Training and Teachers' Confidence with Microsoft Applications

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Capstone Prospectus

Topic

  The research topic is in regard to educators who are lacking the confidence to use Microsoft Apps to create engaging assignments for virtual learning due to a lack of training. As a middle school teacher who is currently teaching virtually, I have found myself having to figure out most of my technology issues on my own. I am relatively tech saavy and from my conversations with coworkers they are struggling to intergrate technology effectively. My long term professional goal is to move into a technology coach role within my district, making this research topic very relevant. Looking at the greater field of education it is important to investigate the effect of training as we see increasing technology use in K-12 classrooms.

  One of the most common assumptions of new teachers is that they are more tech savvy because they have been exposed to technology their entire life. As these digital natives entire the classroom, schools and mentor teachers expect them to have a greater understanding of how to use technology. Swapna Kumar and Katya Vigil surveyed 21 undergrad preservice teachers about their technology use. Their survey findings confirmed that although these students have experience using social media and educational technologies such as blogs, podcasts, videos, and wikis, they lack the practice of creating these online resources (Kumar 2011).

  In Northern Cyprus, Begum Cubukcuoglu conducted a case study to identify factors that encouraged teachers to use ICT resources while teaching their content. He interviewed seven teachers over a period of two semesters. One of the main teacher factors he identified was teacher confidence. Suzan, one of the participants, was interviewed saying, "The more a person is involved in technology, the more s/he will tend to use it even more and better. A person who

does not know how to use technology (computers) will avoid using it... so, having technology (computer) skills is an enabler factor in integrating ICT into teaching (Cubukcuoglu 2013)".

Research shows that most preservice teachers are not prepared for the type of technology use that is expected of them as a teacher. They know how to use some of it as the student but lack the training and practice to create using technology as the teacher. Once these preservice teachers begin teaching any training they receive is either from their school or individual training they have sought out on their own. This lack of exposure to the necessary technology leads to avoidance and a lack of confidence.

Problem Statement

Public K-12 teachers in the researcher's social circle lack the confidence and training to effectively use an information and communications technology (ITC), such as Microsoft's Educational Apps, within their virtual classroom. This is a significant problem because it impacts their ability to design assignments and activities that will increase their students' engagement.

Problem Discussion

Before successfully implementing any new initiative or strategy in a classroom, teachers need training on the topic. Technology is a quickly changing field and varies from school district to district. When new programs, learning management systems, and technology devices are introduced to schools there is limited training on how to use them prior to implementation in individual classrooms. Most school districts assume that their educators have a through understanding of Microsoft Applications because they have used them previously as a student or for casual use. The uses of the applications greatly change when you are developing educational resources in a virtual setting. Too many school districts have not provided the necessary training on these ICTs.

When Dr. Serhat Kurt and Dr. Muhammaed Ciftci completed a mixed methods study attempting to identify the perceived barriers to teachers using technology in elementary schools in Turkey, they found lack of training to be one of the six major barriers. From their study, 24 out of the 26 teachers acknowledged their own lack of training as a barrier (Kurt 2012).

Trent Grundmeyer and Randal Peters set out to see how effective high school 1 to 1 laptop initiatives were for preparing students to use them in college. As they completed their qualitative study of interviewing college students a common theme was identified. The researchers found that there was an "implementation dip" for most of the programs due to increased availability of technology without increased professional development for teachers on how to use it. The participants shared that they dealt with a lot of trial and error in the first year of implementation which impacted their ability to be successful academically. As the program continued the students commented on how the teachers were able to use the laptops more effectively which in term help them be successful. The researches also acknowledged that when training is provided it needs to be provided continuously so that new teachers can benefit from the training every year (Grundmeyer 2016).

Katherine Fulgence conducted a qualitative study to try to discover how Tanzania's teacher educators at the university level developed their own digital skills so they can help their students relate to the contemporary world. What she found was that of the 90 participants 60% of them identified that they developed their digital skills by completed individual trainings and that only 31% felt they received training through their job. The researcher concluded that the government needs to invest in instructional designers, content developers and educational technologists who can provide educators the quality training they need to develop their digital fluency as technology continues to change (Fulgence 2020).

Proposed Solution

Participants will work through the self-paced training lessons with support from the researcher through email and videoconferencing over a two week period.

Once participants have agreed to voluntarily participate in this study, the researcher will email them the Informed Consent. Within the Informed Consent participants will be made aware of the types of data that will be collected and how the data will be used. After the Informed Consent is returned, the researcher will send a welcome email with information on how to join the OneNote Notebook were all training information will be kept. In the introduction lesson, the researcher will include the pre study survey to assess the current level of participants confidence and technology use. As with every survey in this study, it will be anonymous, and participants will be informed of this prior to completing the survey. The participants will be informed that they may select to withdraw from participating in the study at any time by notifying the researcher without penalties.

The training has been broken up into eight self-paced lessons: Microsoft forms, Microsoft word, Microsoft Sway, Microsoft Excel for organization, Microsoft Excel for student work, Microsoft PowerPoint, setting up a Microsoft OneNote Class Notebook, creating pages within Microsoft OneNote Class Notebook. Before the lessons participants will complete an Introduction and at the end of the course participatnts will complete a Wrap Up. Each App lesson should take participants approximately an hour to complete with the introduction and wrap up taking approximately thirty minutes. For each of the lessons, learners will be provided with example(s) of how the app can be used in a classroom, training videos on how to create their own and then create an assignment or activity using that app for their own classroom. At the end

of each lesson, they will complete a reflection of how they plan on using the app in their classroom.

For each lesson, participants will first use the App as a student by completing a sample activity. Participants will watch videos that show them how to create their own version of an activity using the App. To demonstrate their understanding of the training they will then create something they can use in their real classroom using the App. As a wrap up for each lesson they will complete a Microsoft form reflection on their training. Throughout the training the instructor will be available by email and can schedule Microsoft Teams meetings to provide additional 1-1 support. All of the videos, links, and sample activities will be housed within the Microsoft One Note Classroom for participants to access at their own rate and for other instructors to use as well.

At the end of the study, learners will complete the post study survey. They will be sent a thank you email which includes information about how they can obtain results of the study and that the researcher may contact them after the data has been analyzed for additional feedback. The surveys and the data will be organized in a chart for data analysis.

Participants

Participants will be chosen from the researcher's social circle using convenience sampling. The goal is to have 5-10 adult learners that are current K-12 public school teachers whose school district using Microsoft for Education. The learners will be completing the trainings asynchronously from their own computer.

Research Questions

How will educating teachers on Microsoft's Educational Apps affect their confidence in using them to create assignments for their virtual classroom? This question will be approached

through action research by administering a pre/post survey identify initial confidence levels prior to providing provide training on Microsoft's Educational Apps and after providing training.

Data Collection and Instruments

To address the research questions in this study, participants will complete surveys and end of lesson reflections. They will answer seven Likert questions about their confidence and the effectiveness of the training. Three open ended questions will seek to understand their feelings and opinions about the technology, their confidence and the training. As participants complete each lesson, they will complete a reflection of how they can use the specific Microsoft Education App in their classroom.

Data Analysis

The data collected will be coded to support maintain participant anonymity. The data will then be analyzed to identify and explore themes of participants confidence with the specific ICTs. The researcher will use this information to make conclusions about the impact of training has on teachers' confidence with technology. From the pre/post surveys, researchers will be able to see if there was an impact on teachers' confidence by looking at the Likert ratings. From the same surveys, researchers will be able to see if participants found content specific training to be more effective, less effective or no change in effectiveness as opposed to previous trainings. This quantitively data will be analyzed through descriptive statistics to look for trends in participants responses comparing pre/post survey. By comparing the pre/post survey responses, the researcher can determine if there has been group growth.

Triangulation will occur by using lesson reflection and the open-ended survey questions

 in order to utilize qualitative data to provide anecdotally evidence that supports the quantitative

data collected from the pre/post study survey. Participants will provide feedback at the end of

survey, which provides additional validity of the findings.

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