Tennessee Educational Leadership A TASCD Publication

Tennessee Educational Leadership (TEL) is a peer reviewed journal intended to communicate information, ideas, theoretical formulations, and research findings related to leadership, supervision, curriculum, and instruction. Starting with *Volume 43*, the *TEL* will appear in an online format with national open availability. Distribution will include Tennessee Association for Supervision and Curriculum Development (TASCD) members and others with an interest in supervision/leadership, curriculum development, and instruction at both the university and schoolbased levels. The journal is nonthematic and aims to promote discussion of a broad range of concepts, theories, issues, and dissemination of the knowledge base for professionals in education.

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Letter from TASCD President Melanie Simpson

Greetings TASCD Members,

I hope this journal finds you well! I hope our membership is staying safe and healthy during these uncertain times. Our thoughts are with you all as we embark on unchartered waters. Many of our schools are balancing distance learning and the traditional school setting. Many of the concerns, fears, and issues are shared by all educators across the great state of Tennessee. Please know our board of directors, along with ASCD are here to help and support you professionally in any way we can. This is our time to shine as a state and as a profession! We hope this journal will provide you with knowledge you can use within your schools to improve your students and your communities. We thank you for the work you are doing each day. The task we have been given is great, but the reward is so much greater when our students and communities succeed!

Melanie Simpson President, TASCD

Message from TASCD Executive Director Steve Simpson

I've been reading a book lately called "The Power of Moments" by Chip and Dan Heath, which I feel is appropriate considering the circumstances that surround our society in the current times. The book describes how life and the moments we create or surround ourselves with leave lasting impacts. Schools across the country are working to find ways to keep students healthy and safe, teach curriculum with innovation, and keep positive attitudes despite obstacles that comes with the daily work in our schools. We often wonder what kind of lasting impact will this create? The book describes creating those "moments" which will define lasting memories students will cherish or remember long after their school years have passed. It also describes how educators can be central to creating positive lasting moments for themselves and their students. Educators can "Elevate, provide insight, have pride, and make lasting connections" to help sculpt positive moments in children's lives. Elevation is "defining moments that rise above the everyday." Educators can help a student problem solve, create positive moments, and elevate above problems to find solutions. Insight is "defining moments that rewire our understanding of ourselves and the world." Insight comes from self-awareness and the ability to reflect on one's surroundings. Pride is "defining moments that capture us at our best – moments of achievement, and moments of courage." Lastly is Connection, "defining moments are social: weddings, graduations, baptisms, vacations, work triumphs, speeches, and sporting events." "These moments are strengthened because we share them with others." Let me encourage you today to find your "moment" to elevate above problems you may face, have pride in the work you do every day with your students and other educators, provide insight that may help someone else or yourself, and finally make connections to strengthen your relationships with your students and others. We at TASCD and ASCD will continue to provide support, professional development, and pathways for educators to seek content relevant to today's students and educators. Continue to do the great work you do for the students of Tennessee and remember to make "moments" that they will remember for a lifetime.

Sincerely,

Steve Simpson Executive Director, TASCD

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Invitation to Submit Manuscripts

Review process: Authors will receive acknowledgment regarding receipt of their submission. Manuscripts that meet *TEL* specifications will be peer-reviewed. Except for the cover page, *TEL* requires that you omit any identifying information to ensure a blind review.

Submission requirements: Authors should email an electronic version of the manuscript to the attention of Dr. Thomas Buttery, teljournal@apsu.edu.

Style: Authors should use the "Publication Manual of the American Psychological Association" (APA) (7th edition). Number all pages, but please do not include a running head.

Length: Manuscripts, including references, tables, charts and figures normally should not exceed 15 pages; however, we recognize that the length of articles varies according to topics.

Word-processing: Format manuscripts via Microsoft Word Times Roman font and doublespaced, 12-point text, with one-inch margins. Authors should use tabs and indents instead of spaces to standardize the format. Do not use tabbing in the references section; use the hanging indent function typically located in the paragraph formatting menu of your word processor. Please place tables, charts, and figures at the end of the manuscript.

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- 5. Biographical information that identifies your title/position, where you work and area(s) of scholarship. Please limit this information to 30 words per author.

Abstract: A concise 100-word, double-spaced narrative should be included at the beginning of the manuscript.

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The *TEL* Journal is a peer-reviewed publication of the Tennessee Association for Supervision and Curriculum Development. The mission of the *TEL* Journal is communication of information, ideas, theoretical formulations, and research findings related to leadership, supervision, curriculum, and instruction. The points of view of authors are not necessarily reflective of the association or journal editors. Authors are responsible for the accuracy of information and legal use of all materials within their manuscripts.

Opportunities and Barriers to Technology Integration: School Factors and Change

Catherine Atkinson Garden Grove Unified School District

The purpose of this qualitative needs assessment was to determine middle school teachers' perceptions of opportunities and barriers to technology integration. The six participants were observed integrating technology in a variety of ways. Interview findings indicated that some teachers perceived technology as a supplemental tool whereas others perceived technology as a means for providing opportunities for choice and creativity. Barriers to technology integration included time to explore, plan, and collaborate with colleagues; knowledge about the potential of technology tools; and perceived administrative support and leadership. Participants consistently noted their informal network of colleagues as a support to technology integration.

he introduction of technology computers, (e.g., mobile devices) as a panacea to increase student learning and acquisition of academic skills continues to remain unmet (Voogt, Erstad, Dede, & Mishra, 2013). In fact, technology integration will continue to have little effect on student learning if tasks and activities are not aligned to sound pedagogical approaches (Cuban, 2013). As teacher instructional practices directly influence what occurs in the classroom (Cuban, 2013), the goal remains of how to help teachers design meaningful learning opportunities for students. Teachers need to take advantage of the benefits of technology to provide students with the necessary skills and dispositions to be productive members of this global society (Kale & Goh, 2014). The job market stipulates the need for a labor forced skilled in the areas of problem solving, adaptability, and flexibility (Gates, 2013; Kivunja, 2014; Trilling & Fadel, 2009), and meaningful learning with technology can serve as means to help students acquire and master those critical skills. Jonassen, Howland, Marra, and Crismond (2008) contend that meaningful learning with

technology can support the learning process if the tasks reflect active, constructive, intentional, authentic, and cooperative learning. For example, when administrators conduct classroom visitations, they could witness project-based learning with students as active and constructive creators of information, especially if students share their work via YouTube or personal blogs. Likewise, video conferencing tools such as Google Meet or Skype support authentic and collaborative learning when students engage in real-time conversations with book authors or scientists in the field. However, the existence of technology devices on campus does not equate to meaningful learning with technology for students, nor does it presume that teachers know how to change their instructional practices to incorporate the use of technology to support active, constructive, authentic, and cooperative intentional. learning.

Literature Review

Changing teacher instructional practices to include opportunities for students to engage in meaningful learning with technology does not come without challenges (Ertmer, 1999; Kale & Goh, 2014). Barriers to technology integration are two-fold: external and internal (Ertmer, 1999). External barriers include access to the Internet. technology devices, and technology support (Ertmer, 1999). Although issues with equity for and access to technology and high-speed Internet may inhibit widespread adoption, access to technology-an external barrier-is no longer an insurmountable barrier (Cuban, Kirkpatrick, Peck, 2001; & Ertmer. Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012). The recent adoption of computer-based testing and the belief that technology-based learning helps students acquire the necessary academic skills challenges schools to funnel more funds toward the purchase of technology (Zheng, Warschauer, Lin, & Chang, 2016). However, schools are under pressure to purchase technology to satisfy the public so, more often than not, technology is purchased without having a clear plan in place (Morrison, Ross, & Cheung, 2019).

Internal barriers to technology integration remain a problematic challenge. Internal barriers include low self-efficacy (Ertmer, 1999; Ertmer & Ottenbreit-Leftwich, 2013), attitudes and beliefs about the value of technology for student learning (Ertmer et al., 2012; Shifflet & Weilbacher, 2015), lack of technology knowledge and skills (Koehler, Mishra, Kereluik, Shin, & Graham. 2014), and poorly designed professional development (PD; Cifuentes, Maxwell, & Bulu, 2011). Instructional decisions by teachers arise from a myriad of factors such as self efficacy, beliefs, perceptions, knowledge, and value for student learning (Ertmer et al., 2012; Shifflet & Weilbacher, 2015). A contributing factor to teacher efficacy is technology knowledgedefined as what teachers know about technology (e.g., device management,

software, applications, troubleshooting; Albion, Jamieson-Proctor, & Finger, 2010). An additional challenge to technology integration resides with administrative support.

principals' instructional School leadership strongly correlates to the degree of teacher collaboration to improve instruction (Goddard, Goddard, Kim, & Miller, 2015; Gray, Kruse, & Tarter, 2015). In situations that challenge teachers' sense of efficacy, the level of collegiality and administrative support is a major factor in the persistence of teachers to meet that challenge (Bryk, Gomez, Grunow, & LeMahieu, 2015; Payne, 2008). Specifically, principals, perhaps inadvertently, demonstrate their support for collaboration-or not-through their allocation of time for collaboration (Goddard et al., 2015). As knowledgeable and skilled instructional leaders, principals can promote or hinder a strong focus towards improving student learning outcomes through their actions (Goddard et al., 2015; Minckler, 2013).

As instructional leaders, principals have the potential to exert a strong influence over the change process-including the integration of technology into teacher instructional practices. The Tennessee Instructional Leadership Standards (2018) stipulate that an ethical and effective instructional leader clearly communicates a focus towards continuous improvement (Standard A, Indicator 1), establishes a culture of collaboration (Standard B. Indicator 1), and shares in the development of learning opportunities for students that are meaningful and relevant (Standard B, Indicator 2). The absence of communication and clarity about what changes need to occur serve as a point of frustration for teachers (Pullan, 2007). Moreover, lack of a vision for schoolwide technology integration in

conjunction with weak leadership contribute to a school climate that avoids risk-taking and collaboration (Preus, 2012). In situations that challenge teachers' sense of efficacy, the level of collegiality and administrative support is a major factor in the persistence of teachers to meet that challenge (Bryk et al., 2015; Payne, 2008).

Context

The setting and context for the study is a junior high (i.e., Grades 7 and 8) school located in a large urban K12 unified district in California. School personnel consisted of a an assistant principal, principal, one counselor, and 29 faculty. All teachers held a California teaching credential and were considered highly qualified as defined under the No Child Left Behind Act (U.S. Department of Education, 2001). The district and school both qualified for Title I funding. Approximately 76% of students came from low socioeconomic households, and 54% of the student population were English language learners. During the 2015-2016 school year, Title I funding facilitated the purchase of technology for the school, such as MacBooks, iPads, and Chromebooks. All teachers had a MacBook and the core academic classes had a 1:1 student-to device ratio, meaning that students were provided with a mobile device to use in their English language arts, history, mathematics, and science classes while on campus.

Purpose

The presence of computers and Internet on school campuses does not necessarily translate into instructional practices that focus on meaningful learning with technology (Cuban et al., 2001), which still seems to hold true for mobile devices present in today's schools. In many cases, there is little difference between student use of computers and their use of paper and pencil (Cuban et al., 2001; Ertmer & Ottenbreit-Leftwich, 2013). For instructional practices to include the meaningful use of technology by students, teachers need to know what meaningful learning with technology looks like in the classroom (Ertmer & Ottenbreit-Leftwich, 2013).

Moreover, teachers need an understanding of how to integrate skills such as communication, collaboration, critical thinking, and creativity into lesson design (Battelle for Kids, 2019; Cuban, 2013). The purpose of this study was to identify teachers' understanding of meaningful learning with technology as well as their perceived opportunities and barriers to technology integration. The research questions that guided this study were:

- How do teachers interpret meaningful use of technology?
- What are the opportunities and barriers to integrating technology in meaningful ways?

Method

The participants of this qualitative needs assessment were six junior high teachers (i.e., Grades 7 and 8) from a large urban K12 district located in California. The demographic breakdown was as follows: male (n = 2), female (n = 4), Asian (n = 2), Caucasian (n = 3), and Hispanic (n = 1). Years of teaching experience ranged from 6 to over 20 years. The teachers represented four content areas: English language arts, history, mathematics, and science.

The author, a classroom teacher at the school, recruited core content teachers and then purposively sampled the volunteers to select two high, two medium, and two low users of technology, in accordance with the Technology Integration Matrix (Florida Center for Instructional Technology, n.d.). The teachers did not formally assess themselves using the Technology Integration Matrix, but rather the researcher used her prior knowledge of their instructional practices to determine individual technology use. For the purposes of this study, high users were teachers whose instructional practices were categorized as adaptation, infusion, and transformation, whereas low users were teachers whose instructional practices aligned with entry level use, and medium users fell within the adoption category (see Table 1).

Table 1

Characteristics of the Five Levels of the Technology Integration Matrix (Florida Center for Instructional Technology, n.d.)

Entry	Adoption	Adaptation	Infusion	Transformation
The teacher	The teacher	The teacher	The teacher	The teacher
begins to use	directs students	facilitates	provides the	encourages the
technology tools	in the	students in	learning context	innovative use of
to deliver	conventional and	exploring and	and the students	technology tools.
curriculum	procedural use	independently	choose the	Technology
content to	of technology.	using	technology.	tools are used to
students.		technology.		facilitate higher
				order learning
				activities that
				may not have
				been possible
				without the use
				of technology.

Classroom observations informed the first research question and both the observation and semi-structured interview data informed the second research question. Observations were conducted and analyzed first and followed up by interviews. As teacher espoused beliefs do not necessarily translate into enacted practices (Judson, 2006), rich data from observations informed the reality of technology integration and use. The researcher developed a classroom observation tool to record how, if at all, practices reflected instructional four categories: communication, collaboration, critical thinking, and creativity. Data from the matrix informed possible follow-up questions for the semi-structured interviews.

The researcher and participating teachers put together a schedule for the researcher to observe one 45-minute class period per participating teacher. The six interview questions focused on topics, such as the perceived role of technology, available support, and barriers to technology, with follow-up questions based on the data analysis from the classroom observations. The interviews took place after school and lasted approximately 1 hour.

Findings

The first research question sought to determine how teachers interpreted meaningful use of technology. Findings from

the observations indicated a wide range of levels of technology use (see Table 1). For example, one English language arts teacher, at the entry-level, incorporated a station rotation model, whereby students used iPads to practice speaking skills with a district mandated, computer-based curriculum. The science teacher, also at the entry level, facilitated a lesson in which students completed a computer-based assessment that incorporated both recall and critical thinking skills. The two math teachers, both at the adoption level, used technology as an intentional whole-class check for understanding activity as well as collaborative work using Khan Academy (www.khanacademy.com) resources. The other English language arts and history teacher, both at the transformation level, utilized a more active and constructivist approach in which students iPads to create projects that used demonstrated their understanding of the material-allowing voice and choice in the learning process.

The second research question focused on illuminating the opportunities and barriers to integrating technology in meaningful ways. Data from the classroom observations revealed that although the level of meaningful learning with technology varied across the classrooms, students seemed comfortable using mobile devices in the learning process. The degree of technology knowledge and skills of teachers appeared to influence the design and facilitation of the observed lessons. For example, teachers, who were high users of technology, seemed to be more comfortable giving students authentic tasks such as the autonomy to choose not only the technology tool, but also the end-product itself; whereas, low and medium users of technology seemed to rely more on pre-made curriculum or activities to facilitate learning.

One theme from the interviews revealed that the lack of structured time for exploration, planning, and collaboration posed a key barrier to technology integration. One mathematics teacher stated the need "to be trained and educated [in] how and what to use" (Participant 4, Interview). Several teachers mentioned that technology PD tended to focus on the what as opposed to the how, which they felt did not give them enough knowledge on how to design instruction that focused on meaningful learning with technology. The science teacher remarked that "a lot [is] out there [but] no time to find quality time" for exploration (Participant 2, Interview). All teachers revealed that they needed time to explore and plan with colleagues beyond the current bimonthly collaboration schedule.

A second theme from the interviews was the issue of the lack of administrative support and leadership. In some cases, teachers asked for and received funds to purchase licenses as well as procure substitute teachers so they could be released from class to collaborate, whereas others have felt as if their department needs had overlooked. been The mathematics department, in particular, had several of their technology requests denied under the guise of cost. Participant 3 shared "[He needs to] pay better attention to the [needs of the] team" (Interview). Similarly, Participant 4 stated that the principal "didn't address [our request for technology PD] in a timely manner" (Interview). This statement was related to the concern that the other. nonmathematics, departments received release days to collaborate about technology. In spite of the frustration relayed by the two mathematics teachers during the interview, both stated that they were "willing and open" to learning how technology could support student learning outcomes in their classes (Participants 3 and 4).

A third theme was that proximity to technology-engaged peers was a key component supporting teachers' in technology integration. All of the participants mentioned that they felt they could rely on the history department-the first department to 1:1 technology integration pilot for technology support not just for planning but also for troubleshooting hardware, software, and application issues. One teacher indicated a large learning curve when first introduced to technology, but the proximity of peers who could help troubleshoot issues helped him to realize that the "key [is that I am] not a loser" (Participant 1, Interview). Most teachers mentioned that they liked that they could walk over in between or during classes to ask colleagues for help-this practice was noted during several of the classroom observations, specifically with the mathematics and science teachers who shared a common doorway between their rooms.

Conclusions and Implications

The results of the study not only revealed the current use of technology (Research Question 1) but also informed opportunities and barriers to meaningful learning with technology (Research Question 2). Although the small sample size prevents generalization to other contexts, findings from the study inform how teachers implement technology across various core academic classes as well as teacher perceptions regarding the importance of administration and colleague support to technology integration.

Data analysis revealed a range of technology use for meaningful learning. The majority of observed teacher instructional practices included one of five characteristics of meaningful learning: active, constructive, cooperative, authentic, and intentional (Jonassen et al., 2008). In some classes,

teachers created opportunities for students to use technology for collaborative (i.e., cooperative) purposes. However, the lack of consistent and purposeful application of authentic, intentional, or active learning components implied room for improvement in teacher instructional practices. Moreover, the existence of an informal support network suggested the benefit of communities of practice as another avenue to empower teachers to design instructional practices that meaningful learning support with technology-all of which can be accomplished by an effective instructional leader who "establish[es] and communicate[s] a clear and compelling vision for a culture and learning" conducive to teaching Indicator 1; Tennessee (Standard B, Department of Education, 2018, p. 2). Perhaps principals can leverage the technology expertise of some teachers to lead pilot programs in which early adopters can coach late adopters.

Historically, the lack of time to explore, plan, and play with technology posed barriers to technology integration (Preus, 2012; Wong, Li, Choi, & Lee, 2008). When asked about how they wanted to learn about technology tools and integration ideas, the answers from teachers varied, which support findings that reveal teachers desire professional development that caters to their content area, skill level, and interests (Darling-Hammond, Hyler, & Gardner, 2017; Desimone & Garet, 2015). Thus, it behooves administrators to provide teachers with learning opportunities that will enable them to create and sustain "meaningful [and] relevant opportunities for students" (Standard B, Indicator 2; Tennessee Department of Education, 2018, p. 2).

Leadership without a vision for schoolwide technology integration contributes to a school culture that fears risk-

taking and collaboration (Everson & Prosser, 2019; Preus, 2012). Thus, a substantial barrier to changing teacher instructional beliefs and practices rests with competing district initiatives and programs (Darling-Hammond et al., 2017; Fullan, 2007; Morrison et al., 2019). Data from the interviews indicated that some teachers experienced frustration with the lack of support by the administration and struggled with efficacy when it came to technology integration. To remedy such situations, effective instructional leaders should proactively establish a common vision, promote the practice of continuous improvement (Standard A, Indicator 1; Tennessee Department of Education, 2018, p. 1), and remember that change is a process (Fullan, 2007) and efficacy plays a role (Bandura, 1977). A myriad of factors determine teacher propensity to change instructional practices to support meaningful learning with technology. However, one factor remains clear: effective instructional leadership is critical to establishing a collaborative culture open to change.

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Dr. Catherine Atkinson is a classroom teacher in Garden Grove Unified School District. Her dissertation examined teachers' implementation of blended learning after a yearlong professional development program.

Technology Integration Across the Curriculum: Using the Teacher Educator Technology Competencies to Analyze Technology Reform in an Elementary Education Program

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The purpose of this project was to analyze the first year of work for a grant project designed to improve technology integration in an elementary education program. The Teacher Educator Technology Competencies (TETCs) were adopted as an analysis framework, and results indicated strong alignment between the scope of the project and the TETCs. Implementation of the goals by teacher educators demonstrated patterns of integration by content area and opportunities provided to teacher candidates. Suggestions for future work to integrate technology across the elementary education program and use of the TETCs are provided.

ederal funding for technology has increased of late, Federal funding for technology has increased of late, with public schools spending more than three billion dollars annually in technology related resources. Nonetheless, research demonstrates that even with greater funds, teachers may be slow to alter their teaching practice to incorporate technology in meaningful and in-depth ways (Shuldman, 2004). Likewise, Jacobsen, Clifford and Friesen (2002) note that this trend also holds true in the university education classroom. They posit that technology is not yet a seamless part of university curriculum as it is often a scheduled event at a few particular points, rather than a truly integrated component. In this manner, technology may "involve a fairly low level of thinking and research, focusing heavily on the presentation of final

products rather than on thinking differently, rigorously, and effectively at every stage of a project" (p. 365). The time is ripe for a shift in technology integration at the university level, with opportunities for more comprehensive and authentic experiences in the university teacher candidate classroom related to technology.

The purpose of this article is to describe the Year 1 implementation of technology reform in one elementary education program as a part of a grant-funded project with the goal of developing an innovative and scalable model to address technology needs in a rural environment in collaboration with local education agencies (LEAs). The project team, which included teacher educators from English language arts (ELA), science, mathematics, and social studies, adopted the TETCs as a useful framework for analyzing the project goals for technology integration, monitoring implementation progress, and guiding future work. The authors describe the methods of the first year of reforming technology integration across the elementary education program, analyze the results within the framework of the TETCs, and discuss findings in the context of previous research.

Literature Review

Recent statistics demonstrate an ever evolving digitalized and globalized society, will produce more which Science. Technology, Engineering, and Mathematics (STEM) jobs exacerbating a lack of qualified graduates to fill them (Yadav, Stephenson, & Hai, 2017). The US Department of Labor's Bureau of Statistics found that computer, engineering, and information technology jobs are the fastest growing jobs since the most recent recession (BLS, Employment Projections 1998-2008). Education will be key in helping societies remain economically competitive as they support and train students for careers in the information economy (Wing, 2008).

The national teacher organizations of ELA, mathematics, science, and social studies have developed position statements on technology use which differ slightly from content area to content area but share many commonalities. The National Council of Teachers of English (NCTE, 2018) advocates for a broader definition of literacy with emphasis on components such as multimodal text, as well as consideration of how technologies provide new ways to consume and produce texts. The National Council of Teachers of Mathematics (NCTM, 2011) promotes access to technology as a means of support for mathematical sense making, reasoning. problem solving and communication. The National Science

Teachers Association (NSTA, 2011) focuses on 21st century skills and view rapid changes in technological advancements as a means for increased innovation and economic success. Lastly, the National Council for Social Studies position statement (NCSS, 2015) focuses on the need for critical media literacy, and the need to prepare learners to use technology in the context of a responsible democratic citizenry. As technology integration across the curriculum occurs, teacher educators need to carefully consider their content areas in order to determine how best to enhance teaching and learning of their disciplines.

The Technological Pedagogical Content Knowledge framework (TPACK) is a theoretical framework used to describe the knowledge that teachers need to integrate technology (Schmidt, Baran, Thompson, Mishra, Koehler, & Shin, 2009).

According to the TPACK framework, technology use must be considered in context-specific cases due to the complex and integrated nature of content, pedagogy, and technology (Mishra & Koehler, 2006). Methods courses in educational programs provide a safe zone in which teacher candidates have some prior knowledge of content, and therefore may find comfort in exploring new technologies with peers and their instructors. It is vital that teacher candidates see technology modeled, and they need to engage with technology as a learner (Estapa, Hutchinson, & Nadolny, 2018). They also require opportunities to apply technology in scaffolded ways (within methods courses and residency placements) and to reflect on their knowledge, skills, and abilities in each of the TPACK domains (Schmidt et al., 2009).

In 2017, the U.S. Department of Education called for the creation of a set of

technology competencies for teacher educators (U.S. DOE, 2017) which led to the development of the Teacher Educator Technology Competencies (TETCs; Foulger, Graziano, Schmidt-Crawford, & Slykhuis, 2017). The TETCs act as guideposts by outlining the array of competencies necessary to effectively prepare teacher candidates to successfully use and integrate technology in the classroom. The TETCs is a list of 12 competencies (knowledge, skills. and attitudes) each with a set of two to five related criteria, that all teacher educators need (Table 1). As an example, the first TETC is: Teacher *educators will design instruction that utilizes* content-specific technologies to enhance teaching and learning. It has three related Evaluate criteria: a. content-specific technology for teaching and learning; b. Align content with pedagogical approaches and appropriate technology; and c. Model approaches for aligning the content being taught with appropriate pedagogy and technology. TETCs 1-9 relate to teacher educators' use or modeling of technology in the classroom or providing opportunities for teacher candidates to use technology while TETCs 10 and 11 relate to professional development and advocacy for technology use. TETC 12 relates to troubleshooting skills. Given the scope of the TETCs and the extent of change needed by the typical education program, full implementation of the TETCs by teacher educators in all content areas is likely to take several years.

Table 1

List of the TECTs Omitting Related Criteria

1. Teacher educators will design instruction that utilizes content-specific technologies to enhance teaching and learning.

2. Teacher educators will incorporate pedagogical approaches that prepare teacher candidates to effectively use technology.

3. Teacher educators will support the development of the knowledge, skills, ad attitudes of teacher candidates as related to teaching with technology in their content area.

4. Teacher educators will use online tools to enhance teaching and learning.

5. Teacher educators will use technology to differentiate instruction to meet diverse learning needs.

6. Teacher educators will use appropriate technology tools for assessment.

7. Teacher educators will use effective strategies for teaching online and/or blended hybrid learning environments.

8. Teacher educators will use technology to connect globally with a variety of regions and cultures.

9. Teacher educators will address the legal, ethical, and socially-responsible use of technology in education.

10. Teacher educators will engage in ongoing professional development and networking activities to improve the integration of technology in teaching.

11. Teacher educators will engage in leadership and advocacy for using technology.

12. Teacher educators will apply basic troubleshooting skills to resolve technology issues.

For a full list of the TETCs and their related criteria, visit http://site.aace.org/tetc.

Purpose of the Project

Program change at the university level typically takes a minimum of one academic year to put in place; however, with teacher candidates graduating every year, the need for reforming technology integration is time sensitive. Rather than beginning with programmatic changes, the purpose of this project was to reform technology integration within courses of the existing program of study for elementary education with plans for programmatic changes at a later date. The integrating STEM and Literacy with Computation in Elementary Education (iSLICEE) grant, a Teacher Quality Partnership funded by the U.S. Department of Education, sought to address technology integration in elementary education teacher education programs and classrooms in rural environments. The five-year grant project had two goals related to the elementary education program: (Goal 1) using technology to develop and refine course content and pedagogy and (Goal 2) preparing teacher candidates to use and integrate technology. Successful implementation of the project would require increases in the technology knowledge, skills, and attitudes of each faculty member; therefore, the TETCs were adopted as the natural framework for evaluating the work of the teacher educators and to guide future work of the grant project. Analysis was completed after the first year of implementation, and the project team sought to answer two questions:

- How have teacher educators integrated technology in their elementary education courses and what content area motives guided their choices?
- How does technology integration in the elementary program align with the TETC framework?

In the following section, the authors describe the methods and results of the analysis, discuss findings in the context of previous research, and recommend next steps for the project or other education programs seeking to make similar changes in technology integration.

Methods

Description of Setting and Program

The setting of the project was a regional university in the southeastern U.S. Most of the teacher candidates in elementary education are from the region and remain there after graduation to teach in local elementary schools. The Elementary Education program has historically been the largest one of the department (and college) with an average enrollment of 60-75 students per cohort. Students typically enter the program as juniors after completing two years of general education requirements. The iSLICEE project team was composed of eight people: two science education faculty (one of which was principal investigator of the grant), two math education faculty, two ELA faculty (one of which was department chair), one social studies faculty, and one faculty member from biology in the College of Arts & Sciences. At the time of the project, the department did not have a faculty member in technology education.

All project faculty were integrating technology to some extent in their courses prior to the project; however, the iSLICEE project encouraged faculty to refine and expand their use of technology in their fall and spring semester of classes (Table 2). The principal investigator (PI) of the project organized the efforts of the team by providing a focus for the work, opportunities for for collaboration. and а timeline implementation. As a team, project members met to discuss who was using which technologies and what they were covering.

This helped team members understand when someone had already provided some scaffolding or practices in an area. The PI also facilitated implementation of new integration technology bv supporting subscriptions to technologies, creating an inventory of technology resources, and providing graduate student support. The department chair devoted time during faculty meetings to technology integration and explicitly encouraged and supported the efforts of faculty. The chair also attended collaboration meetings as a member of the project team.

Table 2

Junior and Senior Courses with Technology Integration Focus in Year 1

Year	Course Title (Credit Hours)
Junior	• Integrated STEM for
	Elementary Educators (3
	hours)
	• Social Studies Education in a
	Multicultural Society (3
	hours)
	 Teaching Reading in
	Elementary School Through
	Differentiation (3 hours)
Senior	• Language Arts Methods (3
	hours)
	• Mathematics Methods (3
	hours)
	• Science Methods (3 hours)

Data Collection and Analysis

Data were collected through semistructured interviews with members of the project team. For the interviews, members of the project team responsible for teaching one or more of the courses listed in Table 2, responded to a set of questions regarding technology integration. Teacher educators identified their primary considerations for technology integration in their content areas, how often they were integrating technology, which technologies they were using, and why the technologies were used. Descriptions of the learning activities from the teacher educators were analyzed for evidence of alignment to related criteria of the TETCs. Analysis was completed at the criteria level. Since the purpose of the project was to reform the elementary education program to improve technology integration, it was important for the analysis to identify what had been accomplished and what needs to be addressed moving forward; therefore, distinctions were not made between competencies that were demonstrated through work prior to the project and those that were demonstrated during Year 1. For example, if a teacher educator had evaluated the use of a contentspecific technology prior to the project and was still using the technology in her course, that was considered demonstration of TETC 1a.

Results

Year 1, During the greatest investment of time and effort by teacher educators was related to using technology to develop and refine course content and pedagogy (Goal 1). The time needed by faculty to collaborate, design, develop, and test new course materials integrating technology was substantial. Smaller changes were made to course assignments that would prepare teacher candidates to use and integrate technology (Goal 2), with most teacher educators revising one major assignment or learning activity.

Using Technology to Develop and Refine Course Content and Pedagogy

Faculty from ELA, mathematics, science, and social studies considered the role of technology in their respective fields as well as the reasons for integrating technology in elementary education to guide their work

in Year 1. Table 3 provides a summary of content-specific and general approaches to technology integration by faculty and their alignment to the TETCs at the criteria level.

For the ELA teacher educators, the primary considerations for how and why to integrate technology were access to online materials for reading and writing to expand the learning opportunities of young readers, using multi-modal texts to expand teacher candidates' definitions of text, and using coding and computational thinking to elementary advance students' reading abilities. The primary considerations for the math teacher educators were the use of technology to make abstract concepts concrete and technologies as essential tools for computation. The primary considerations highlighted by science faculty included applying technology to facilitate data collection and analysis, using technology to learn problem solving skills, technology as a product of science and engineering, and the importance of technology in future STEM careers. For the social studies course, the teacher educator considered the role that the field of social studies plays in critiquing how technology can best serve and develop engaged, democratic citizens while balancing the social dilemmas that often arise with increased uses of technology. It was the teacher educator's goal to expand teacher global understandings candidates' and content knowledge through the use of technology as well as foster critical examinations of technology.

Overall, the work of the faculty to address the first iSLICEE technology goal aligned primarily to the TETCs related incorporating technology into instructional design (TETC 1), pedagogical approaches (TETC 2), and assessment (TETC 6) as well as use of online tools (TETC 4). The teacher educators reported multiple instances of these TETCs across the content areas. TETC 1 and its related criteria refer to content-specific technologies; however, teacher educators frequently used general technologies in content-specific ways (this modification is indicated with an asterisk in Table 3). The TETCs related to using technology for differentiation (TETC 5), online learning environments (TETC 7), connecting globally (TETC 8), and in a socially-responsible way (TETC 9) were evident but to a lesser extent. TETCs related The to professional development and advocacy in using technology (TETCs 10 and 11) or troubleshooting (TETC 12) were not evident in the responses of the teacher educators. Demonstration of TETC related to developing the knowledge, skills, and attitudes of teacher candidates is detailed in the section below

Preparing Teacher Candidates to Use and Integrate Technology

For each of the four assignments analyzed, technology integration to prepare teacher candidates aligned to the competencies related to pedagogical approaches (TETC 2) and the knowledge, skills, and attitudes (TETC 3). Criteria 2b and 2c refer to content-specific technologies; in the following paragraphs, when teacher educators used general technologies in content-specific ways, an asterisk has been used to indicate this modification.

In the senior-level Language Arts Methods course, teacher candidates participated in a series of learning activities designed to identify connections between computational thinking and reading. After reading two texts for elementary students related to coding and a brief introduction to the components of computational thinking (i.e., decomposition, patterns, abstraction, and algorithmic solutions), teacher

Table 3

Content-specific and General Approaches to Technology Integration and TETC Alignment

Content Area	Purpose of Technology Integration	Technology Used	TETC Alignment
ELA	Identification of reading strategies related to computational thinking	Dash robots	1b*, 1c*, 2a
	Access to leveled texts, multi- modal texts, and information for student research	Internet websites (e.g., NewsELA)	1a-c, 2a, 5a, 5c
	Discussion of strategies used by literacy educators in other parts of the world	WhatsApp Zoomed	8a
Math	Formative assessment and class discussion of student problem solving strategies	Nearpod (specifically the draw feature)	2a, 4c, 4d, 6a, 6b
	Making abstract mathematical concepts concrete	BeeBots	1a-c*
	Computation	Calculators, iPads	1b, 1c
	Data collection and analysis	iPads, Google Forms	2a
Science	Online collection and analysis of data during a lab investigation	Google Docs, Sheets, Forms, and Science Journal	1b, 2a, 4a-d
	Formative assessment of teacher candidates' science misconceptions during a series of learning activities	Nearpod	2a, 4d, 6a, 6b
	Designing and evaluating multiple solutions to solve a problem with identified criteria and constraints	Ozobots, Flipgrid	1a-c*, 6b
	Data collection and analysis	Vernier probes, iPads	1a-c, 2a

Content Area	Purpose of Technology Integration	Technology Used	TETC Alignment
Social Studies	Access to primary source documents (photographs, historical documents, artifacts)	Online databases (e.g., Library of Congress, Smithsonian Digital Vaults, etc.)	1b, 1c
	Dialogue about digital citizenship that embodies meaningful civic experiences towards democratic understandings and engagement with digital tool and spaces	iCivics, digital citizenship websites	9Ъ
	Virtual field trips	Google Cardboards	1a-c*
	Use of GPS for navigation	iPads, Geocaching applications	1a-c
General	Access to lesson plans, practitioner articles, and best practices	Library databases, education websites	2a
	Online collaboration to create lesson plans	Google Docs, Sheets,	4b, 4c
	Student engagement and formative assessment	Flipgrid	4a, 4d, 6a, 6b, 7a

*General technology was used in a content-specific way.

candidates had small group discussions to identify connections between computational thinking and core concepts they had learned in their reading coursework (TETC 2b*, 3a). For example, teacher candidates connected the coding strategy of decomposition, breaking down a complex problem into smaller parts, to the literacy concept of phonemic awareness, hearing and manipulating sounds. Teacher candidates then explored coding in a practical, hands-on way with Dash robots and participated in learning stations that integrated coding with nonfiction text features (TETC 3c). In one station, pictures of non-fiction text features,

such as graphs, diagrams, captions, and bold words, were printed on paper and arranged on a grid on the floor. One teacher candidate would call out a text feature and then another teacher candidate coded a Dash robot to travel to a specified feature. After the activity, teacher candidates completed a series of reflection questions which prompted them to evaluate how computational thinking and literacy can be integrated (TETC 2c*) and how they would feel using technology in a similar way in their field placements or future classrooms (TETC 3b).

In the senior-level Mathematics Methods teacher candidates course. developed interactive learning activities that incorporated BeeBots and Nearpod (TETC 2c*) which had been modeled by the teacher educators earlier in the course. During the BeeBot activity in the course, teacher candidates explored the commutative property and procedural fluency aligned to kindergarten, first, and second grade standards. In the kindergarten activity, teacher candidates worked in pairs to show multiple ways to make a certain sum. One person might code a robot to move forward three spaces and forward four spaces to illustrate the math expression 3+4=7 while the other person might code a different robot to move forward four spaces and then three spaces (4+3=7). The quiz and draw features of Nearpod were used in the course as a means of formative assessment allowing the professor to see how teacher candidates solved problems and as a discussion point by projecting different solutions for the class to see. The teacher candidates were completing a residency field placement at the same time, so a dimension of the assignment they completed was to align their learning activities with a math standard from the grade level of their placement (TETC 3a). Teacher candidates presented their activities to their peers in the university classroom (TETCs 2d, 3c). Although it was not required, some teacher candidates also implemented the activities in their field placement classrooms (TETCs 3b, 3c).

The learning activity in the juniorlevel course Integrated STEM for Elementary Educators occurred in two phases. During the first phase, teacher candidates completed an engineering challenge aligned to two elementary science standards which specify that students should design solutions to problems with specified criteria and constraints and communicate a design to solve a problem. Teacher candidates designed a track for an Ozobot that met specified criteria and constraints (e.g., the robot must change speeds at least three times and complete the track in 30-40 seconds), and communicated their designs thev to classmates and the professor by posting short videos of the robots completing their tracks to Flipgrid. After the activity, teacher candidates worked in small groups to identify ways in which Ozobots could be used to teach math or science standards (TETCs 2b*, 3a). During the second phase, teacher candidates developed a 15-minute learning activity using Ozobots or Dash robots to address a science or math standard and implemented it with two small groups of elementary students (TETCs 2c*, 2d, 3c). For example, one pair of teacher candidates prepared a learning activity in which students were challenged to code a robot to demonstrate orbital motion around a paper sun placed on the floor. After teaching their activities, teacher candidates reflected on questions about how elementary students responded to the technology and to what degree the technology enhanced student learning (TETC 3b).

In the junior-level course Social Studies Education in a Multicultural Society. teacher candidates used online sources such as the Smithsonian Digital Vaults to create a primary source set for an educational setting (TETC 2c). Teacher candidates selected a topic idea, such as The Great Depression, Economics and Currency. or Space Exploration, and then curated a collection of relevant photographs, documents, and artifacts available online. As a part of the project, teacher candidates created a "For Teachers" section which included helpful ideas, links, and resources as well as relevant social studies standards (TETC 3a). During the class presentation of their projects teacher candidates used the Pecha Kucha format to show 20 images for 20 seconds each (TETC 2d, 3c).

Discussion

Overall, analysis of the technology integration by teacher educators across the elementary education program is positive. Given the scope and specificity of the TETCs as well as the rigorous, collaborative nature Graziano, of their creation (Foulger, Schmidt-Crawford, & Slykhuis, 2017), strong alignment with the TETCs is a promising indicator for the changes made to the elementary education program and the future of the iSLICEE project. During Year 1. the teacher educators considered technology integration relative to their content areas and implemented it for various content-specific purposes which aligned to the position statements of national teacher organizations (NCSS, 2015; NCTE, 2018; NCTM, 2011; NSTA, 2011). Articulating and communicating these reasons and the resulting differences in technology integration among the project team are helpful steps in reforming the curriculum across the elementary education program within the TPACK framework (Mishra & Koehler, 2006).

As teacher educators continue to refine their course content and pedagogy, recommendations from the TETCs analysis are to find more opportunities to use technology for differentiation and assessment as well as seek out additional content-specific technologies. Once accomplished, teacher educators should assist teacher candidates in completing these tasks as well. In the current analysis, there were few examples of using technology to connect globally or consider the legal, ethical, and socially-responsible uses of technology. This is a vital component of technology use, and one which the project team will continue to explore specifically through the lens of social studies education.

Without a background in technology education, the list of 12 TETCs and their 41 related criteria could first at be overwhelming. The results of this analysis indicate that TETCs 1-4 may be a good starting point for other teacher educators in the first steps of building their technology competencies. Because many of the related criteria of the TETCs reference providing opportunities for teacher candidates, teacher education programs should consider working with LEAs to build opportunities for teacher candidates in elementary classrooms through field experiences and residency placements. Partnership with LEAs would have the added benefit of addressing TETCs 10 and 11 related to networking and advocacy for technology integration. Work related to TETC 12 on troubleshooting was not captured in the current study, so future work could explore how teacher educators are building and demonstrating this competency.

The organizational structure provided by the PI and the content-area diversity of the project team were helpful features to the technology integration that occurred in this project. The grant project was initiated because the elementary education program was typical in that it lacked a seamless integration of technology across the curriculum and relied heavily upon a single class to prepare candidates to use technology in their teaching. Within one to two years, the department will likely be ready to initiate programmatic changes that reflect the shift of integrating technology within content area classes and the revision or removal of the class. current educational technology Continuously, teacher educators must consider the changes that are needed to reimagine the role of technology in teacher preparation programs to meet the vision set forth by the U.S. DOE (2017) including how to best partner with LEAs to prepare teacher candidates. Using the TETCs to guide the efforts of the teacher educators leading this reform could help optimize the experience of teacher candidates in elementary education and create a culture of innovation in which technology is integrated strategically within each content area to enhance teaching and learning in elementary classrooms.

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Organizational Culture and Congruence at Tennessee Institutions of Higher Education Before the Implementation of the Focus Act

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Passage of the Focus on College and University Success (FOCUS) Act by the Tennessee General Assembly in 2016 initiated major governance and organizational changes for the six universities that were governed by the Tennessee Board of Regents (TBR) system. The purpose of this study was to determine the existing culture within each of the universities before the dissolution of TBR, identify cultural congruence levels, and establish an organizational culture baseline for each of the institutions prior to the implementation of the legislation, positioning the research for longitudinal policy impact studies related to governance change and organizational culture and behavior on a national level. The Competing Values Framework (CVF) was utilized to obtain quantitative culture data from each institution. Findings suggest that despite a common governing system through TBR, organizational culture varied by institution. Additionally, an independent relationship exists between the organizational leader and organizational emphases, and another independent relationship between the organizational glue and the organizational characteristics, suggesting that organizational culture in higher education may not be very malleable according to the institutional leader and their strategic initiatives.

rganizational culture is a driving powerful force within an institution and is a predictor of institutional greater effectiveness, success, and outcomes than perhaps any other variable (Barney, 1986; Cameron & Freeman, 1991; Cartwright & Cooper, 1993; Chaffee & Tierney, 1988; Peterson, Cameron, Jones, Mets. & Ettington, 1986; Schein, 2010). Culture is a potent dynamic within an institution as it impacts all aspects of organizational life, especially when a major institutional change occurs that forces cultural shifts (Ravasi & Schultz, 2006; Weber, 1996). One such major change occurred in the landscape of Tennessee higher education when the Focus on College and University (FOCUS) Act was signed into law on April 19, 2016. Tennessee

public higher education had not experienced such a dramatic governance shift since the 1970's (Barber, Chesley, & Flora, 2016).

The FOCUS Act served as the next logical legislative step in former Tennessee Governor Bill Haslam's Drive to 55 initiative, wherein it was hoped that 55% of Tennesseans will possess post-secondary education or training by 2025. An important component of the FOCUS Act was the realignment of governance structures among the six public four-year institutions that were part of the Tennessee Board of Regents (TBR) system. Until the implementation of the Act, these six public universities operated under a centralized governance structure under TBR along with 13 community colleges and 27 Tennessee Colleges of

Applied Technology (TCATs). Each of the university and community college presidents reported directly to the Tennessee Board of Regents. Under the provisions of the FOCUS Act, centralized control for the universities was transitioned from TBR to new, gubernatorially-appointed independent governing boards for each of the six universities: Austin Peay State University (APSU), East Tennessee State University (ETSU), Middle Tennessee State University (MTSU), Tennessee State University (TSU), Tennessee Technological University (TTU), and the University of Memphis (UofM). It should be noted that three additional public universities exist within the state and are governed under the University of Tennessee (UT) system: UT-Chattanooga (UT-C), UT-Knoxville (UT-K), and UT-Martin (UT-M). Governance within the UT system was not affected by the FOCUS Act.

Scholars across disciplines have examined the impact of major organizational shifts such as policy changes, governance changes, and changes stemming from mergers and acquisitions, each of which fundamentally impact institutional culture (Cartwright & Cooper, 1993; Ovseiko & Buchan, 2012; Ovseiko, Melham, Fowler & Buchan, 2015). To date, the present study is the only examination of governance change and institutional cultural shifts related to the implementation of the FOCUS Act. Further, assessing the overall longitudinal impact of the legislation requires a baseline assessment of culture compared to the assessment of culture over time. The present study initiates this research line of inquiry and provides baseline results from the analysis immediately prior to each institution inaugurating independent board members and establishing their own policies and procedures for the governance of the university. The study of cultural shifts and cultural congruence over time is significant

for the future operational and aspirational success of the six universities as there is an established and clear connection between institutional culture and institutional change strategies and effectiveness (Kezar & Eckel, 2002; Stensaker, 1998). Although there have been many changes within and across state governance of higher education, the addition of new gubernatorially appointed board members for six state institutions is a unique disruption within the higher education landscape. No existing state model was identified for Tennessee to emulate, so these changes are novel in approach, scope, and scale. Finally, this study is significant in that it provides the opportunity to track cultural shifts stemming from a system-board governance model to a local-board governance model of higher education in a state where a net increase of 48 additional new gubernatorial appointments to higher education governance has occurred. Findings from this research will inform the scholarship related to governance change and policy implementation in higher education.

Review of the Literature

Organizational Culture in Higher Education Institutions

Organizational culture is a powerful definer of the institution and is made up of the organizational stories, norms, mores. practices, myths (Martin, 2002), attitudes, shared beliefs (Schein, 2010), and is something that is tangible and can be measured (Angwin & Vaara, 2005). Organizational culture is a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems. (Schein, 2010, p. 18).

Organizational culture has such a commanding presence in the institution such that "culture does not *hold* the organization together so much as it *is* the organization" (Manning, 2013, p. 93). Indeed, if culture is something tangible and real within an organization, then it stands that it can be created, managed, measured, and generalized (Davies, Nutley, & Mannion, 2000). Stated simply, organizational culture is "the way we do things around here" (Bolman & Deal, 2013, p. 263).

Institutions of higher education are steeply enveloped in organizational culture and tradition, manifested through the following shared beliefs and kev characteristics: the values and assumptions of the institution; the subcultures that exist among the myriad groups within the institution; the deep history, tradition and context of the institution; the key members of the institution that shape the culture because of enhanced power, influence, tenure and longevity; the unique language espoused by the institution; the organizational sagas, and symbols; and the ubiquitous and distinctive architecture of the campus (Manning, 2013). Indeed, organizational culture in higher education institutions can be complex, multifaceted, and deeply entrenched. Further complicating organizational culture within higher education is the connection between institutional culture and academic disciplinary culture, which shape the departmental cultures within the institution (Lee, 2007). The departmental cultures that exist within the institution can vary greatly across disciplines; thus, departmental culture can and will affect the overall institutional culture (Lee, 2004). The intersection of institutional, disciplinary, and departmental cultures is further influenced by the faculty members themselves; whether they identify as cosmopolitans - faculty who identify more with their discipline than the institution, or as

locals - faculty who focus more on the campus community and institutional politics (Clark, 1963).

Culture Change in Higher Education Institutions

Higher education can be characterized as an industry that is highly targeted for change with its marked ties to state and federal politics, policy, and advances in technology (Manning, 2013). Organizational or institutional culture is highly connected to these change events and external pressures cause institutions to selfreflect on their current identity. When change occurs through internal or external pressures, such as the advent of a radical new policy like the FOCUS Act, institutional identity is subsequently threatened. Organizational culture acts as a stabilizing force for the institution, with its artifacts, symbols, beliefs, and values acting as a source for sensemaking and sense-giving during times of uncertainty; culture preserves a sense of self during organizational change (Ravasi & Schultz, 2006).

Despite the constancy of change and threats to identity within higher education, the higher education environment itself is characterized as highly resistant to change with preference for constancy and comfort afforded from the status quo (Freed, Klugman & Fife, 1997). Ignoring the organizational culture during times of institutional change will lead to issues and organizational ineffectiveness (Manning, 2013). Therefore, culture has a heavy bearing on institutional effectiveness and success (Cameron & Freeman, 1991; Chaffee & Tierney, 1988), and will dictate the change strategy that is ultimately utilized (Kezar & Eckel, 2002). Disturbances to organizational culture as a result of large external changes such as new policies, laws, or mergers and acquisitions (M&As) are commonplace (Cartwright & Cooper, 1996), and can send negative shockwaves into the organizational culture (Marks & Mirvis, 1998) that in turn cause impediments to productivity, job security, and communication (Cartwright & Cooper, 1996; Stahl & Sitkin, 2005). The implementation of the FOCUS Act can be categorized as such a disturbance.

Methods

Measuring Organizational Culture

In this study, we are adopting a policy analysis lens to understand the adaptability and susceptibility of culture within higher education institutions as a result of external forces or disruptions, such as the passage of legislation like the FOCUS Act. Culture can be used as "a vardstick for assessing whether or not a transformational change has actually taken place" (Keup, Walker, Astin & Lindholm, 2001, p. 6). Said another way, "the fit between the existing culture and the proposed change will determine whether the culture ultimately facilitates or inhibits institution transformation" (Craig, 2004, p. 85). If the culture does not change as a result of the external disruption, it may be an indication that organizational change has not occurred. Yet, if the baseline institutional culture shifts after externally driven policy levers, such as the FOCUS Act, this may be indicator that higher education an environments are easily adaptable and more susceptible to cultural change than previously thought.

Organizational theorists debate whether culture is something that can be assessed quantitatively or qualitatively. Some believe that culture is more appropriately studied qualitatively and that quantitative assessments of culture cannot truly capture the shared experiences, meaning, or depth that exists in an institutions culture (Martin, 2002). However, scholars have generated valid quantitative instruments to study institutional culture; one such instrument is the Competing Values Framework originally developed by Quinn and Rohrbaugh (1981;1983) and Cameron (1985).

The Competing Values Framework

Culture can be difficult to define for participants because of the underlying assumptions, values, traditions, and rituals that are prevalent in an organization. Without using a qualitative method, it is necessary to provide a stimulus for respondents that can be related to their own experiences in the organization. Relating to one's own experiences in the organization is what the Competing Values Framework (CVF) accomplishes. The survey questions were intended to "serve as mirrors, where respondents rated the familiarity of each different reflection" (Cameron & Freeman, 1991, p. 33) as it relates to their own experiences in their institutions and their own organizational culture.

The CVF is one of the most commonly utilized instruments to measure organizational culture from a corporate culture theoretical frame (Ancarani, Di Mauro, & Giammanco, 2009; Bligh, 2006; Cameron & Freeman, 1991; Cameron & Quinn, 2011; Helfrich, Yu-Fang, Mohr, Meterko, & Sales, 2007; Ovseiko & Buchan, 2012; Ovseiko et al., 2015; Scott, Davies, & Marshall, 2003), and "is specially designed to represent the balance of different cultures within the same organization" (Scott et al., 2003, p. 941). Additionally, the CVF uses the stimulus method by providing descriptions of overarching cultural themes for respondents to match to their own experiences within the culture (Cameron & Freeman, 1991). The CVF follows a typological approach, "in which the assessment [instrument] results in one or more "types" of organizational culture. The [CVF] ... characterize(es) organizational cultures [based on the subcategory or quadrant]" (Scott et al., 2003, p. 928).

The CVF is designed using a four quadrant model with a vertical axis and horizontal axis (Figure 1), and characterizes culture as either Clan, Adhocracy, Market, or Hierarchy. The horizontal axis determines the level of internal or external focus for the institution. The vertical axis emphasizes whether the institution values flexibility, autonomy, and decentralization, or stability, centralization, and control. The quadrants that are diagonally opposite of each other are culturally diametrically opposed and represent the competing values within the organizational culture (Cameron & Quinn, 2011). The CVF allows for generalizations about the organizational culture as a whole. "The [CVF] reduces the complexity of organizational culture for analytical and practical purposes by focusing on an organization's key cultural characteristics" (Ovseiko & Buchan, 2012, p. 710). These key characteristics or subcategories of the organizational or institutional culture are the dominant attributes of the institution, the leadership stvle employed bv key administrators (in this study, the university president), the bonding factor or glue that holds the institution together, and the strategic priorities of institution the (Cameron & Freeman, 1991).

Culture Congruence

The CVF was the instrument selected to measure cultural congruence among each institution in Tennessee before the implementation of the FOCUS Act. Cultural congruence is defined "as consistency among organizational systems and components" (Cameron & Freeman, 1991, p. 28) found in each culture type quadrant. Quinn (1984) stated that if there is a level of homogeneity between the institutions attributes or subcategories, i.e. the institutions dominant attributes, the leader's style, the institutional "glue", or the strategic emphases, then there is a level of cultural congruence within that organization. Congruence among organizational subcategories, while not a prerequisite to achieve success, can mean that the organization is more effective and can be an indication of how functional the institutional culture is overall (Cameron & Quinn, 2011; Chaffee & Tierney, 1988).

Having all aspects of the organization clear about and focused on the same values and sharing the same assumptions simply eliminates many of the complications, disconnects, and obstacles that can get in the way of effective performance... Incongruence inhibits the organization's ability to perform at the highest levels of effectiveness (Cameron & Quinn, 2011, pg. 85).



Figure 1. CVF Framework: Culture Types and Quadrants

Adapted from: Cameron, K. S., and Freeman, S. J., used with permission.

Cultural congruence occurs when the subcategories within the institution align. A high level of congruence is evident in an organization when each of the four sets of organizational or institutional attributes are highly aligned as measured by those that know the organization best; in this study, those filling a key leadership position. "Incongruent cultures are characterized by a lack of fit between the leader style and dominant cultural attributes" (Cameron & Freeman, 1991, p. 28), or any of the other subcategories. Complete congruence occurs when all four subcategories align; incomplete congruence occurs when three of the four subcategories align: incomplete incongruence occurs when two of the four subcategories align; and complete incongruence occurs when none of the four subcategories align (Cameron & Freeman, 1991). A key characteristic of the current study is to ascertain if there is a level of congruence among the TBR institutions prior to the implementation of the FOCUS Act, and to establish a baseline measure for institutional culture and congruence levels (i.e. cultural effectiveness) to compare postimplementation. As previously stated, congruence can indicate a higher level of effectiveness within the institution, while incongruence in the organizational culture "may indicate a lack of focus, that the culture is unclear to respondents, or that the complexity of the environment requires multiple emphases in different areas of the organization" (Cameron & Quinn, 2011, pg. 86).

Sample and Data Collection

Data collection for this baseline measurement of culture at each TBR university prior to the implementation of the FOCUS Act occurred in May, 2016. Using publicly available contact information, key administrators and leaders were identified at each TBR university, and all six universities were contacted. Key administrators and faculty leaders were divided into the following employment categories: general administrators. academic administrators, financial administrators, student affairs administrators. athletic administrators. academic department heads, and faculty senators. These employment categories were selected because it was believed that these individuals were able to "provide an overall institutional perspective, that is, [they have] a view of the overall institutional culture" (Cameron & Freeman, 1991, p. 32). Across all six institutions, a total of 1318 potential respondents were contacted with 554 individuals responding to the survey, and 461 deemed as complete (Table 1).

Analysis

The version of the CVF used for this study used four questions to assess the current culture of the institution and focused on four subcategories or dimensions of Institutional culture: Characteristics. Institutional Leader, Institutional "Glue", and Institutional Emphases (Cameron & Freeman, 1991). Respondents were asked to evenly distribute 100 points across four of each subcategory descriptions or dimension of culture, with the highest amount of points going toward the institutional/cultural description that most matched their current institutional culture. If a response did not add to 100 points for each domain, it was not included in the results. Respondents were given four prompts, one for Institution A (Clan), B (Adhocracy), C (Market), and D (Hierarchy), and were instructed to give the most points to the institutional description that most reflected their current institution. This method reveals the institutions dominant culture type (Clan. Adhocracy, Market or Hierarchy) and also reveals whether each of the four subcategories (institutional characteristics,

Administrator Type	APSU	ETSU	MTSU	TSU	TTU	UofM	Total
Academic Administrator	12	22	11	15	10	15	85
Academic Dept. Head	13	24	10	11	9	20	87
Athletic Administrator	4	9	3	3	4	3	26
Faculty Senator	12	18	11	7	9	9	66
Financial Administrator	0	8	3	7	4	3	25
General Administrator	7	43	14	25	16	18	123
Student Affairs Administrator	6	16	5	6	11	5	49
Total	54	140	57	74	63	73	461

Table 1.Number of Respondents by Institution and Administrator Type

leader, glue, and emphases) were within the same culture type, thus indicating a level of congruence.

For each institution, the average of each question response translated to the data point for that culture type on the CVF model (see figure 2). Likewise, the average of each question response identified if there was a level of congruence within each institution (see table 2).

Congruence Levels

APSU is dominated by the Clan (A) culture and is primarily focused on team cohesion, collaboration, morale, and human resources. There is a skew toward the Adhocracy (B) culture as well, which focuses on creativity, flexibility, and some level of entrepreneurship and risk taking. APSU has an incomplete incongruence level with 2 of 4 subcategories aligning with the culture type. Respondents rated the institutional characteristics and the institutional glue as Clan, and rated the institutional leader and the institutional emphases as Adhocracy,

which may be the cause of the two primarily dominant culture types (i.e. the President has the power and authority to direct the institutional strategic emphasis, but may not necessarily influence the more complex components of the institutional characteristics and glue).

ETSU's culture is "squared", with almost equal mean averages in the Clan (A), Adhocracy (B), and Market (C) cultures, with a slight leaning more toward the Adhocracy culture, which maintains an external focus with flexibility on ad hoc or temporary teams, initiatives, and projects and engenders a sense of entrepreneurship. Authority in an Adhocracy is not centralized typically, but emanates from individuals and from individual projects and allows freedom and creativity (Cameron & Quinn, 2011). ETSU was not completely "squared" because of a strong leaning away from a Hierarchy (D) cultural orientation. Like APSU, ETSU has an incomplete incongruence level with 2 of 4 subcategories aligning with the culture type. ETSU administrators rated the institutional

Table 2.

Congruence Levels by Institution

	AF	<i>PSU</i>	E	TSU
	Clan (A)	Adhocracy (B)	Clan (A)	Adhocracy (B)
Characteristics:	41.321	Characteristics: 19.90566	Characteristics: 36.457	Characteristics: 16.35
Leader:	21.13208	Leader: 38.491	Leader: 11.85714	Leader: 48.524
Glue:	43.396	Glue: 16.03774	Glue: 34.443	Glue: 16.57857
Emphases:	27.26415	Emphases: 29.057	Emphases: 19.57143	Emphases: 29.429
	Hierarchy (D)	Market (C)	Hierarchy (D)	Market (C)
Characteristics:	15.56604	Characteristics: 23.20755	Characteristics: 13.05	Characteristics: 34.14286
Leader:	16.41509	Leader: 23.96226	Leader: 15.20214	Leader: 24.41643
Glue:	18.30189	Glue: 22.26415	Glue: 23.57857	Glue: 25.4
Emphases:	24.24528	Emphases: 19.43396	Emphases: 26.32143	Emphases: 24.67857
	M	TSU		TSU
	Clan (A)	Adhocracy (B)	Clan (A)	Adhocracy (B)
Characteristics:	30.4386	Characteristics: 17.19298	Characteristics: 36.054	Characteristics: 17.0473
Leader:	3.77193	Leader: 23.59649	Leader: 19.24324	Leader: 28.351
Glue:	30.08772	Glue: 15.61404	Glue: 49.581	Glue: 15.77027
Emphases:	11.31579	Emphases: 30.70175	Emphases: 21.81081	Emphases: 29.264
	Hierarchy (D)	Market (C)	Hierarchy (D)	Market (C)
Characteristics:	19.47368	Characteristics: 32.895	Characteristics: 17.56757	Characteristics: 29.33108
Leader:	27.45614	Leader: 45.175	<i>Leader:</i> 25.25	Leader: 27.15541
Glue:	24.03509	Glue: 30.263	Glue: 14.04054	Glue: 20.60811
Emphases:	36.93	Emphases: 21.05263	Emphases: 23.18243	Emphases: 25.74324
	Т	Γυ		UM
	Clan (A)	Adhocracy (B)	Clan (A)	Adhocracy (B)
Characteristics:	33.33333	Characteristics: 16.11111	Characteristics: 22.80822	Characteristics: 17.19178
Leader:	11.11111	Leader: 39.444	Leader: 5.013699	Leader: 39.11
Glue:	33.857	Glue: 18.46032	Glue: 20.06849	Glue: 22.87671
Emphases:	12.85714	Emphases: 29.28571	Emphases: 10.54795	Emphases: 32.12329
	Hierarchy (D)	Market (C)	Hierarchy (D)	Market (C)
Characteristics:	16.34921	Characteristics: 34.206	Characteristics: 22.64384	Characteristics: 37.356
Leader:	17.22222	Leader: 32.22222	Leader: 27.38356	Leader: 28.49315
Glue:	21.96825	Glue: 25.71429	Glue: 29.589	Glue: 27.46575
Emphases:	32.698	Emphases: 25.15873	Emphases: 37.877	Emphases: 19.45205
1				

characteristics and the institutional glue as Clan, and rated the institutional leader and the institutional emphases as Adhocracy. The leaning of the institutional characteristics and institutional glue toward the Clan cultural orientation is somewhat surprising as this culture type had the third highest mean score behind the Market culture. It would appear that ETSU's institutional characteristics and institutional glue are incongruent with the overarching culture of the institution.

MTSU slants downward toward both internal and external stability and control with a dominant Market (C) culture followed closely by Hierarchy (D). In addition to a focus on stability and control, the Market culture also emphasizes an external focus on competition and quick decision making. Secondary but close behind MTSU's Market culture is the Hierarchy culture, which emphasizes internal stability and control. This is a heavily competitive culture with a leaning towards stark bureaucratic. formalized working conditions that seek to maintain smooth operations while controlling the competitive market. This culture of stability and control is further corroborated by MTSU's congruence level, with three of the four subcategories being dominated by the Market culture. This represents the highest congruence level among the former TBR universities. Specifically the institutional characteristics, institutional leader, and institutional glue were all rated as primarily Market (C). Only the institutional emphases were rated as Hierarchy (D) with a bureaucratic orientation.



Figure 2. Tennessee Board of Regents Culture Map

TSU's culture model has a heavy leaning toward the Clan (A) culture type, which emphasizes an internal focus with some flexibility on team development, concern for human resources, and sensitivity to customers. Clan cultures engender a more familial atmosphere, with assumptions that the organization is best managed via personal development. teamwork and Though there is a large leaning toward the Clan culture as a dominant culture type, the institution does have incomplete an

incongruence level with two of four subcategories aligning, with the same results as APSU and ETSU. TSU's intuitional characteristics and institutional glue both favor the Clan culture, while the institutional leader and institutional emphases both aligning with the Adhocracy (B) culture type. It seems that the leader and the emphasis of the institution fall outside of the dominant institutional culture.

TTU's dominant culture leaned toward the Market (C) culture orientation, which is above all else a competitive orientation, specifically with an external focus on stability and control. The term "Market" is not to be confused with an orientation toward the marketing function. rather the institution is focused on external constituents and university transactions (Cameron & Quinn, 2011). Only MTSU was ranked as leaning more toward this orientation than TTU. After the Market orientation, TTU had a "squared" orientation with almost equal scores in the other culture types, suggesting that the Market culture is indeed the most pronounced within the institution. TTU's congruence level is unlike any of the other institutions within the former TBR system. Where each institution had some level of congruence, TTU is listed as complete incongruence, meaning that none of the subcategories align. The Institutional Characteristics were in fact dominated by the Market (C) culture, but the Institutional Leader was predominantly ranked as Adhocracy (B), the Institutional Glue was ranked as Clan (A), and the Institutional Emphases was ranked as Hierarchy (D). This may suggest that TTU's culture is unclear to the respondents, that there is a lack of focus. that there is a lack of fit between the leader and the institution, or that perhaps the organization is so complex that multiple cultural emphases are required (Cameron & Freeman, 1991; Cameron & Quinn, 2011).

UofM favors the Hierarchy (D) culture, which tends more toward traditional bureaucracy and internal control as promulgated by Max Weber. This should not be interpreted as a negative culture type as the term "bureaucracy" can elicit a negative response, rather the culture simply emphasizes smooth operations with a formalized structure where formal procedures keep the institution together (Cameron & Quinn, 2011). The culture is followed by a Market (C) and Adhocracy (B) orientation. What makes UofM different from the other institutions within the former TBR system, other than its predominant leaning toward Hierarchy, is its large deemphasis of the Clan (A) orientation, which is characterized by collaboration, human development, lovalty and tradition. Of the six institutions studied, UofM has the lowest score for this culture type, suggesting that formal policies and procedures do in fact govern what administrators do within the institution, even though these two culture types are not the competing values within the framework. UofM's congruence level is further dominated by the Hierarchy culture, though it is characterized as incomplete incongruence as only the Institutional Glue and Institutional Emphases are dominated by orientation. The Institutional this Characteristics favor the Market culture, while the Institutional Leader leans toward the Adhocracy orientation.

Discussion

Although each institution within the former TBR system ultimately had the same line of reporting and accountability, the culture types and congruence levels are vastly different, suggesting that despite the centralized governance system, each institution adjusted its operations, leadership, strategic emphasis, and ultimately organizational culture to fit the dynamic and complex needs of the institution within its market area. Since institutions of higher education have complex organizational cultures that are deeply steeped in tradition (Manning, 2013), it is not unlikely that these cultures are long standing prior to the time of the TBR, and even resisted integration efforts into a centralized governance system when that initially occurred.

In three of the six institutions studied, there seems to be an independent relationship between the Institutional Characteristics and Institutional Glue. and another the independent relationship between the Institutional Leader and the Institutional Emphases. In these three institutions, both the Institutional Characteristics and the Intuitional Glue had a Clan (A) orientation, while the Institutional Leader and the Institutional Emphases had an Adhocracy (B) orientation. It seems that the Institutional Characteristics align with the Intuitional Glue independent of the leader or the emphasis. However, it further seems that while the leader may not necessarily have an impact on the Institutional Characteristics, they do have a relationship and impact on the Intuitional Emphases. This seems consistent with the logic that the Institutional Characteristics and Glue are likely deep-seated components of the culture that operate independent of the leader or the emphasis that the leader likely brings with them to the institution. It seems reasonable to conclude that institutional or strategic emphases are fleeting and are easily manipulated by the leader and the focus that they wish to bring to the organization, along with the regular turnover of the institutional leader that occurs. However, organizational culture as a whole may not be very malleable to the leaders' directives or strategic emphases.

With the FOCUS Act now fully implemented, it is possible that the organizational cultures have been affected, changing to meet the needs of a new governing body structure, and possibly malleability experiencing more than previously experienced with a now more autonomous institutional leader. As previously stated, the organizational culture will ultimately be the "measuring stick" for the effectiveness of the FOCUS Act (Keup, Walker, Astin & Lindholm, 2001). If a change in the culture does not take place, it is an indication that effective organizational change did not actually occur. On the other hand, organizational leaders may want a seamless transition into a new governing system, and would view culture change as detrimental to the initiative. The question for consideration is whether the FOCUS Act and its sweeping organizational changes at the executive level will impact the "felt" organizational culture among university administrators. Steep culture changes may indicate chaos as a result of the change, and further congruence variances may indicate that the culture is broken as a result of the change. Perhaps the soundest implementation strategy is one that makes the organizational changes virtually indistinguishable to the stakeholders within each university, thus lessening the impact on the organizational culture. This does not mean that clarity, transparency, and communication should not be utilized by institutional leaders, but it does suggest that the new governing boards should practice discretion in their direct involvement in university affairs, adopting a "hands on, but fingers out" approach. These questions and considerations should be addressed in future studies.

Conclusion

This study presents a baseline measure for the cultures of the six former TBR institutions within the state of Tennessee before the implementation of the FOCUS Act, which transitioned the university governing structure from a centralized orientation to a decentralized, local governance system. The implementation of the FOCUS Act provides a natural experiment wherein the effects of major policy change in governance and leadership can be tracked to see its impact on organizational culture.

Future research should include a longitudinal study of these same institutions to track changes in culture and the organizations as a result of the policy change, using these results as a baseline, and to inform policy makers about institutional effectiveness after such changes are made. In addition, it is possible to track changes in congruence to see if the organizational cultures become more or less congruent as a result of this change.

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Leading with the Heart Through Tragedy

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t is easy and fun to lead when test scores are good, parent engagement is at a high level, and school moral is high. You work with teachers in PLCs to improve student learning and teacher effectiveness, and you get to engage with students during break times and class changes that are fun and uplifting. However, it is during times of tragedy and student loss that your resolve and strength as a school leader will be tested the most.

In the span of 14 months, we (Flintville School) lost three students in very tragic ways: an off-roading accident, suicide, and a car accident. All three manners of death were very different, yet impacted our small school and community in very different ways. We wanted to share some advice that we learned through those 14 months that may help you should you unfortunately have to deal with the loss of a student.

Central Office

One of the most important things is to understand that you cannot deal with a loss of student by yourself, and nor should you try. You will want to work with school district personnel as much and as closely as you can. Typically, this person is the Safety Supervisor or Crisis Team Supervisor. This person will have Recovery Teams' members and procedures ready and trained should an event of student loss happen, and you will work with them on placement within your building, interaction with the students, appropriate activities, and the overall dealing with the aftermath of the loss. This is also the person you will work with when it comes to making difficult decisions. For example, the family may want a memorial in the school or some type of t-shirt recognition. By working with the Safety Supervisor/Crisis Team Supervisor, you will be able to follow policies and procedures that are specific to the event. Following policies and procedures is very important for consistency. Even though each tragedy is different, you do not want families to feel like their situation was treated with any less care and concern than other families who have to deal with a difficult situation. For example, if the student loss stems from a suicide, then you will want to lean heavily on the Jason Foundation's recommendations and other state agencies such as in our case, Tennessee Suicide Prevention Network

Parents and Family Members

This is one of the hardest things that you will have to do during a student loss. Losing a child is something no one should ever have to deal with, yet it happens. During these times, empathic communication with the family and appropriate family members is a must. Students and faculty members will ask many questions concerning funeral/celebration-of-life events, and as the leader of the school, you will need to be the one who provides this information. The parents will want to come to the school to get their lost one's personal items. When that happens (and it will), we suggest the following: always stop what you are doing to meet with the parents, meet them at door and guide them to your office, have the student's personal belongings ready in your office, and listen to them. They are hurting and lost, and by showing both empathy and sympathy to them, you are able to share that your school is mourning with them and supporting them along their tragic journey.

Spiritual Advisors

An important factor you may want to include spiritual advisors as an option for students and faculty members along with the Recovery Team. Students will be devastated with the loss of a classmate and friend. They may not be willing or comfortable talking to a Recovery Team member, as they may not recognize or know them. However, students may feel comfortable talking and discussing their feelings with a local pastor, community member, or spiritual advisor they know and feel comfortable talking to about their feelings and emotions.

Visibility

Perhaps the most important thing we can share would be this: be visible. During times of student loss, you will need to clear your schedule and be as available and visible as possible. You will need to smile and ask them "How it's going?", "Are you holding up ok?", "Do you need to talk to someone?", and tell them "It's great to see you", "It's going to be ok", and "We will make it through this together and as a family."

You will also need to go into each classroom and interact with the teachers, especially the teachers of the lost child. Remember, they are the ones who worked with the child each and every day and knew them well. They will need compassion and empathy also, and we promise you, they will need to see strength, support, and compassion from their leader.

Normalcy

This is perhaps the hardest thing to do and get to, but it's something you have do as soon as you can. The quicker you can get to normal schedule and day-to-day normal activities and schedule, the better it is for everyone. Both children and adults like routines as they are comforting and reassuring. Getting back to normal, everyday flow of a school schedule will let everyone know that everything is going to be ok, school will continue as usual, it's ok to live and move forward.

Take Care of Yourself

Taking care of yourself during times of student loss is often times put on the backburner, but it's a must. When a student passes, everyone will automatically look at you for guidance, support, and leadership, and you will have to do your best to deliver these for everyone in your building. Losing a child is burden and heartache that no school leader should have to deal with, and often times, we put that burden on our shoulders. But, it is ok for us to show our hurt. It makes us show our humanity, and it also makes us relatable to the students and adults in our building and community. At the onset of a student loss, there may be nights with little sleep as we are working the phones with district leaders, community leaders, faculty and staff members. We will be up late organizing plans on dealing with the tragedy and how to help everyone. We may even be on the phone with local law enforcement officers and make multiple trips out to our building late at night. All of these are very normal happenings during the onset of a student loss. During the days before the funeral/celebration-of-life, you may experience late nights talking to parents, family members of the deceased, and other members of the community as well. It is very important that during all of this that you find time to rest and relax. Your family as home will need this from you as well as your school family. Being a leader in these times is very difficult, and the more rested you are, the clearer your mind will be when it comes to times to make difficult decisions and interact with everyone.

Finally, it is important to understand that it is perfectly normal for you to talk to someone like a therapist or counselor. Sometimes people forget that principals and school leaders are real people who have feelings and emotions. Losing a student for any reason is a tragic experience for anyone, but being one who leads everyone through the tragedy can be a very heavy load for even the most experienced school leader.

Conclusion

While we hope no one has to deal with the tragedy of losing a student, it is inevitably going to happen. Hopefully, what we have discussed will give you a foundation on how to deal and work through if and when it happens at your school.

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