5	-5.4
	N = 97		*N* = 94		

Interview data provided additional understanding of educator attitude for TPGES implementation. For example, several teacher interviewees noted concern that TPGES could be just another state program that would come and go as other initiatives had in the past.

Also, while interviewees addressed confidence in their own principal's ability to implement TPGES fairly and effectively, some expressed concern that less experienced or less effective principals might not implement it as well, which would impact teachers' attitudes. One teacher noted, "Our principal talks with us about the process, and that really is helpful. At other schools some teachers are really struggling."

A statement from one teacher interviewee focused on a consistent theme concerning the time requirement for the TPGES process by stating, "We see no real time issue for teachers, except for peer teachers." Other interviewees noted that peer teachers needed release time for professional development and for observation time. In addition, interviewees noted that principals struggled with TPGES time management, but experience during the year had helped.

Concerning TPGES's potential to improve the teaching/learning process and also its potential to improve student achievement, a teacher interviewee voiced a common theme, "In our school we are all about student achievement, and TPGES supports that focus." Other interviewees believed that TPGES was a great tool that enabled teachers and administrators to focus on components of teaching that impact student achievement.

Principal group: TPGES positives

On the Early Year Survey, 14.3 percent of Principal Group respondents noted positive educator attitude for TPGES implementation, while zero respondents noted positive educator attitude for implementation on the Year-Ending Survey. On the Early Year Survey, 7.1 percent of principal respondents identified time requirement as a TPGES positive, and zero principal respondents identified time requirement as a TPGES positive on the Year-Ending Survey. On both surveys, respondents identified the potential to improve the teaching/learning process and the potential to improve student learning at the highest percentages of positive ratings. One hundred percent of Early Year Survey respondents and 90.9 percent of Year-Ending Survey respondents noted that the potential to improve the teaching/learning process was a TPGES positive. On the Early

Year Survey and the Year-Ending Survey, 85.7 percent and 90.9 percent respectively noted the potential to improve student learning as a TPGES positive (see Table 6).

Table 6: Principal group: TPGES positives

Survey	Early year	Survey	Year ending	Survey	Year ending
Rating	*N*	%	*N*	%	*Gain-loss%*
Educator attitude for implementation	2	14.3	0	0	-14.3
Time requirement	1	7.1	0	0	-7.1
Potential to improve teaching/learning process	14	100	10	90.9	-9.1
Potential to improve student learning	12	85.7	10	90.9	+5.2
	N = 14		*N* = 11		

Concerning educator attitude for TPGES implementation, one principal interviewee noted, "TPGES is something new and we are being asked, actually directed, to do something differently." Other interviewees agreed that there will naturally be concern, and those concerns actually can drive improvements if educators work cooperatively and learn from each other. Interviewees also noted that there was an issue of excessive time required to complete the TPGES process, noting that they "refined" their focus. For example, a principal stated, "Before TPGES I spent a lot of time in classrooms. Now, I've adjusted that classroom visitation time toward TPGES activities." A statement from another principal reflected other interviewees' viewpoints concerning the issue of TPGES supporting student achievement by stating, "We focus on student achievement, and TPGES supports what we do every day."

Discussion

Data collection methods were devised to provide multiple opportunities to collect teachers' and principals' viewpoints on topics identified in the study questions. Viewpoints concerning TPGES implementation impacting teacher quality and improving student achievement were addressed in survey items five and six on the Early Year Survey and the Year-Ending Survey. Teacher Group and Principal Group viewpoints concerning the time requirement for implementation, educator attitude for implementation, potential to improve the teaching/learning process, and potential to improve student achievement were addressed in survey item seven. Small-group teacher interviews and individual principal interviews at three participating schools provided opportunities for teachers and principals to express their viewpoints concerning each research question, and provided qualitative data that were triangulated with survey data to develop study implications.

Researchers acknowledged potential study limitations. As the school leaders, principals had options to provide, or not provide, survey access to teachers in their schools. School principals' biases concerning the use of surveys or of TPGES implementation in their schools—or of their concern of the time requirement for participating teachers—could have negatively impacted the return rate. A higher return

rate could have produced a higher level of confidence in results. Another limitation concerned the use of a Likert scale survey, as respondents' differences in perception among numeric ratings could impact results (Simon & Goes, 2013). Another limitation focused on the dynamics of the teacher interview process, conducted in small teacher group settings at the schools. According to Joseph Maxwell (1996) those being interviewed might respond to researchers for the benefit of the researcher or themselves by providing information that does not represent their actual viewpoints. Researchers must remain conscious of how their presence is affecting the setting and the individuals being observed and how this could affect the research results. Individual teacher interviews, with a guarantee of anonymity, could have resulted in a higher level of confidence in results. Conversely, school principals were interviewed individually, which could have resulted in a predisposition to present TPGES implementation favorably regarding their own schools. The presence of other educators during principal interview sessions could have resulted in a higher level of confidence in results.

In addition, researchers noted study delimitations. A primary delimitation of this study was researchers' focus on "rural" schools. Purposive sampling, including only schools classified as "rural," decreased the generalizability of findings. Researchers' review of literature identified recent studies focused on teacher evaluation and teacher quality; however, they identified few recent studies focused on teacher improvement and quality in rural schools, or on the implementation of newly developed teacher evaluation and effectiveness systems in rural schools. Another delimitation was the researchers' decision to include data only from schools that responded to both the Early Year and Year-Ending survey. This decision supported the research question, which focused on differences between early year and year-ending data.

Improvement of teacher quality

Triangulated teacher survey and interview data indicated that teachers believed the TPGES process could support improvement in teacher quality; however, survey data did not indicate that teachers' viewpoints changed overwhelmingly during the implementation year. Although the Teacher Group High-Impact Response increased 2.8 percent from the Early Year Survey to the Year-Ending Survey, less than half of teacher respondents indicated High-Impact Response on the Year-Ending Survey. Teacher interviewees spoke favorably about the TPGES process increasing teacher quality by noting that it could improve teacher instruction, and that teachers did have room for improvement in their teaching. No teacher interviewees, however, actually noted that the implementation of the TPGES process improved their quality of teaching. Analysis of interview data revealed teachers' attitudes concerning the importance of principal involvement in the TPGES process. A consistent theme focused on appreciation for principals' support during TPGES implementation at the school.

Triangulated principal survey and interview data indicated that principals believed TPGES implementation improved teacher quality. From the Early Year Survey to the Year-Ending Survey, the percentage of principals that indicated High-Impact Response concerning the impact of TPGES on teacher quality increased 4.2 percent,

to 90.9 percent. One principal interviewee noted that when the TPGES process was implemented appropriately, the quality of teaching improved, and she, as principal, also grew and learned as an educational leader.

Improvement of student achievement

Triangulated teacher survey and interview data did not indicate a substantial change in teacher viewpoints concerning the impact of the TPGES process on the improvement of student achievement. High-Impact Response on the Year-Ending Survey was 3.6 percent less than on the Early Year Survey, resulting in 36 percent High-Impact Response on the Year-Ending Survey. Forty-three percent of teacher respondents indicated Noncommittal-Impact Response on the Year-Ending Survey. No teacher interviewees stated that the implementation of the TPGES process had improved student achievement. Rather, their statements focused on their commitment to student achievement and acknowledgement of TPGES as a tool that enabled them to focus on components of teaching that impact student achievement. Teachers again noted the importance of teachers and principals working together to support the shared goal of student achievement.

Principal respondents' survey data indicated that they believed the TPGES process improved student achievement. On the Year-Ending Survey, 91 percent of principals indicated a High-Impact Response concerning the improvement of student achievement, 11 percent higher than on the Early Year Survey. Similar to teacher interview data, principal interviewees did not state that TPGES implementation resulted in an increase in student achievement; however, they did focus on the concept that "we," teachers and principals together, focus on student achievement, and that TPGES supported that.

Educator attitude for TPGES implementation

Triangulated survey and interview data indicated that neither teacher respondents nor principal respondents viewed educator attitude for TPGES implementation positively. On the Year-Ending Survey only 8.5 percent of teacher respondents identified a positive educator attitude for TPGES implementation. Zero Principal Group respondents noted a positive educator attitude for implementation on either survey.

Kentucky Department of Education officials, understanding the need for a collaborative rather than a hierarchical evaluation system, provided opportunities for educator participation in TPGES development and implementation. In addition, unlike hierarchical teacher evaluation systems, the resulting TPGES process included collaboration between teachers and principals in determining teachers' TPGES ratings. Although a majority of teacher and principal survey respondents noted TPGES' potential to improve the teaching/learning process and student learning (see Tables 5 and 6), educators did not view TPGES implementation positively. This discrepancy may be due to those being interviewed responding to researchers for the benefit of the researcher or themselves by providing information that does not necessarily represent their actual viewpoints (Maxwell, 1996). Although teacher interviewees addressed confidence in their own principals' abilities to implement TPGES fairly and effectively, some expressed

concern that less experienced or less effective principals might not implement it as well, which could have negatively impacted teachers' attitudes.

Time requirement for TPGES implementation

Survey data indicated that Teacher Group respondents believed the time requirement to implement the TPGES process was excessive. On the Year-Ending Survey, 7.4 percent of Teacher Group respondents indicated time requirement as a positive component of TPGES, 1.2 percent greater than on the Early Year Survey. However, teacher interview data indicated that their viewpoints were focused on the time requirement for peer teachers and for principals, those who observed and completed required TPGES tasks, and were not necessarily focused on their own time requirements.

The Principal Group survey data identified that zero principals viewed time requirement as a TPGES positive on the Year-Ending Survey, while only one principal noted time requirement as a positive TPGES issue on the Early Year Survey. Interview data supported survey data, as principals agreed an excessive amount of time was required to complete the TPGES process. However, principals also noted that they made adjustments in their schedules, including completing TPGES processes during time generally spent on general classroom visitation.

Potential to improve the teaching/learning process and potential to improve student achievement

Examination of the Teacher Group survey and interview data led to an intriguing reflection. Although less than half of the Year-Ending Survey respondents indicated that TPGES implementation actually led to an improvement of the teaching/learning process or to the improvement of student achievement, a majority of Year-Ending Survey Teacher Group respondents indicated their belief that TPGES did have the potential to improve the teaching/learning process and the potential to improve student achievement.

High percentages of Principal Group respondents on both surveys believed that the TPGES process had the potential to improve the teaching/learning process and the potential to improve student achievement.

Implications

Educators implementing innovative change initiatives

The implementation of change initiatives in public schools could potentially be difficult. Certainly, the implementation of the TPGES in rural Kentucky high schools was a complex and challenging change initiative. In research applicable to public schools today, Patterson (1997) noted several harsh realities of change that educators must understand to lead effectively. He noted that most people act first in their own self-interest, not in the interests of the organization. In addition, most people do not want to understand the "what and why" (p. 13) of organizational change because they might have to agree that change is needed. Also, he believed that most schools are wired to protect the status quo and are driven by a convenience mindset rather than by a values mentality. However, Patterson's harsh realities did not exhibit a defeatist mentality, nor was Patterson criticizing educators. Instead, he was reminding

educators of potential mindsets that could impede important change initiatives. Armed with knowledge of these realities, leaders could proactively address and overcome realities about people and school culture. He stated that most people and schools have the capacity to develop resilience and move forward despite these realities of change. To lead is to influence others to achieve mutually agreed upon and socially valued goals that help schools stretch to higher levels. To lead beyond the status quo, educators must confront realities about people and school culture that impact systemic change.

Teacher and principal dispositions are crucial, as they address Patterson's harsh realities and implement meaningful change. The terms "dispositions" and "attitudes" often are used interchangeably. However, dispositions, impacted by attitude, are more complex and behavior-based and are exhibited frequently in the absence of coercion. They constitute a habit of mind under some conscious and voluntary control and are intentional and oriented to broad goals (Lang & Wilkerson, 2007). Several positive dispositions that teachers and principals should demonstrate when focusing on change initiatives are identified in this study, including: a focus on the vision; a commitment to open dialogue; the support for effective common practice; a commitment to authentic self-reflection and action; and a focus on the three Ls (listen, learn, lead). These teacher and principal dispositions are crucial as schools attempt to implement meaningful change initiatives such as TPGES.

Disposition: A focus on the vision

An inescapable reality: we will only sustain success if groups work together, respecting each other's roles, understanding their true values, vision, and mission. First and foremost schools must focus on vision and mission with robust value-based initiatives (Calder, 2014). This disposition of "a focus on the vision" was increasingly evident in rural Kentucky high schools.

Current study interviewees identified perceptions and actions that supported an emphasis on vision. Concerning this focus on vision, interviewees stated that they are beginning to look at school-wide instruction differently, focusing on what happens in the classroom. In addition, interviewees noted that they had to ensure they maintained focus on growth, both of the teacher and student. One interviewee specifically noted, "Until the day we retire, we'll focus on growing as educators. While we have frustrations, when we are resilient and focus on students good things will happen."

Disposition: A commitment to open dialogue

Dialogue is about shared inquiry, a way of thinking, learning, and improving. Dialogue is not about imposing one's explanations and ideas on others; it is something one does *with* other people. Open dialogue requires a shift in mindset concerning the meaning of communication with others, and is an exchange in which people think together, discover something new, and develop shared meaning (Kohireser, 2006).

The commitment to open dialogue also highlights the role of peer teachers in this study. Empowering other professionals to share their expectations with peers, in a partnership, will allow peers to more effectively tailor their feedback, and it also

provides opportunities for teachers to engage in collegial conversations concerning pedagogical practice. In addition, peer observation enables both peer and observed teachers to gain new perspectives and teaching approaches, and enables cross-discipline collaboration leading to more continuity for students (Kentucky Department of Education, 2015).

Several interview statements indicated that Kentucky rural high school educators are developing this disposition of a commitment to open dialogue. Interviewees noted that TPGES spurs discussion in the school, in meetings, and informally. An educator noted, "There is complaining, but that's going to happen because it is something new." Other interviewees noted positive conversation and the desire for TPGES to work. Several interviewees also agreed the TPGES process was improving the culture of learning and working together, listening to their principals' and peers' ideas.

Disposition: The support for effective common practice

An important component of the Kotter Change Model is to embed new practice into the culture of the organization. Schools should be focused on persisting, monitoring, and measuring progress as principals recognize, reward, and model the new behavior. Success is visible and communicated as new norms are continually reinforced (Kotter, 2012).

Statements by teacher and principal interviewees reinforced a growing commitment to the disposition of support for effective common practice. One educator stated, and others agreed, "Actually, for some teachers TPGES is beginning to be something we incorporate into our own personal improvement process." Several interviewees agreed that there was focus on student growth goals, teacher growth, feedback, student discipline, and respectful classrooms, and that TPGES as a tool was helping them engrain those concepts into the school culture. As an interview session ended, one educator noted, "We're somewhat enjoying TPGES, and it's becoming just part of what we do."

Disposition: A commitment to authentic self-reflection and action

Reflection is evident as a teacher performs critical self-examination of practice on a regular basis to deepen knowledge, expand repertoire of skills, and incorporate findings to improve practice. Genuine reflection is based on the observation of data, of what actually happens in the classroom (United States Department of Education, 2013).

Interviewees provided evidence of the disposition of a commitment to authentic self-reflection and action in rural Kentucky high schools. For example, "It's important that we continually self-reflect concerning observations, more so than in the past," one educator noted. Others agreed that genuine self-reflection throughout the TPGES process would enable them to grow as teachers and to improve instruction for all students. Educators also agreed that they should think and intentionally focus on practices described by the observation data.

Disposition for principals, identified by teachers: A focus on the three Ls (listen, learn, lead)

Burnison noted leaders of change initiatives must really listen to what is said, and also for what is not said. Be aware, listen, learn from the right people who support

innovative change, and lead (Burnison, 2013). According to Carl Glickman, Stephen Gordon, and Jovita Ross-Gordon (2001), every teacher in the school should have the opportunity to provide meaningful input concerning the school's instructional program. Teachers are the instructional experts in their chosen academic area and grade span, and they are the professionals who actually teach students daily. By listening to teachers, effective principals are not simply "hearing." Instead, they are seeking to understand the perspective of instructional experts. In addition, effective principals lead collaboratively. No one person has all the right answers to tough educational issues; however, the collective knowledge of the collaborative principal and a staff of engaged instructional experts is crucial in school improvement efforts to increase student achievement.

Anthony Bryk, Penny Sebring, Elaine Allensworth, Stuart Luppescu, and John Easton (2009) reported that all schools need a professional community that focuses on continuous improvement and learning, including professional development for teachers. In addition, Bryk et al. (2009) noted professional development to be one of five "essential supports" for schools. The most important features of effective teacher quality development included teams of teachers learning together, a focus on deepening teachers' content knowledge for teaching, sufficient time for professional learning distributed throughout the year, and the active engagement of participating teachers.

Several thoughts shared by rural Kentucky high school interviewees in this study indicated the development of the "three Ls,:" listen, learn, and lead. One teacher noted, "With my principal it is not a 'got you' situation, but is a process, a framework to help us grow as teachers. She supports us and leads us through the process." Another teacher agreed and stated, "We have a lot of support from our principal, two-way conversations, and it's not a scary process." Other teachers agreed that their principals see TPGES as learning together, building teachers, and stressing the "growth goal" as a process that will increase student learning. One teacher noted that a good principal leader is going to support initiatives that have the potential to help teachers grow, to make sure training takes place, and support teachers when they struggle. In addition she stated, "That is what our principal does, and the atmosphere here reflects the support for teachers and students." Interview data supported the belief that TPGES will improve teaching and learning, with the emphasis on student achievement and effective practice … that it will help teachers and principals learn and grow as a team.

Recommendations

Principals, often charged to implement potentially divisive change initiatives, such as teacher growth and effectiveness systems, should commit themselves to the "power" of inclusive processes that advance teacher quality and student learning. Elaine Fink and Laura Resnick (2001) noted that school principals are responsible for establishing a pervasive culture of teaching and learning in every school. In addition, Michael Fullan (2001) promoted the idea that school principals serve as transformational leaders of the teaching and learning culture of the school. The "power" to get things done in public schools is inherent in the concept of the principalship.

However, "power" is not used here in the traditional, hierarchical sense of having control over people or situations. Instead, consider this "power" of the principalship to be synonymous with public school principals having a unique opportunity to lead and work collaboratively with teachers and other stakeholders, using collective knowledge and expertise to create highly effective schools characterized by quality teachers and high student achievement.

Suzanne Wilson (2011) noted that teacher quality and student achievement depended on "collective processes," such as working conditions and school culture. Effective in the 2017–2018 school year, the Kentucky Department of Education is no longer recognizing TPGES as the official state teacher growth and effectiveness system. School districts may develop or implement another system that meets established Kentucky Department of Education criteria. As educational partners, such as principal-development programs, state agencies, and local school districts continue to build, evaluate, or redesign change initiatives, such as teacher growth and effectiveness systems, they should provide extensive focus on these "collective processes."

In this study of TPGES implementation, the triangulation of data led to the identification of five specific dispositions teachers and principals believe supported TPGES implementation in their schools. Those "dispositions for change" reflect a commitment to a "collective process" focused on teacher quality and to the vision of increased student achievement. According to the Reform Support Network (2014), the challenge for principals is to inform, inquire, involve, and inspire teachers to action, to develop engagement to create shared commitment, rather than rely on one-way communication. Principal-development programs, state agencies, and local school districts should lead current and prospective principal candidates to gain deeper knowledge and understanding of dispositions that support teacher quality and build positive school cultures, with the focus on student achievement.

Need for Additional Study

A relationship between high-quality instruction and student achievement is literature based. Studies indicate that schools and their efforts do make a difference, and much of that difference can be linked directly to teachers (Darling-Hammond, 2000; Stronge, Ward, Tucker, & Hindman, 2007). Further research is needed concerning the implementation of teacher growth and effectiveness systems throughout the United States. Teachers and principals have an ethical commitment to provide quality educational opportunities for every student. Researchers in other school settings might consider qualitative methods, such as observation, interview, and focus groups, which enable them to identify factors that support teacher growth and effectiveness system implementation and student achievement in their schools. In addition, experimental studies focused on the hierarchical and collaborative processes of teacher growth, and effectiveness systems could provide valuable insight to educators concerning research-based strategies that support teacher quality and student learning.

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