

Educators' perceptions of technology integration into the classroom: a descriptive case study

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Abstract

Purpose – The purpose of this paper is to supply an in-depth description of the educators' values, beliefs and confidence changing from a traditional learning environment to a learning environment integrating technology.

Design/methodology/approach – The descriptive case study design was employed using descriptive statistical analysis and inductive analysis on the data collected.

Findings – Themes on a high level of confidence, the importance of professional development and training, self-motivation, and excitement about the way technology can enhance the learning, along with concerns over the lack of infrastructure and support for integrating technology, and about the ability of students to use the technology tools for higher ordered thinking surfaced.

Research limitations/implications – Additional research may include a more diverse population, including educators at the kindergarten to high school level. Another recommendation would be to repeat the study with a population not as vested in technology.

Practical implications – A pre-assessment of the existing values, beliefs and confidence of educators involved in the change process will provide invaluable information for stakeholders on techniques and strategies vital to a successful transition.

Social implications – To effectively meet the learning styles of Generation Z and those students following, educators need to be able to adapt to quickly changing technology, be comfortable with students who multitask and be open to technology-rich teaching and learning environments.

Originality/value – This study filled a gap in the literature where little information on the humanistic challenges educators encounter when integrating technology into their learning environment providing insights into the values, beliefs and level of confidence of educators experiencing change.

Keywords Educational technology, Humanistic approach, Integrating technology

Paper type Research paper

Introduction

How students prefer to learn has changed dramatically since the introduction of the internet. Students no longer prefer passive dissemination of information being delivered by a teacher. Students prefer to watch a task taking place, and then attempt to duplicate it instead of reading or being instructed about the topic (Genota, 2018; Seemiller and Grace, 2017; Shatto and Erwin, 2017; Swanzen, 2018). For example, 59 percent of Generation Z, 14–23-year olds, access YouTube for learning and information, 55 percent believe YouTube contributed to their education and only 47 percent prefer textbooks as a learning tool (Global Research and Insights, 2018). The findings indicate virtual applications integrated into the curriculum can enhance the cognitive and creative skills of students through a student-centered environment (Steele *et al.*, 2019). Although the study indicated 78 percent of the Generation Z believed teachers were important to their learning, only 39 percent preferred teacher-led instruction.

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During the last seven years, the number of technology devices has grown 363 percent in our public schools. However, the use of classroom computers that duplicate the passive pedagogy of traditional classrooms has become more common, and the percentage of educational professional development opportunities for technology integration has remained unchanged (Genota, 2018). Most college courses, even those that use a learning management system (LMS), tend to be teacher centered and lecture based (Vercellotti, 2018). Higher education tends to be slow at adopting innovations in part because of the risk and the time commitment involved in exploring new tools and ideas (Serdyukov, 2017). Simply adding more devices into the classroom is not enough to change instructional practices.

To effectively meet the learning styles of Generation Z and those students following, educators need to be able to adapt to quickly changing technology, be comfortable with students who multitask and be open to technology-rich teaching and learning environments. However, most educators do not have the adequate knowledge, skills and confidence to effectively or efficiently use the available technologies to support technology integration into the learning environment (El Fakil, 2015; Ferdig and Kennedy, 2014; Somera, 2018). In order to generate a systemic and empathetic change that can be sustained over time, educational leaders would need to explore the humanistic aspect of the change process as experienced by the educators. Inherent in the shifting role of educators is an in-depth understanding of the values, beliefs and confidence educators bring to the integration of technology into their classrooms.

Accessing information

The creation of the internet in 1990 by Tim Berners Lee (Patterson, 1999) greatly influenced how people accessed information, interacted socially and prefer to learn. Generation Z (those born between 1995 and 2010) have grown up with easy access to the internet and are accustomed to multitasking, accessing information with a few clicks and watching something being done before trying it themselves (Seemiller and Grace, 2017). Generation Z students prefer working with peers in collaborative groups over lectures. These students desire active learning with demonstrations and hands-on participation (Adamson *et al.*, 2018; Seemiller and Grace, 2016). The students are also known by the monikers Net Generation, iGeneration or digital natives. By the year 2020, digital natives will make up one-third of the population in the USA (Seemiller and Grace, 2016). Technology is a dominant part of their existence.

The traditional educational setting no longer meets the needs of a generation of students who strive to design their own learning experience (Office of Educational Technology, Department of Education, 2017). However, the change from a teacher-centered learning environment to a student-centered learning environment with the integration of technology creates challenges and creates opportunities for educators (Nicol *et al.*, 2018). Some educators recognize the benefits of integrating technology into their classrooms, which includes the advantages over traditional teaching and additional opportunities for improving student learning. Educators also consider benefits such as the availability of equipment, ease of use and the interest the technology may spark in each student (Porter and Graham, 2016).

The process of identifying and implementing instructional technology requires different levels of support. The transition from a traditional learning environment to a learning environment integrating technology requires a certain amount of self-education on the part of the instructor, and the change process may take years (Nicol *et al.*, 2018). Some educators find the process of scheduling equipment and loading materials into online course shells frustrating, and others find professional development activities do not fulfill their needs. The professional development available to faculty may have the wrong instructional focus,

may be the wrong type or format, or may not be at the appropriate instructional level of the learners involved (Reid, 2017). Achieving the level of support required for educators to feel comfortable may be challenging to both the support staff and the educators.

Change process

Learning how to enhance teaching with technology can be difficult (Reid, 2017). Some educators approach instruction with very traditional methods. Teacher-centered lectures, pages of notes and assigned readings represent traditional or old-school instructional practices. Few post-secondary instructors are taught how to teach and most learn by modeling the teaching style of others. Teachers have not been taught how to be a facilitator in a technology-rich classroom (Nicol *et al.*, 2018). Those teachers who do not acknowledge the changes in learning preferences may find it more difficult to teach the new generation.

Not all educators have the ability to embrace change. They may approach change with a fixed-mindset attempting to use a new technology tool and giving up easily at the first sign of difficulty. They do not see themselves as capable of learning to use the new technology tools and fear the risk of failure when trying new things (Dress, 2016). The transition from teacher centered to student centered is a significant change and may be seen as a relinquishment of control by the teacher. Educators who are most comfortable in a traditional approach to education need more support when changing to a student-centered approach.

Humanistic influence on technology integration

The humanistic approach is described as involving the whole person and is manifested in the values, beliefs, confidence and emotions of the individual (Fedorenko, 2018). Teaching is a humanistic endeavor, and educators find joy in being able to interact with their students and in being able to share their knowledge directly (Azzaro, 2014). Learning organizations need educators who can bridge the gap between human and technological cultures (Dominici, 2018). However, changing from a teacher-centered approach to a student-centered approach to instruction and learning may be difficult, and requiring the use of technology may seem too impersonal for educators to accept.

The educators' values, beliefs and level of confidence are factors in the adoption of new technologies and pedagogies. A positive attitude toward using technology was found to be a significant factor in the intention to use educational technology. Positive attitudes have a major influence on the acceptance or rejection of the new technology integration. The change may come in the form of an educational change initiated by the college or university.

An educator's beliefs about using technology become a factor in the ability to adopt the new technology into their pedagogy. If the transition was smooth and the process was positive, educators may be more open to accepting the change. If the change was not positive, the announcement may produce negative feelings and doubt related to any new initiative. The change may produce resistance, self-doubt and uncertainties (Kilinc *et al.*, 2017; Reid, 2017). The doubt causes them to question the change and their belief system. Past experiences may also influence educators' ability to be successful with the implementation of a new innovation, such as technology (Demirbağ and Kilinc, 2018; Reid, 2017). If the focus of the change contradicts the current belief system, teachers are less likely to put the reforms into practice; therefore, they become resistant to the change. Changes that align with core beliefs are more likely to be successful (Demirbağ and Kilinc, 2018). The alignment allows teachers to feel confident about the change process and more likely to be a user of technology.

Educators produce resistance by using the technology superficially or not at all. The resistance builds when the educational technology seemingly does not contribute to their traditional teaching (Demirbağ and Kilinc, 2018). Educators may perceive learning to use the

newly adopted technology as a burden (Cheung *et al.*, 2018). The educational technology may be meaningful, but the resistance prevents them from exploring further opportunities for using the technology.

Resistance to technology can also be in association with an educator's efficacy. Self-efficacy is the belief in one's own ability to succeed in a context-specific task or behavior (Bandura, 1986; Alenezi, 2017). Confidence and knowledge with using technology and computers is known as computer self-efficacy (CSE). CSE refers to the ability and the application of skills to achieve a result (Alshammari *et al.*, 2016). The importance of CSE increased since the implementation of computer-based learning at all educational levels (Bhatiasevi and Naglis, 2016). Educators with limited exposure to technology in their everyday and personal lives or with limited or nonexistent support will be resistant to using technology (Kilinc *et al.*, 2017). An educator who demonstrates higher levels of CSE will have less frustration and will increase their use of technology in the future (Cheung *et al.*, 2018). Users of technology tend to believe in the value of technology if it is easy to use and makes completing tasks simpler (Bhatiasevi and Naglis, 2016). Lower levels of CSE coincide with low motivation and the perception of the technology as difficult and useless (Alshammari *et al.*, 2016). CSE is a major factor in the resistance of the change, but it is a barrier which is difficult to detect. However, when combining CSE with an educator's background experiences, one may have the ability to determine an educator's resistance to technology.

Educators who are comfortable with traditional teaching methods may feel more comfortable with a colleague or mentor easing them into the process of integrating technology. This mentor or colleague would be the change agent. The change agent would provide reassurance and support. It would not only require a change in an educators' knowledge of pedagogy and technology but also in their self-efficacy (Reid, 2014). These mentors can provide just-in-time support and help ease the educator into increasing the use of technology.

Purpose statement and research question

The purpose of the qualitative descriptive case study was to supply an in-depth description of the educators' values, beliefs and confidence at the onset of their experiences changing from a traditional learning environment to a learning environment integrating technology (Merriam, 2009; Yin, 2013). Integrating technology into the learning environment is a student-centered process where students are actively engaged in authentic learning experiences expanding their critical and creative thinking and increasing their knowledge base through the use of technology. A qualitative descriptive case study providing a detailed description of educators changing to a learning environment integrating technology is appropriate for this study (Merriam, 2009). By gathering the insights and perceptions of educators who experienced a change in the learning environment, strategies and approaches for focusing on the humanistic aspect of change can be gathered. The research question we explored was:

RQ1. What were the values, beliefs, confidence and level of preparedness of educators making the change from a traditional learning environment to a learning environment integrating technology?

Method and design

Descriptive case studies provide insight into complex issues and describe natural phenomenon within the context of the data that are being questioned (Zainal, 2007). The goal of a qualitative descriptive study is to summarize the experience of the individuals or participants (Lambert and Lambert, 2012). The design is appropriate for this study as the researchers were seeking to gain a rich description of educators' experiences transitioning

from a traditional learning environment to a learning environment integrating technology (Harrison, 2017; Yin, 2013). A descriptive statistical analysis was conducted on the 12 Likert-type questions and an inductive analysis was conducted on the narrative data collected from five open-ended questions included in the survey.

Participants

The sample recruited from the membership of Association for Educational Communication and Technology (AECT) during the fall of 2018 were community college, university, graduate level educators and others who had experienced changing from a traditional learning environment to a learning environment integrating technology. AECT has a membership of about 2,000 individuals from 50 countries (T. Lawson, personal communication, September 10, 2018). This population was of special interest because of the value and experience that they place on technology as evidence by their membership in AECT. The members of this group are familiar with technology and embrace the use of technology leaving the move from teacher centered to student centered as the key challenge. An invitation was sent out to the membership through the AECT website, and members of the organization self-selected to take part in the survey by clicking on the Member Consent, “Yes, I agree to participate.” An informed Consent approval was electronically signed through the SurveyMonkey tool describing the purpose and intent of the research study and describing how the participant’s identity and responses would remain protected.

In total, 42 participants started the survey. Tables I–IV provide the demographic information collected from the first four questions of the survey.

Table I.
Years teaching

1–10 years	12
11–20 years	17
21–30 years	5
31–40 years	6
41–50 years	2
Total responses	42
Range: 1–50 years	
Average: 18.7 years	

Table II.
Educational level
currently teaching

Community college	2
University level	15
Graduate level	10
Other	15
Total responses	42

Table III.
Subject or field
currently teaching

Technology	14
Instructional design	6
Content area: English, French, Science, Special Education, Library Science, History	13
Research, graduate level	4
Other: retired, real estate, not teaching, program evaluation, communications	5
Total responses	42

Data collection

After an invitation was sent out to the membership through the AECT website, members of the organization self-selected to take part in the survey. Participants were provided with a link to SurveyMonkey where they were asked to complete 12 Likert-type items and five open-ended questions. Descriptive statistics were collected from the Likert-type items. Participants responded to a series of statements indicating he or she strongly agree, agree, neither agree or disagree, disagree, or strongly disagree (Croasmun and Ostrom, 2011; Salkind, 2009). Three of the items (7, 10 and 17) were negatively worded requiring the participants to think about the statement avoiding automated responses to the items (Croasmun and Ostrom, 2011). The three items and corresponding responses were translated to a positive wording for analysis purposes. The results of the Likert-type items are displayed in Figures 1–3. In the final section of the survey, participants were asked to respond to five open-ended questions. SurveyMonkey generated a document with each participants' narrative comments. Survey results retrieved from SurveyMonkey were anonymous with no participant names or identifiers, other than the demographic information collected was accessible to the researchers.

21–35 years	6
36–45	15
46–55	7
56 and over	14
Total responses	42

Table IV.
Age range of participants

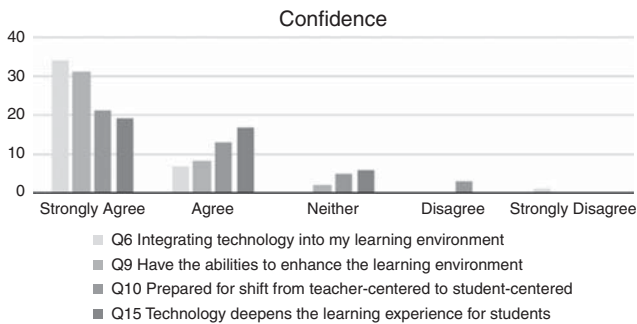


Figure 1.
Confidence level of participants integrating technology

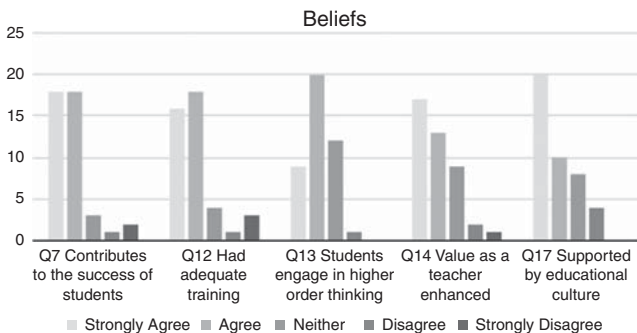


Figure 2.
Beliefs of participants in how technology contributed to student learning

Procedure for analysis

SurveyMonkey site generated a graphic representing the responses of participants to the 12 Likert-type items. Due to the nature of the 12 items, descriptive statistics analysis was appropriate for describing the qualitative data in terms of percentages (Hussain, 2012). A content analysis approach was used to analysis the narrative responses to the five open-ended questions allowing us to systematically describe the data surfacing descriptive codes leading to major themes (Fingfeld-Connett, 2013; Miles and Huberman, 1994; White and Marsh, 2006). Researchers initially coded the narrative statements independently, then engaged in a process of reviewing and analyzing the codes through four rounds until consensus was reached on the cluster of codes leading to emerging themes. The codes were unique and used to describe the educators’ experiences and perceptions changing from a traditional learning environment to a learning environment integrating technology (Hseih and Shannon, 2005; Merriam, 2009; Vaismoradi *et al.*, 2013).

Results

Responses to the Likert-type questions were combined into three figures. The related questions are grouped together for easier analysis. The questions related to confidence are organized into Figure 1. The questions that addressed beliefs are organized into Figure 2. The questions that addressed the values of participants are organized in Figure 3. A detailed description of each figure is provided below.

Likert-type items

Confidence. Responses to the Likert-type items 6, 9, 10 and 15 focused on the confidence of level participants integrating technology. The results can be seen in Figure 1. Combining the responses of strongly agree and agree, 97 percent of the participants indicated they had a high level of confidence in integrating technology into their learning environment. In total, 95 percent of the participants had confidence in their abilities to enhance the learning environment with the integration of technology. In total, 81 percent indicated they were prepared for moving from a teacher-centered learning environment to a student-centered learning environment. There was an 86 percent response to the participants’ confidence in technology to enrich and deepen the learning experience for students.

Beliefs. Likert-type items 7, 12, 13, 14 and 17 addressed participants beliefs in technology integration into the classroom with the results displayed in Figure 2. While the participant responses indicated confidence in technology integration, the beliefs of participations in how the technology contributed to student learning were more varied. In total, 86 percent believed technology contributed to the success of students. The responses to the extent to which technology engages students in higher order thinking indicated 69 percent either

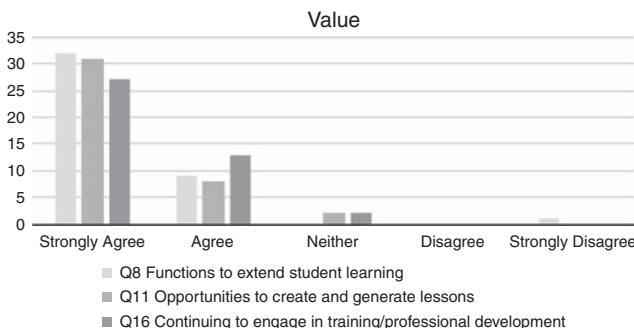


Figure 3.
Participants responses to the value of technology integration

strongly agreed or agreed, while 29 percent indicated they neither agree or disagree. In total, 71 percent believed their value as a teacher was enhanced with the integration of technology, 72 percent believe the culture of their organization supports technology integration and 81 percent believed they had adequate training in technology integration.

Value. Participants responses to the value of technology integration were high, at least 95 percent in each item as shown in Figure 3. There was a 98 percent strongly agreed or agreed to the additional functions technology provides to monitor, adjust and extend student learning. In total, 95 percent of the participants value the opportunities technology integration provided them in creating and generating relevant lessons for students. In addition, 95 percent also valued ongoing training and professional development in integrating technology.

Open-ended questions

A systematic process was used for coding the responses to the open-ended questions. The process began with open coding in which similarities and differences in the responses were identified. Labels were created and examined for the emerging concepts. Axial coding was used to generate relationships between the categories, and these were tested against the theoretical framework. This process was repeated for each of the open-ended questions.

Participants reflected on some of the ways their personal values and beliefs were challenged in Question 18. Of the sample, 36 people responded to the question. Through the analysis of the question, several themes and subthemes were uncovered. These themes were: no impact, concerns about confidence and a change to student-centered instruction.

In total, 16 participants indicated a positive feeling toward technology or that there was no impact on their values or beliefs. One participant stated, "I've always believed in the value of technology." Another said, "My personal beliefs were not challenged. I was one of the teachers leading the technology parade." Under the theme of confidence, nine of the respondents indicated they had challenges to their beliefs due to concerns of their ability to use technology. One participant stated, "It took me several weeks to feel comfortable combining teaching and using the technology." Another shared, "I was not sure I could truly deliver as engaging a lesson as I could face-to-face." A similar comment was related to being able to manage students when technology was added, "My confidence in students' ability to self-regulate has been challenged more than ever recently [...] especially in terms of their unbelievable ability to distract themselves [...]" In addition, nine of the respondents indicated the change to a student-centered approach brought about by the technology changes created challenges to their values and beliefs. One respondent shared, "The main challenge was in accepting a more learner-centered approach after decades of using the traditional approach to teaching." This finding is significant, because it would be anticipated the participants would be comfortable with technology and yet, the move from teacher centered to student centered still held some challenges.

The ways participants were prepared for the change to a learning environment integrating technology was explored through Question 19. There were 36 responses to this question. Through the analysis of the responses, two main themes were uncovered. The themes were: prior experience with technology or formal training with the technology and being self-motivated to learn about the technology. Some of the respondents stated more than one thing that helped them prepare to use technology.

In total, 21 shared they had prior experience with the technology or formal training with technology that helped prepared them. "I was enrolled in technology classes that helped me in college and this opened many avenues for my learning." Another subject stated, "I was a TA for two semesters for the course I taught. I attended the class and corrected papers, which helped me become familiar the Canvas, the LMS we use." Other examples of formal training were, "Lots of grad school, at my own expense." and, "My field is instructional design – it's what I'm trained to do."

In total, 18 of the respondents shared they were self-motivated to learn. Their responses included comments such as, "Trying out the technology before bringing it into the classroom." Another participant stated, "Because of a personal interest in technology, I had been learning on my own." Watching how-to videos on YouTube was another example of how participants were teaching themselves. There were some comments that were not common enough to merit a theme, but that still seemed worth mentioning. These referenced the importance of collaboration among peers. The comment, "Familiarity with the technology tools was important, but more important was the discourse with colleagues and former students about instructional strategies that allow students to grasp complexity," reflected the value put on collaboration.

With Question 20, participants were asked to reflect on some of the challenges they encountered when moving to a learning environment integrating technology. In total, 34 provided responses. One major theme and two minor themes emerged. IN total, 19 of the participants indicated the greatest challenge was resources. Resources included those of time, financial and infrastructures. Time was needed for training, for development and redesigning of materials and lessons. One participant commented, "I need extra time on improving my digital capabilities, somehow add extra workload for me." Specific to students, "when I ask them (the students) to use the technology. It consumes time, which is demotivating." There was also concern about the "best use of time and resources when the technology may not ultimately be useful. Knowing what will endure (and hence worth the effort) is difficult."

Financial support and a strong infrastructure to support the integration of technology was a concern. There were issues expressed about "access for all," "reliability and expensive of technology," "access to computer lab shared with other instructors" and "Tech support for things I can't fix myself."

In total, 11 participants expressed concerns about their lack of knowledge relative to technology resulting in a steep learning curve for educators and students. One participant was surprised at the "low technology skill level of students," and another on the challenge of "becoming both subject matter expert and IT consultant to the students." One participant was concerned about, "Learning new technologies and making sure that the activities and resources effectively help students learning," and another mentioned a "Lack of knowledge about software/apps and ability to use them to enhance learning."

Resistance surfaced in eight of the participants' responses and reflected resistance on the part of students, teachers and administrators. Comments included, "student unwillingness to learn to use the technology," the need for "opening people's minds to a new learning style," and "resistance from supervisors who are not forward thinking."

Participants shared their level of confidence in the change process and any surprises or unexpected events they encountered during the transition in Question 21. There were 34 responses to this question. Through the analysis of the question, several themes and subthemes were uncovered. These themes were: confidence, attitudes and infrastructure. In total, 26 participants responded they were confident about the change process. One of the participants who identified confidence stated, "I am usually very confident because I am an avid technology user." Another participant stated, "My confidence rests on the awareness that there is always more to learn about merging technology and instruction, and teaching and learning is a shared endeavor." Few participants identified lack of confidence about the change process. The participant said, "I was not confident at first, but when I found students learning and enjoying the process my confident [*sic.*] increase."

The next theme which emerged was attitude. In total, 23 participants identified attitudes as surprising or unexpected about the change process. This theme was divided into two subthemes: teacher attitude and student attitude. One participant who mentioned student attitude said of his or her students were "very confident, student [*sic.*] more creative, get more learning resources." Participants also mentioned teacher attitude. One participant

was “surprised by the jealousy of others who lacked knowledge and wanted to learn. Other teachers complained they couldn’t ever use the laptop cart, since I always [*sic.*] had it in my room and used it daily.”

Our last question was an open-ended question asking participants if there was anything else they would like to share that was not addressed by the previous questions. In total, 30 participants provided additional ideas. Comments related to instruction were made by 12 participants. The statement, “Although instructors should be cautious about the potential the extraordinary new technologies afford, there is much reason to excite our capacities to teach in ways that were not possible without these technologies,” reflects the participants views on the ways technology can and will influence their instruction.

In total, 11 participants expressed support for embracing technology and the potential technology holds for the learning environment with comments such as, “technology will be embraced by learners and it will enhance their learning and performance,” and “The potential of a learning environment with integrated technology is enormous.” Instruction and the importance of the designing the learning environment was expressed by eight participants. Respondents believed technology can enhance the learning, not drive the learning. “We must emphasize the design aspect in the learning environment as we do technology.”

Findings

Reflecting on their experiences transitioning from a traditional learning environment to one integrating technology, 42 participants shared their insights on the humanistic aspects of the change process leading to the generation of potential strategies and approaches for future change efforts.

The descriptive statistics indicated a strong level of confidence on the part of the participants in their abilities to integrate technology and a strong sense of the value technology brought to their educational setting. However, the beliefs on how technology contributed to student learning were more diverse. The results suggest there are still some questions about the extent to which technology engages students in higher order thinking and the degree to which technology enhances the role of the educator.

Three major themes emerged from the content analysis of the narrative responses: a sense of confidence and self-motivation in integrating technology in the educational environment, the importance of professional development/training opportunities, and a sense of excitement about the way technology can enhance the learning now and in the future. Approaching the humanistic aspects of change can lead to greater acceptance of the change and a deeper commitment to the change process. Efforts of resistance can be mitigated when the educators have a sense of self-assurance in the process, feel there is an alignment with their core values and have a sense of self-efficacy toward the ultimate goal. A parameter of the study was that the participants were members of the AECT and by membership, indicated an existing interest and awareness of the potential integrating technology into the educational environment.

Discussion

In order to generate a systemic and empathetic change which can be sustained over time, educational leaders would need to explore the humanistic aspect of the change process as experienced by the educators, including the support and resources needed for the effective integration of technology into the educational environment. As anticipated, the participants in this study were more confident and comfortable about the change to technology. The challenge was the shift in emphasis from teacher- to student-centered pedagogies. Inherent in the changing role is an in-depth understanding of the confidence, beliefs and values educators bring to the integration of technology into their classrooms. A pre-assessment of the existing resources, needed resources and potential resources to support the change

process, as well as, an assessment of the existing values, beliefs and confidence of educators involved in the change process will provide invaluable information for stakeholders on techniques and strategies vital to a successful transition.

Recommendations/limitations

The descriptive statistics and content analysis of the educators' responses provided an awareness of the complex aspect of the change process when embracing technology as a tool to enhance the learning environment. The findings may provide schools, community colleges and universities, as well as graduate level educators, educational leaders and educational organizations moving to technology-driven learning platforms with valuable information on the humanistic aspect of designing strategies, techniques and support structures to assist educators in effectively and successfully embracing the innovation. Additional research may include a more diverse population, including educators at the kindergarten to high school level. Another recommendation would be to repeat the study with a population not as vested in technology as the members of the AECT.

Contributions

With the expanding capabilities of technology and ease of access to the internet, students at all levels are moving toward technologically driven approaches providing flexibility, active engagement and self-control over the learning experience (Huh and Reigeluth, 2018; Utami, 2018). The informational age is moving education from teacher centered to learner-centered supported with the integration of technology. Research exists on the success of specific technology platforms and on the implementation of teacher training to support the integration of technology into the learning environment. However, there is little to no research on the values, beliefs and confidence of educators changing from a traditional learning environment to a learning environment integrating technology. Educators are entering into the new innovations with limited skills and knowledge to successfully implement the educational strategies needed for technology integration (Somera, 2018). The findings from this study add to the literature on the complex issues educators encounter when integrating technology into their classrooms and providing additional insights into a humanistic approach to change.

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