

## Perceptions of Preservice Teachers' Experiences and Attitudes on Integrating Educational Technology

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### Abstract

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This research presents a quantitative study on usage and perception towards educational technology. The study was conducted online at a public university in the Midwest part of the United States, with 44 females and 11 males who were enrolled in 16-week teacher preparation courses. Participants were presented with a 22-point questionnaire regarding their attitudes, and knowledge using educational technology. With the importance of infusing instructional technology into the curriculum, the study was guided by the question, "Are we preparing our preservice teachers to infuse educational technology into their curriculum?" The research showed that respondents were skilled using a variety of technologies; however, they did not perceive themselves as competent creating an e-portfolio. This is of great concern, given the fact that in 2015, the new edTPA performance assessment policy requires teaching candidates demonstrate their fundamental knowledge and skills of teaching by the way of submitting an e-portfolio.

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**Keywords:** technology, educational, preservice teachers, curriculum, teacher education, teacher preparation, perceptions Perceptions of Preservice Teachers' Experiences

### 1. Introduction

Educational Technology has been used by many educators as a tool for instruction; however, little research has been done to determine the perception of preservice candidates on integrating educational technology into their curriculum. Perceptions help provide useful information on areas for improving teaching performance. Sutton (2011), states, "By probing novice teacher's perceptions of their experiences, it is possible to zero in aspects of teachers' training that affect their sense of self-efficacy, thus directly influence the decisions they make in their own classrooms" p. 40. For the purpose of this study, educational technology includes all computers and tools used to support teaching and learning. It can be defined as a discipline or application in which it is used. It has allowed educators to improve teaching by incorporating technology into learning and address various learning styles. The use of educational technology warrants educator's opportunities to redefine pedagogy to meet the needs of learners. By using educational technology, educators have found new avenues to improve teaching and learning in and out of the classroom. Technological advancements have many educational institutions deeming the need for more training for faculty and students alike. Designing new learning formats requires a change in educational strategies and more training. Educators have the opportunity to critically reflect on the concepts and skills they want to teach and discover which instructional strategy works best to meet the needs of their students. Critical reflection is a matter of stance and dance. The stance is towards one of inquiry; the dance is one of experimentation and risk. These new opportunities for learning will require extensive planning and preparation; learners will benefit more from the course if teachers are well-prepared for instruction. There is an on-going need for professional development. It is essential for educators, not only from an acknowledgment of inadequacies, but instead to keep pace with the ever evolving technological advances. There is a sense of urgency regarding continuing education.

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As Martin and Loomis (2014) cites, it is not sufficient that teachers simply know how to turn on a computer; they must know when it is appropriate to utilize technology to enhance instruction. Policies are no longer curtailing around the issue of digital literacy. In 2001, Title II, Part D of the No Child Left Behind Act of 2001, goals of improving student academic achievement through the use of technology was identified. In 2010 the State of Illinois adopted the Common Core Standards. These standards support the use of educational technology by outlining student's ability to use the internet to produce, publish and interact. In 2014, the edTPA Assessment (teacher performance assessment), was mandated. This summative assessment measures a candidate's readiness for licensure. It requires teaching candidates to complete an electronic portfolio-based assessment of their teaching performance. Teaching candidates must demonstrate their impact on student learning by using several multimedia's, uploading artifacts and editing digital videos. The capstone assessment incorporates and assesses effective technology usage to support learning in primary and secondary education. Brown (2012) proposes, everyone must recognize what it means to become a digital citizen. There are standards for educators and students. These standards have forced educational institutions to revise delivery methods, reshape teaching strategies and reevaluate learning environments. Though educational technology offers new opportunities for educators, they also come with many challenges. Technology acceptance has caused schools to search for justification for spending on new applications, hardware and professional development (Charp, 2002 p. 10).

### 1.1 Literature Review

#### Learning New Technologies

The fusion of learning new technologies with new concepts in the classroom is exasperating and yet challenging. This daunting task of blending core academics with work-based competencies has been an uphill battle. Many teachers as well as students find it difficult to merge technology skills with technology concepts. The inundation of cloud computing, I-Pads, social media and Web 2.0 has today's students communicating, collaborating and disseminating content in new learning environments. Diemer et. al. (2012) research cites the rapid adoption of I Pads for education is still not well understood. Wohleb et. al. (2012) agrees and cited, "using technology in the classroom is not a simple task" (p. 43). Many teachers fail to integrate technology due to lack of time and training. Nevertheless, teachers must learn these alternative forms of communication and multimedia tools and learn new instructional strategies to teach in the classroom. Callister (1992) states, "If the teacher do not know what to make of technology, or fear it, or misconstrues its uses, it will be used badly or not at all" (p. 324). There is no getting around it; educational technology is used as an instructional tool for every discipline. Teachers' attitudes must change regarding using new technologies. Redmann (2003) notes, "The attitude is affected by access to technology, their technology training, and technology expertise" (p. 29). In addition to using email, teachers must learn how to upload blogs, wikis, and webcast and use voice communication software to correspond with their students on a daily or weekly basis. Educational technology promotes differentiated instruction. Mundy (2012), agrees and states, "The use of technology in the classroom allows students to engage in an active way of thinking and hands-on learning experiences which they are able to practice executing skills that would be impossible with a traditional book lesson" (p. 3).

Twenty-first century teachers must foregoing teaching just technology concepts, techniques and skills using only stand-alone computers with individualized learning systems. They must learn how to integrate more authentic learning experiences into their instruction using digital technology. Segovia (2010) said, "Instructors see technology changing classroom and student behavior; today's students have grown-up with iPods, MP3s, camera phones, iPhones and virtual reality" p. 52). Teaching the concept of building a résumé for example, has even changed due to the overall application process. Since the majority of applications are online, educators must learn new strategies to teach students to build digital portfolios, video résumés and personal websites. There has been a metamorphosis in digital technologies. The tremendous growth using handheld devices, mobile phones, and cameras has allowed educators to infuse educational technology into their curriculum. It has become common that teachers allow students to use these devices in classroom activities. These technologies continue to be reduced in size; are easier to use and are more affordable. Mark (2009) concurs and states, "The growth of the Internet, coupled with falling technology prices in the 21<sup>st</sup> century, has brought knowledge to the fingertips of tens of millions of people for whom education was once only a dream." These new technologies allow educators to increase communication, collaboration and creativity in a classroom without walls. Another instructional paradigm was made available for educators when open source software was introduced.

These applications are used in classrooms to promote creativity, reinforcement, and ultimately maximize instruction. Web 2.0 tools have become prominent because they are public domain; which means users are allowed to change and/or use it freely.

Many teachers use open source software because it offers another option for students and parents who cannot afford to purchase licensed software. Mark (2009) cites, using free Web 2.0 tools, teachers at all levels can deliver curriculum content, additional resources, and incorporate variety interactional strategies to their students. Classrooms have changed over the years, smart boards have taken the place of blackboards; skydrives have taken the place of flash drives and open source software has taken the place of many software applications to communicate and share information.

### 1.2 Media Literacy

As stated before, there is a need for educators to be able to communicate with the I-generation. This tech savvy generation is known for being constantly connected, and is at lost without their digital gear. One practical problem regarding the need to change instructional strategies is media literacy. Media can be in the form of text, audio, visuals, video, manipulatives and people. Multimedia literacy can be defined as the ability to understand and produce a variety of media, including text, audio, visuals, and video. Naiditch (2013) cites, "media literacy includes the ability to develop and use critical thinking skills and create meanings out of those messages" (p. 337). Students must be good consumers and producers of a wide variety of media, including text, audio, visuals, video, real objects, and/or models (Smaldino, 2012, p. 256). Each one has its strong point and should be chosen for a specific purpose for instruction. For example, teachers can create a quick review for students by creating a Jing video or a podcast. Some teachers are incorporating computer multi-media writing tools for literacy through the use of twitter, instagram, forums and Facebook. These various mediums provide the perfect opportunity to promote and use cooperative learning techniques. Teachers are challenged learning these new teaching strategies. McWilliams (2011) concurs and stated, "The challenge faced by many educators, is developing pedagogical approaches that can be personally engaging and socially meaningful" (p. 238). Today's students are reveling in the information age and educators have opportunities to enrich instructional materials and strategies to accommodate a wide diversity of preferences and learning styles for students. The I generation craves new ways of learning, engaging and communicating in the classroom. Furthermore, the growth in online learning, web 2.0 and mobile technologies have significantly impacted teacher preparation programs and curriculum development. As a result of continued advancements in technology, it has become critical for educators to select the appropriate media for instruction. Sutton (2011) held, "Preservice teacher's technology training experience should remain useful and relevant once they are placed in their own classroom" (p. 39).

## 2. Data and Method

This study incorporated a quantitative method to gain insight to perceptions, attitudes and experiences of technology usage among preservice candidates. The researcher sent e-mailed invitations to preservice candidates to participate in the study along with a consent letter and a customized 22-question survey instrument that was created using Google Forms. Research was conducted at an accredited university located in the Midwest part of the United States. Data was collected from preservice teachers who enrolled in courses with an educational technology emphasis during the fall 2014 term. Two courses were taught as a hybrid and one course was taught in the face-to-face mode. All courses were taught over a 16-week term. There were 55 participants selected to participate in this study (44 females and 11 males); 19 candidates elected participate. To ensure confidentiality, only responses were collected and sent to the researcher's email. Participants were informed, both verbally and in written form, that they would be receiving a survey. For the purposes of this research, novice users are defined as persons with a fear of technology. They require one-on-one training. Users who identified themselves as beginner have minor technology literacy skills, such as starting applications. Typically these users can distinguish between hardware and software, but have little or no file management and computer maintenance experience. Advanced users have basic technology literacy skills, experience downloading applications and using open source software. Skilled users have acquired training to use specific software and/or hardware such as smart boards, smart desk, and mobile technology. Competent users are masters using educational technology. They have the intellect to appropriately select and use software applications and hardware in the classroom to address various learning styles for teaching and learning.

For preference related to technical competency, candidates were asked to rate themselves using a Likert-type scale which ranged from 1=novice user to 5=competent user. Using the same scale, respondents rated the degree to which they were comfortable using and teaching with these various technologies in the classroom.

To keep personal bias from intruding into the data collection process, this research study was viewed through the lens of a teacher-researcher who sees the need for continuous curriculum development. Validity and reliability was achieved by collaborating with other colleagues who design technology surveys and teach technology courses, observations notes and reviewing student artifacts and survey results. This helped inform the researcher of patterns and themes of student attitudes and motivation regarding technology usage.

2.1 Participants

Demographics of the sample were proportionally women, which reflected the population of students enrolled at this public university. A total of 19 volunteer preservice teachers participated in this study. The target population of this study was enrolled in teacher preparation courses which infused educational technology into the curriculum. All candidates were required to have a personal computer to communicate with the instructor and complete assignments. A technology lab was used for the hybrid courses. The sample was purposively since all candidates were enrolled in technology emphasis courses.

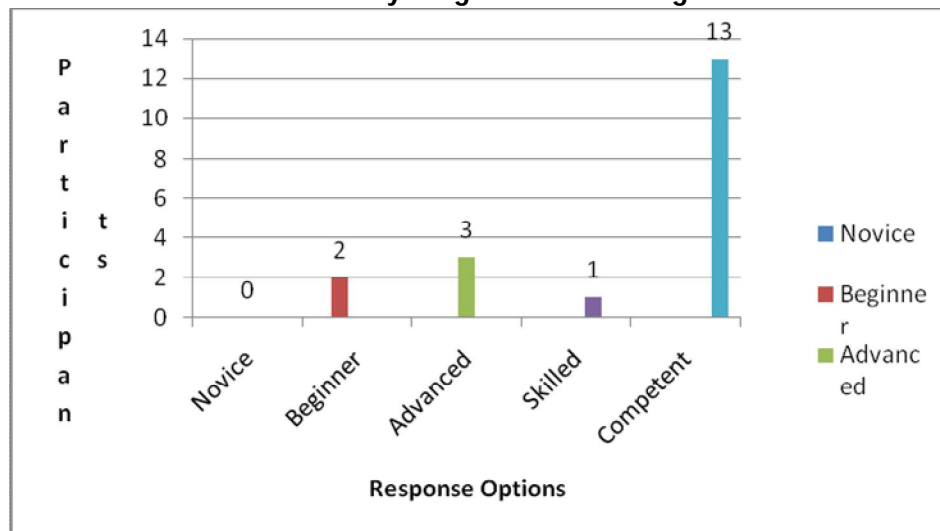
2.2 Technical Activities

The sixteen week courses were designed to motivate and engage students in both a hybrid and online learning environments. Through the sixteen weeks, preservice teachers were given a variety of task using educational software including installing and using open source software and using Microsoft Office applications. Participants also had to demonstrate their ability to download and upload files, use simulation software, create folders, audio and videos files, e-portfolio, and use an assessment management web-based application system and learning platform to communicate, collaboration, and complete online assessments.

3. Results

The evidence presented contributes to the discussion on the transformation technology has had on teaching and learning. Of the 55 preservice candidates selected to participate in this study, a total of 19 elected to participate in this study. This provided a final response rate of 34%. The themes obtained as a result of the analysis of data collected are shown in the tables below. As can be seen in Table 1, the findings regarding participants use and familiarity using basic word processing software was significant. The majority of the respondents, or 13 or 68% perceived they are competent using Word Processing Software; only two or 11% feel they are beginner users.

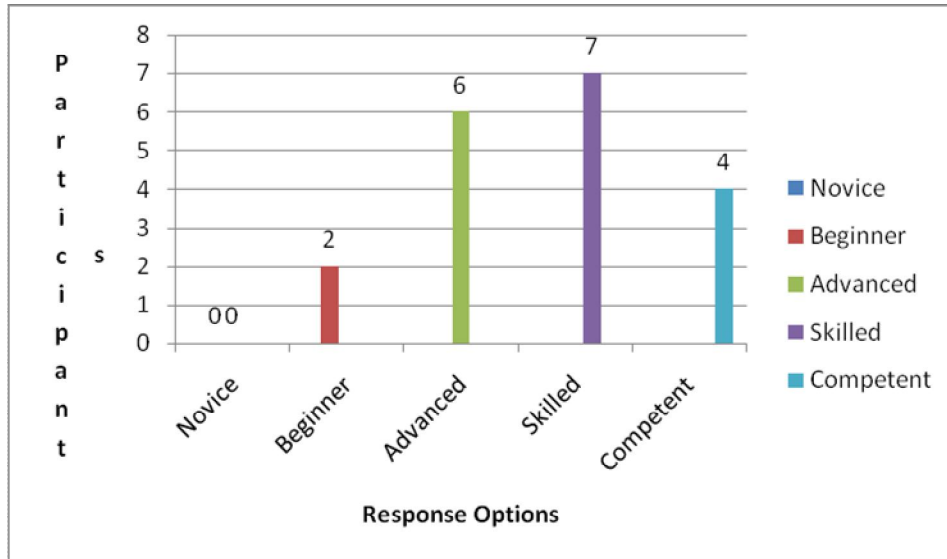
**Table 1: Familiarity using Word Processing Software**



Multimedia integration has become significant in classroom instruction. It allows teachers to adapt instruction to address various learning styles of students. It promotes authentic and collaborative learning while at the same time making content more contextual. It is a combination of text and media including text, images and sound. It includes hyperlinks, animation, videos and websites.

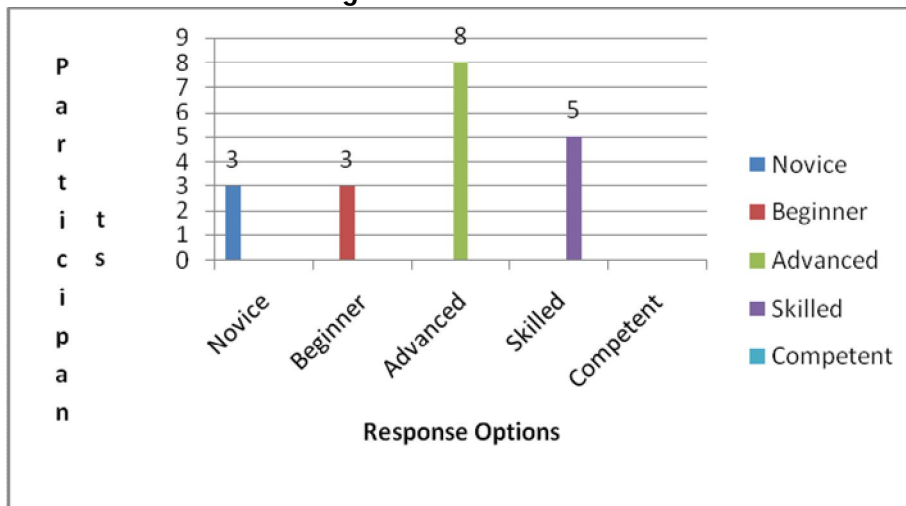
It is a growing concern among educators as society continues to depend on image video and movies for teaching and learning. With regards to how respondents rated themselves using multimedia into their curriculum, 37% or seven rated themselves as skilled users. Only two or 11% perceived themselves as beginners as shown in Table 2.

**Table 2: Integrating Multimedia into the Curriculum**



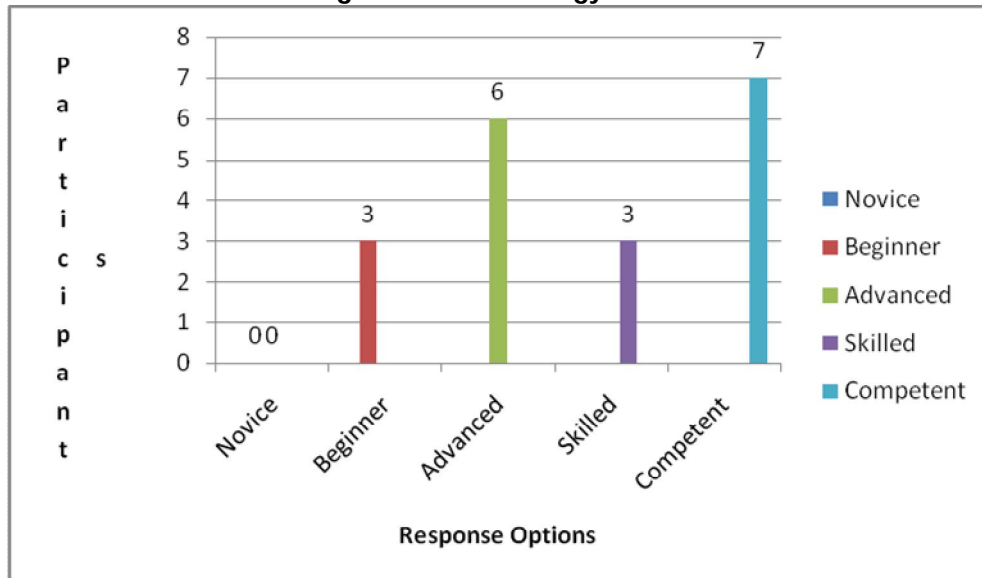
Smart boards have revolutionized classrooms and have become the staple in communicating instruction to students. These interactive electronic boards allow teachers to present data and engage students using creative instructional methods. Regarding ratings on using a smart board in classrooms, 42% or eight respondents indicated they were advanced using these electronic boards. No participants indicated they were competent using smart boards. This deems the need for more training on these electronic devices as shown in Table 3.

**Table 3: Using Smart Boards in the Classroom**



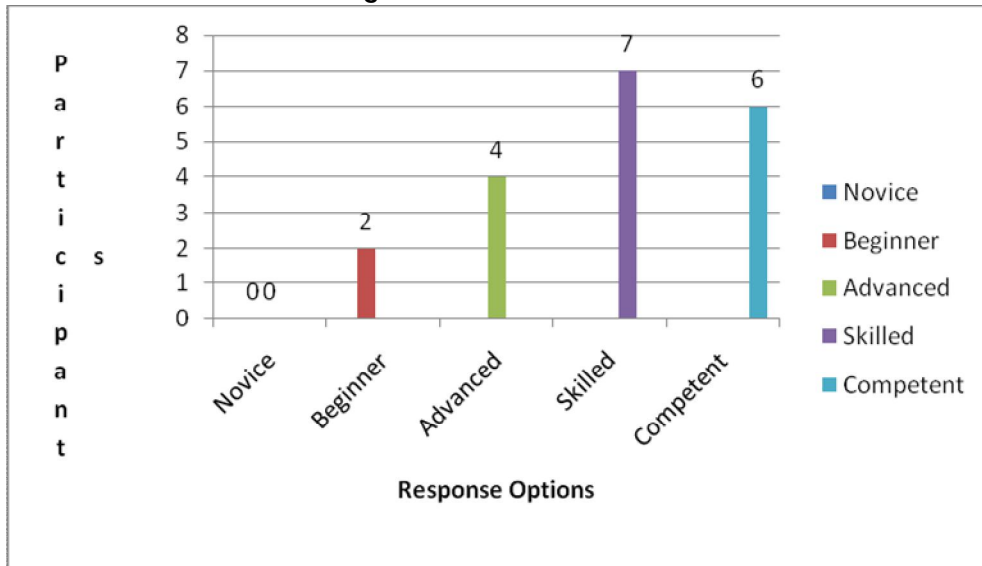
Society is immersed in a digital culture and more schools are moving towards using mobile technology to enhance collaboration. Mobile phones are becoming the primary source for browsing the web. In addition, this new approach to learning is convenient, allows for file sharing and easy storage. Preservice teachers were asked about their familiarity using mobile technology. Seven students or 37% reported they are competent using mobile technology. This could possibly be attributed to the surge in smartphone usage with digital technology. Only three respondents or 16% indicated they were beginners using digital technology as shown in Table 4.

**Table 4: Using Mobile Technology for the Classroom**



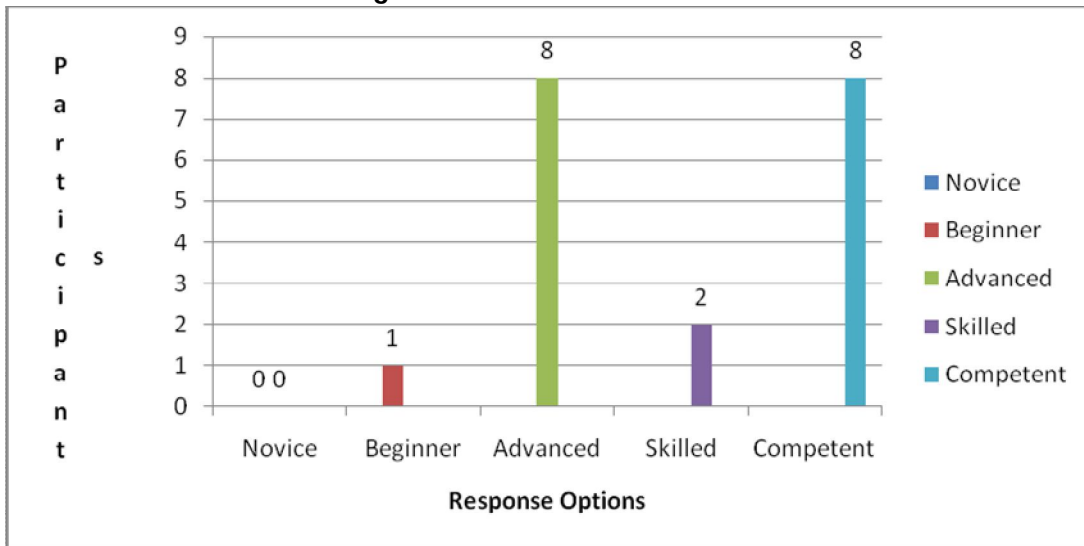
Many schools have adopted I Pads in the classroom. This touch-screen technology promotes creativity, communication and collaboration; and enhances learning experiences. Users can download e-books, applications, and communicate with classrooms around the world. Preservice candidates were asked how comfortable they were teaching using I-pads in the classroom. Seven or 37% felt they were skilled using I-pads as shown in Table 5. This may be credited to the ease, use and flexibility of using mobile technology when compared to a desktop.

**Table 5: Using I-Pads in the Classroom to Teach**



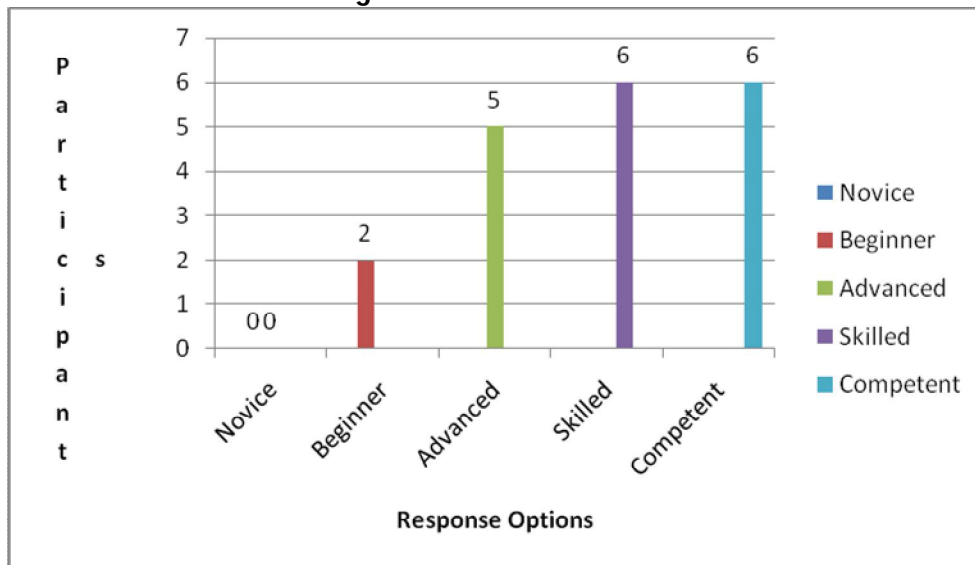
There have been a variety of discussions regarding how social media can be used in the classroom. Twitter, Facebook, Instagram and blogs have become educational tools used to promote discussion outside of the classroom. The digital revolution has forced teachers to develop media literate communities to promote collaboration, communication and creativity. A high number of preservice candidates 8 or 42% perceive they are advanced and competent using social media as shown in Table 6.

**Table 6: Using Social Media to Teach in the Classroom**



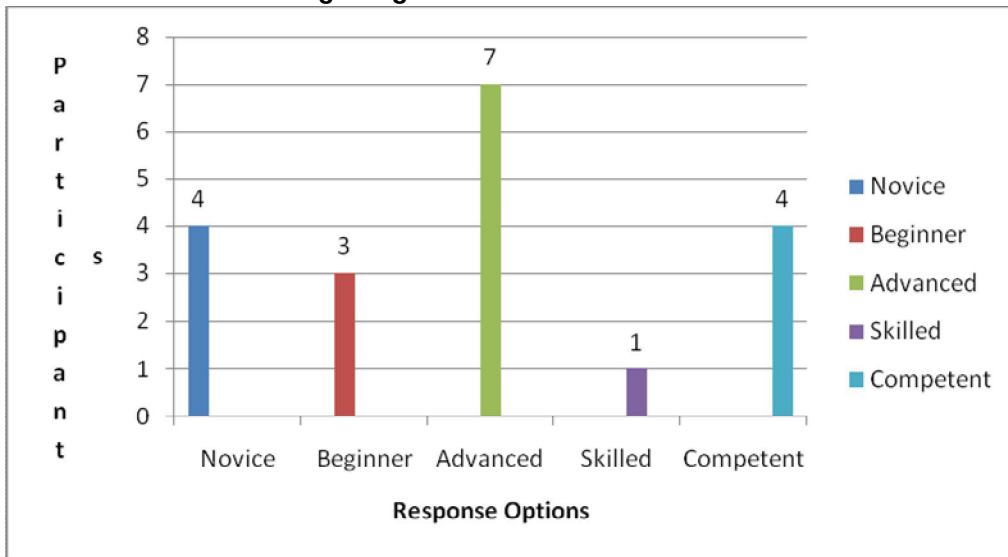
Access to mobile devices has increased and improved the overall classroom experience. Many schools have opted out of purchasing textbooks and instead have invested in tablets. Tablets allow teachers to access current events, download educational videos, use e-textbooks, and allow students to retain and review new materials. Preservice candidates were asked how comfortable they were using tablets to teach in the classroom. Six or 32% indicated they were competent and were skilled using tablets as shown in Table 7.

**Table 7: Using Tablets to Teach in the Classroom**



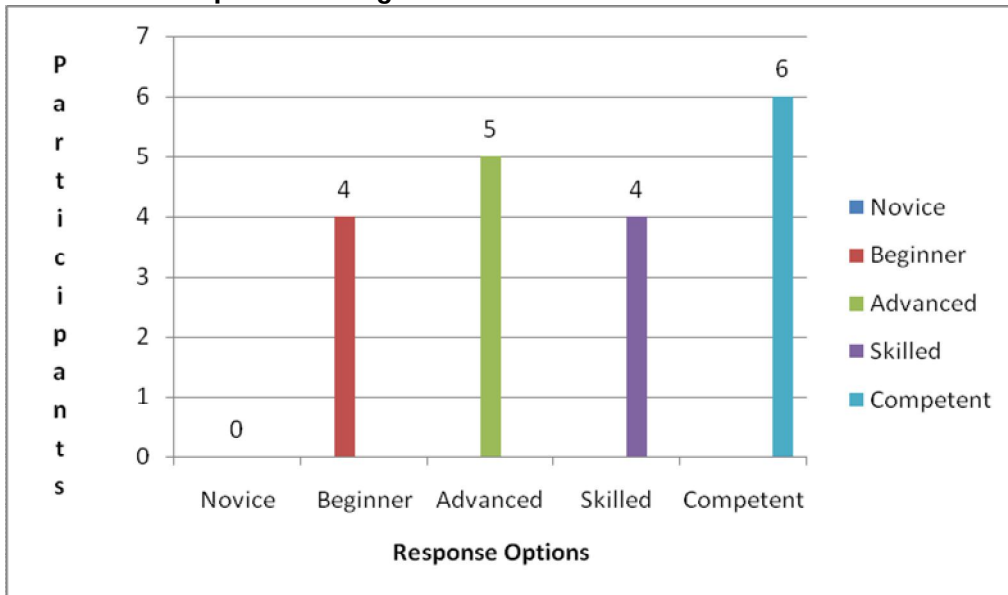
A significant moment in teaching and learning came with the induction of Web 2.0 tools. These software tools are free and are shared among educational professionals. The development of this software has modified the industry because many applications are comparable to costly applications that require a license. Teachers and students can engage using a variety of tools to create and watch videos, develop presentations, create audio files, store files and collaborate. Seven preservice candidates or 37% perceived they were advanced using web 2.0 in their curriculum as shown in Table 8.

**Table 8: Integrating Web 2.0 Tools into Your Curriculum**



From this data set, participants were surveyed to determine their comfort level of using interactive educational websites and webcast for instruction. These websites are flexible and are used to reinforce, assess and assist students on specific content. Six or 32% reported they are competent using interactive educational websites and webcasts in the classroom as reported in Table 9.

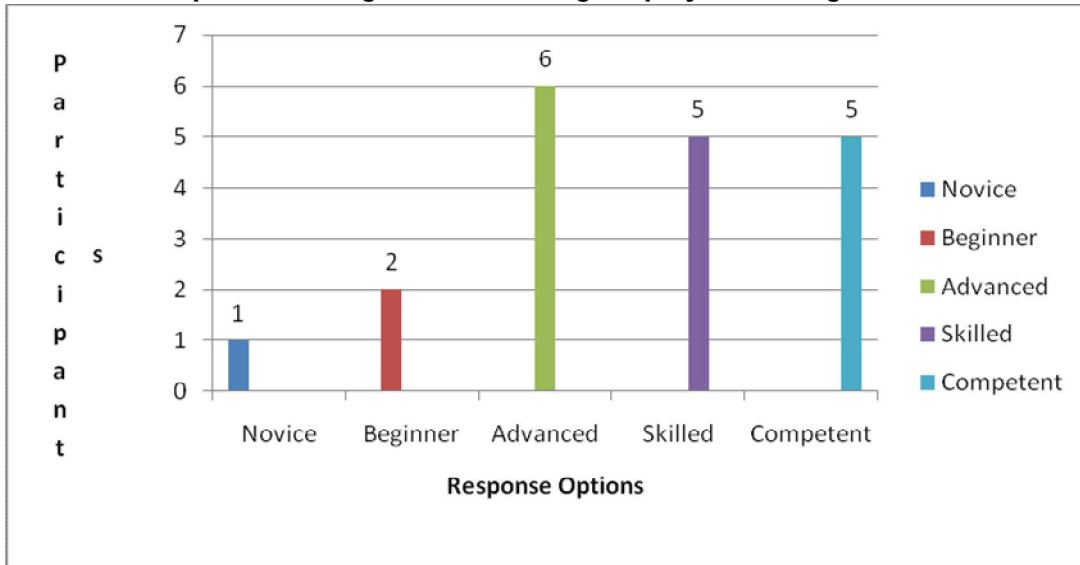
**Table 9: Perception of Using Interactive Educational Websites and Webcasts**



The use of problem-solving/inquiry technologies in the classroom has expanded. Teachers preference this type of software because it promotes critical thinking and collaboration skills. In addition, it allows students to test hypothesis and take notes by completing projects. Participants were asked their comfort level using problem-solving/inquiry learning technologies in their classroom. Five or 26% perceived they were both competent and skilled using these types of technologies in their classroom as shown in Table 10.

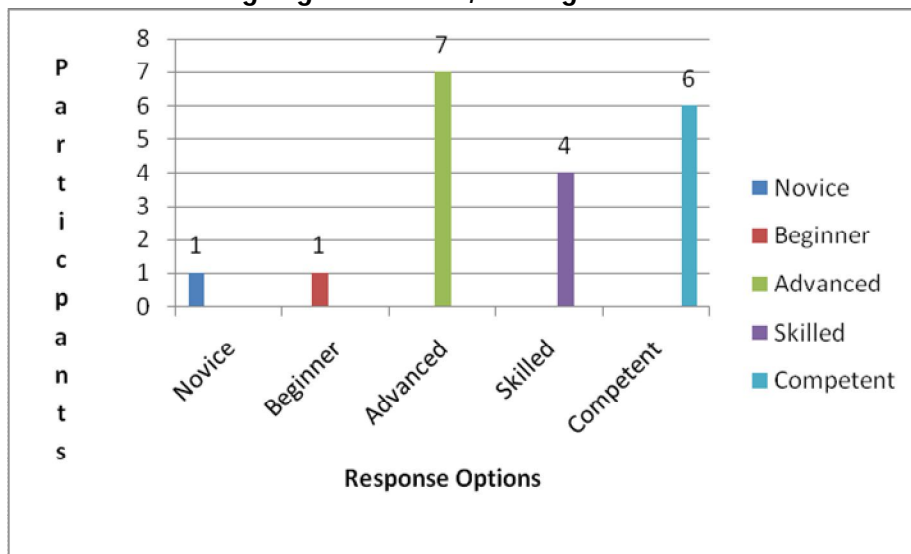


**Table 10: Perceptions of using Problem-Solving/Inquiry Technologies in the Classroom**



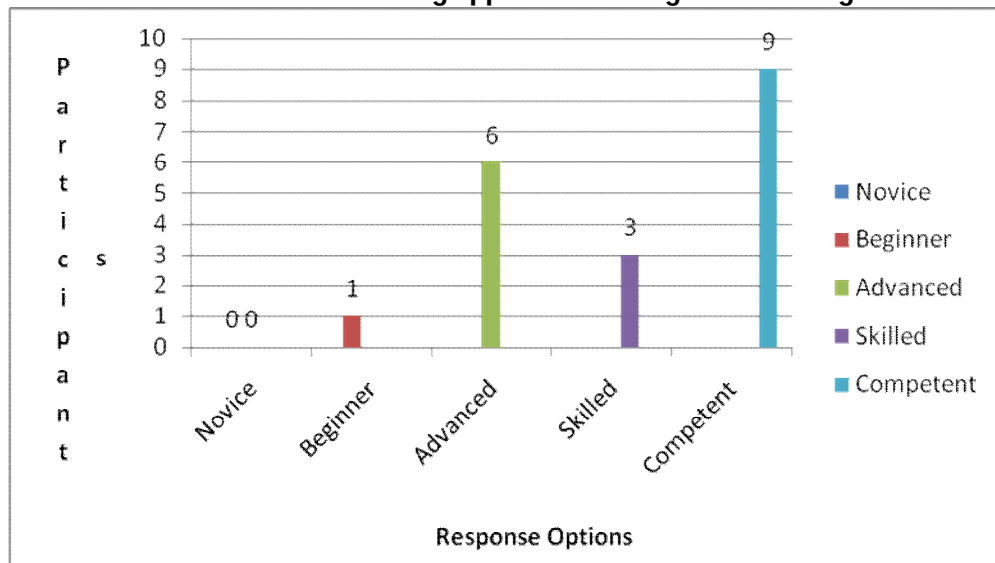
Videoring and editing images is no longer a cumbersome process. Digital technology usage has evolved in the past several years. Schools are using a variety of digital technologies for instruction such as webcams, video recorders and hand held devices. Many educators use digital cameras for presentations or to add interest to existing presentations. Programs such as moviemaker, I movie and Photoshop allow users to modify digital files with ease. This technology has become more prevalent due to more institutions and licensure bodies requiring electronic portfolios. The majority of the respondents to this question, 7 or 37% perceived themselves as advanced using digital cameras, editing software and scanners as shown in Table 11 below.

**Table 11: Using Digital Cameras, Editing Software and Scanners**



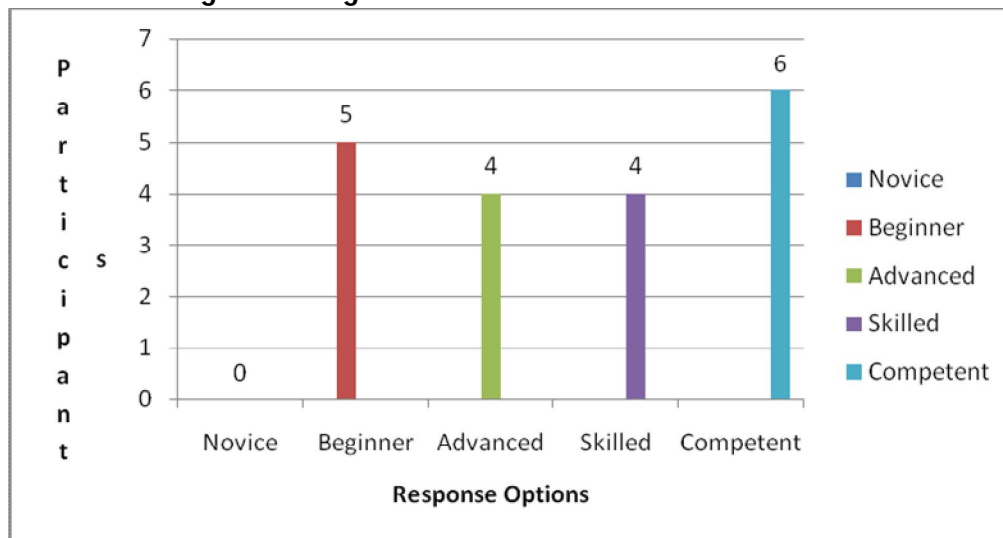
Applications, commonly referred to as apps are widely used in the classroom. These downloadable programs can be installed on personal computers and on mobile devices. Many applications are free and can be used for teaching and learning. Based on the findings, almost half, 9 or 47% identified themselves as competent using apps in teaching and learning as shown in Table 12.

**Table 12: Downloading apps for Teaching and Learning**



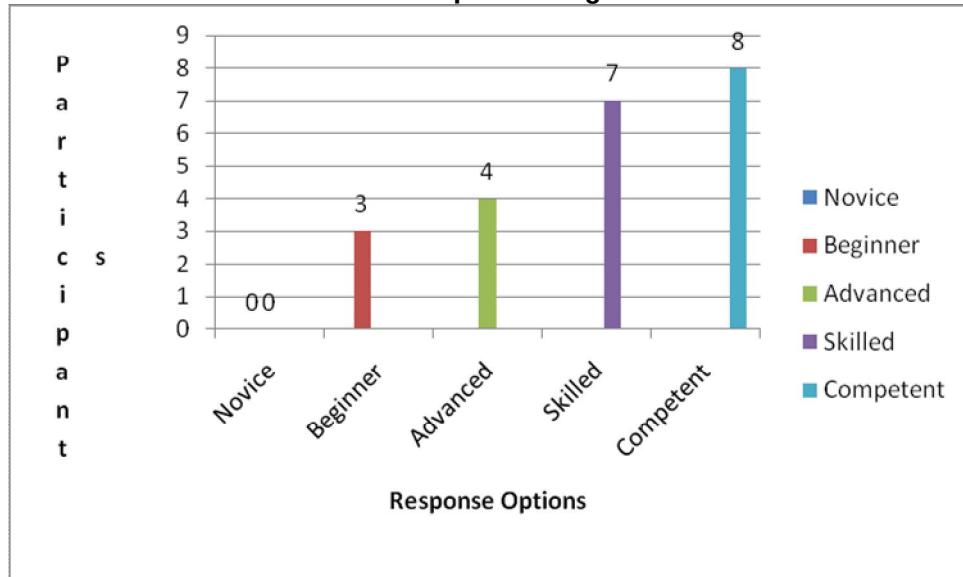
Communication is a critical component of the teaching process. There are many collaborative tools used in teaching and learning to present and share information. Preservice teaching candidates participating in this study were required to use collaboration software during the sixteen-week term to communicate with their instructor and fellow-students. In this study, respondents were polled to determine their perception using technology to promote communication and collaboration. Six, or 32% indicated they were competent using technologies that promote communication and collaboration as shown in Table 13.

**Table 13: Using Technologies that Promote Communication and Collaboration**



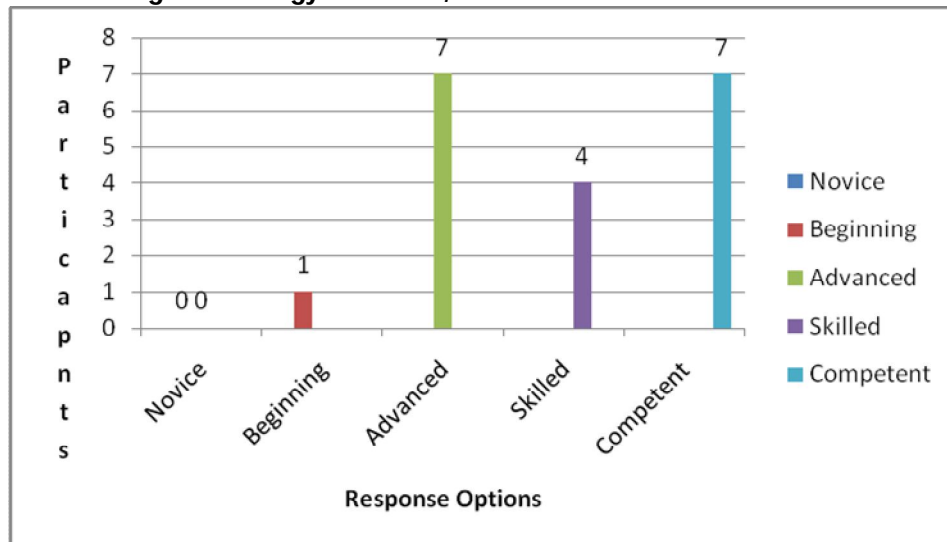
Electronic books, also known as e-books are downloadable from the internet. These electronic books are cost efficient, convenient and promote flexibility to instruction. Respondents were asked to rate themselves using e-books, seven or 37% perceive themselves as skilled downloading the books as shown in Table 14.

**Table 14: Perception Using E-Books**



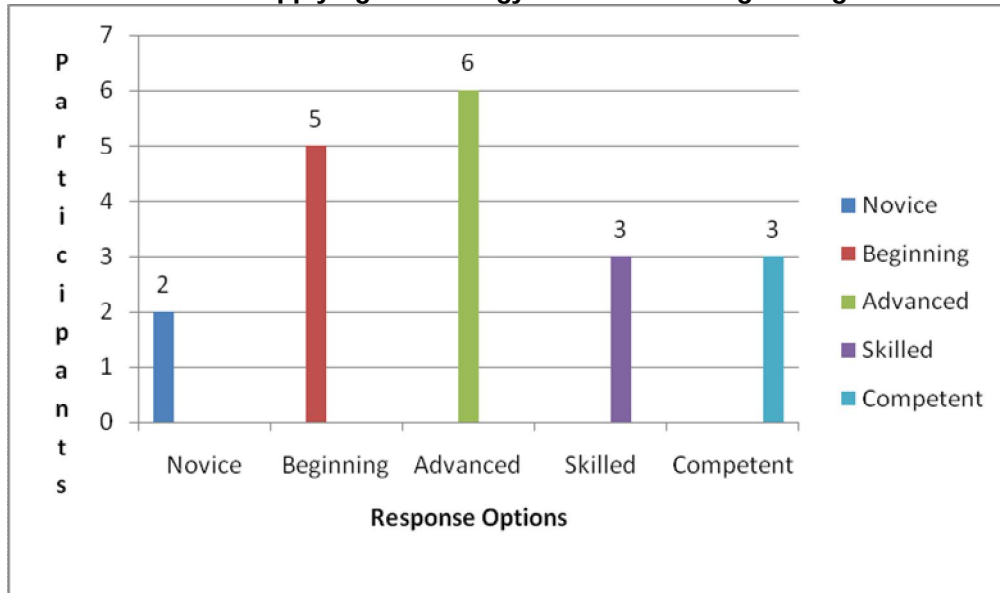
Advances in technology usage have afforded the flexibility to perform research. Digital tools are widely used to locate, evaluate and collect educational research. This digital practice has promoted active learning, increased access to information and allowed users to publish online. Respondents were asked to rate themselves using technology to locate, evaluate and collect educational research, seven or 37% rated themselves as competent users as shown in Table 15.

**Table 15: Using Technology to Locate, Evaluate and Collect Educational Research**



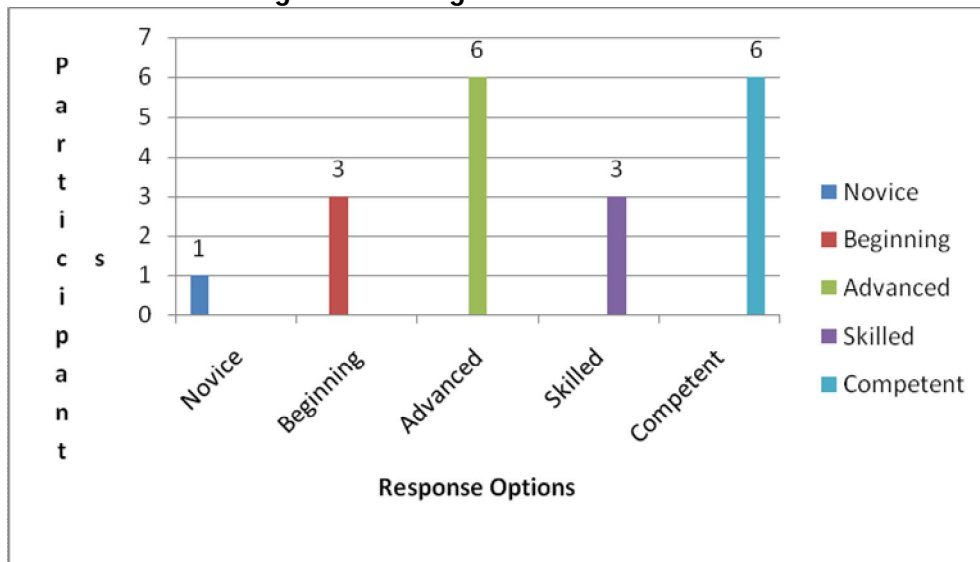
The lack of applying technology to perform trouble-shooting strategies is a great concern. Due to lack of training, many teachers do not use technology in the classroom. Though many schools have technology coordinators, teachers should be aware of common problems and have the ability to perform basic troubleshooting to combat technology mishaps. Only six or 32% respondents indicated they were advanced in applying basic troubleshooting strategies as shown in Table 16.

**Table 16: Applying Technology Trouble-Shooting Strategies**



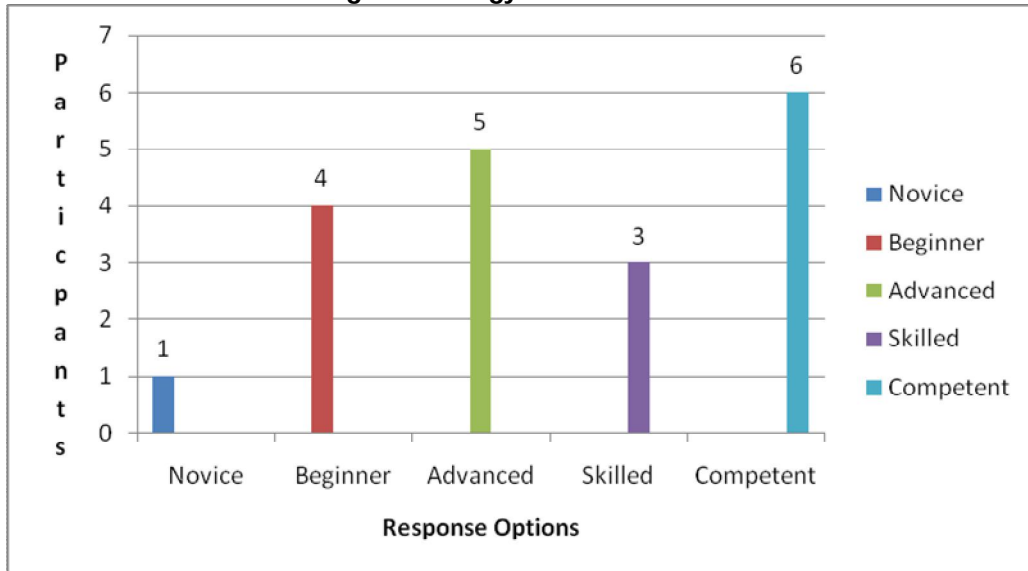
Selecting educational software for the classroom is an important instructional strategy in teaching and learning. Educators need have the ability to evaluate software prior to implementation. Prior to implementation of software in the classroom, educators should evaluate it to ensure it can be used for instruction and to meet course objectives. Respondents were asked to rate themselves selecting educational software for the classroom. Six or 32% indicated they were both advanced and competent selecting educational software as shown in Table 17.

**Table 17: Evaluating and Selecting Educational Software for the Classroom**



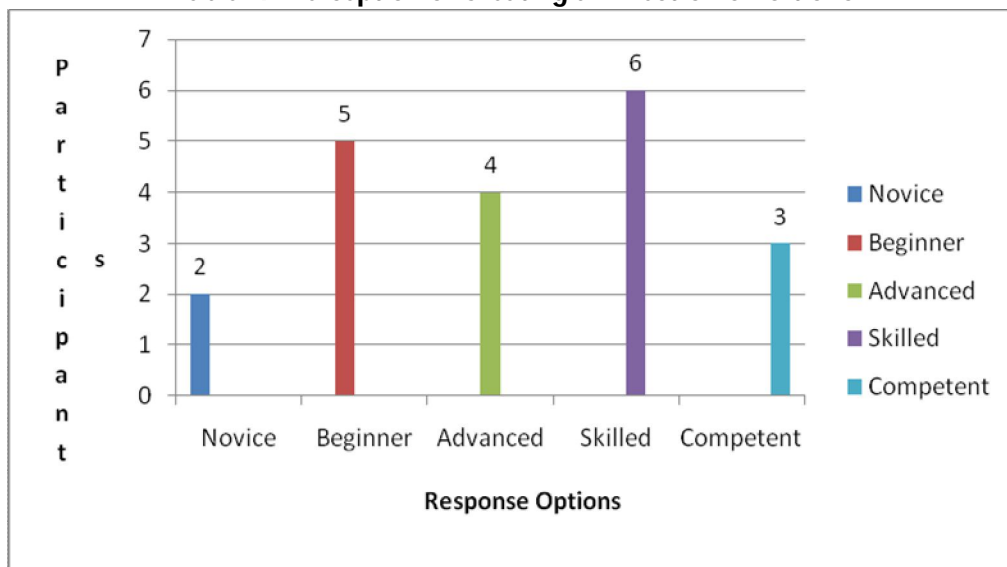
Using technology to solve authentic problems has become an effective instructional strategy in the classroom. Technology can enhance student learning experiences because it promotes genuine learning. Technology enables teachers to engage users in real-world applications that lead to reflection. Respondents were asked how they perceived themselves in using technology to solve authentic problems. Six students or 32% indicated felt they were competent using technology to solve authentic problems as shown in Table 18.

**Table 18: Using Technology to Solve Authentic Problems**



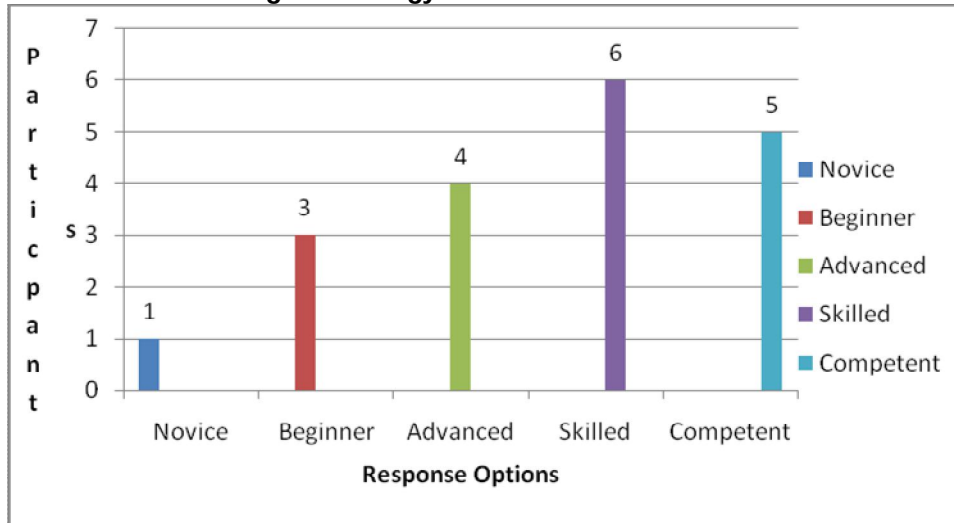
Electronic portfolios are used by many institutions to assess students. They are summative assessments used to organize, share and evaluate student artifacts. These project-based assignments allow students and teachers to use a range of medias to support teaching and learning. They have become a capstone for many teacher education programs. Respondents were asked if they were comfortable creating an electronic portfolio. Six or 32% perceived themselves as skilled. Only 3 or 16% perceived themselves as competent creating portfolios as shown in Table 19. This is of grave concern, since it has become a requirement for credentialing.

**Table 19: Perception of Creating an Electronic Portfolio**



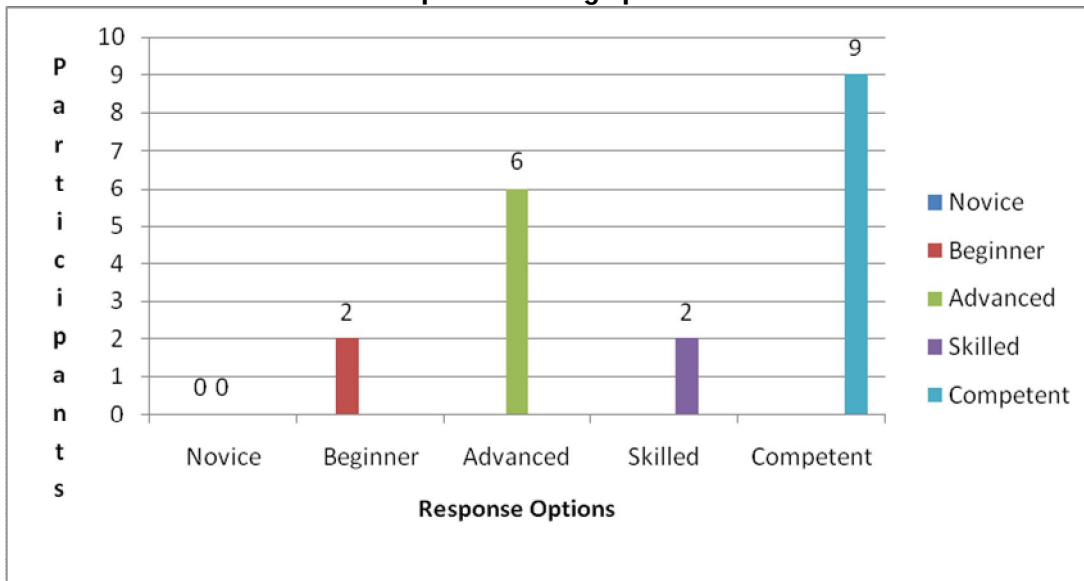
Educators who use technology tools to facilitate and deliver instruction have the ability to reinforce learning, engage users, and address a broad range of learning styles. These tools also can help improve student learning outcomes by assisting in remedial and differentiated instruction. Respondents were asked their perception on using technology to facilitate and deliver instruction. Six or 32% perceived they were skilled at using technology to facilitate and deliver instruction as shown in Table 20.

**Table 20: Using Technology to Facilitate and Deliver Instruction**



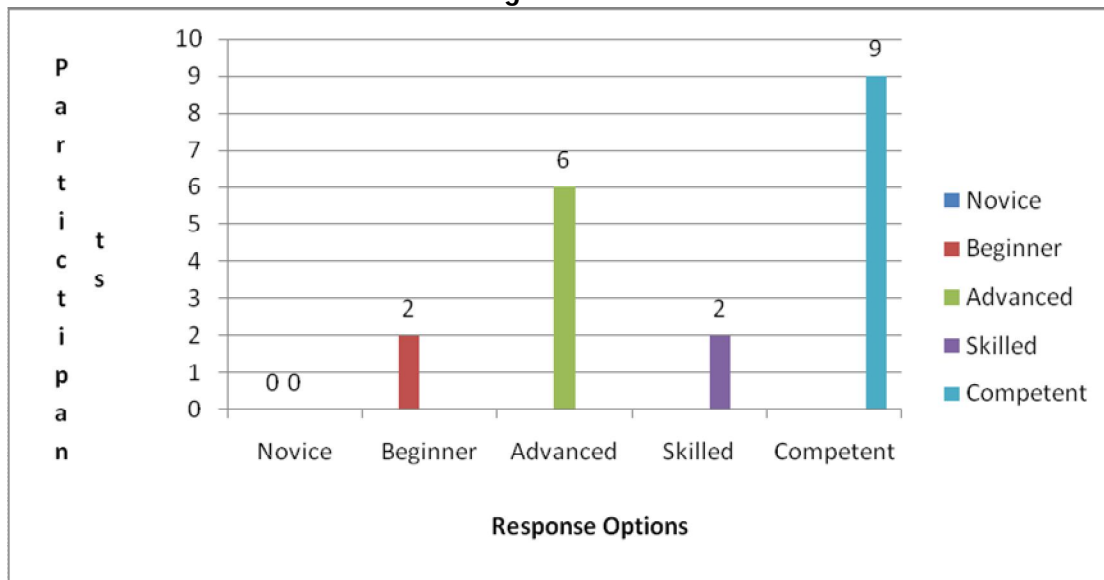
Spreadsheets are widely used in the educational setting. Teachers use them for gradebooks; while students can use them to learn mathematical concepts, create budgets, analyze data and visualize numerical concepts. Respondents were asked their comfort level using spreadsheet software. 9 or 47% identified themselves as being competent using spreadsheets as shown in Table 21.

**Table 21: Perception of Using Spreadsheet Software**



Presentation software is used in classrooms to present and share information. There are a variety of presentation software being used by educators. This type of instructional strategy focuses on visual learners by allowing teachers to present information to a larger audience and engage learners. Teachers and students also have the capability to publish and share their presentation. This research wanted to ascertain respondent's ability to use presentation software. The majority of the respondents, 9 or 47% indicated they were competent using presentation software as shown in Table 22.

**Table 22: Using Presentation Software**



**4. Discussion**

In this age of tech savvy learners, it is imperative that teacher candidates are adequately equipped with technological, pedagogical and content competencies to engage and teach students. The research allowed the author to critically examine preservice candidates’ conception of learning as it relates to using educational technology. Findings indicate the majority of the participants perceive themselves as having basic technology literacy skills. In most cases, they perceive themselves as being skilled and advanced. They have experience downloading and using various application. These tech savvy students are comfortable using digital and mobile technology as well as, downloading apps. This could be attributed to the fact that teaching candidates are focusing on applying the application rather than transferring that knowledge into the teaching process. Yurdakul (2011) agreed and stated, “The transformation in information communication technologies require students not only to become literate in technology, but also become individuals who can adapt themselves to the new advanced technologies” (p. 33). The concern of this research sets with respondent’s ability to create e-portfolios. As stated before, the edTPA assessment policy is the new capstone project that will be used to assess fundamental knowledge and skills of teaching candidates. It requires teaching candidates to create and submit an e-portfolio prior to receiving their teaching license. This study clearly identified the need to review the pedagogical format of educational technology courses offered at this institution. While the study showed students were competent using a variety of educational technologies, it also showed a need for additional instruction in troubleshooting computers, using smartboards, web 2.0 applications and most importantly, creating e-portfolios.

**5. Limitations and Future Consideration**

This study obtained information from a small percentage of preservice teachers who were enrolled in technology emphasis courses during the fall 2014. Distinctive of this type of study, a better response rate would have provided a more thorough caption of students’ perceptions of technology usage. Because the results of the study provided the research with quantitative data and observation notes, focus groups are planned to provide a broader understanding of the impact technology integration and usage will have on student learning outcomes. An expanded form of this study, would include colleges and universities in the surrounding area, to determine if there responses are similar to those obtained from this university.

**6.0 Conclusions**

Recall that the purpose of this study was to identify perceptions of preservice teachers’ usage and attitudes towards educational technology.

While, these teaching candidates' responses indicated they are comfortable using educational technology; the concern lies with ensuring they are competent to teach digital literacy in their classrooms and meet the licensure requirement. The better prepared teaching candidates are using educational technology, the more likely they will integrate it into their instruction. The challenge remains keeping abreast of the latest technological advances used in education, reviewing and revising curriculum, and ensuring teaching candidates are prepared to teach these new technologies. This is no easy task, considering that many teachers do not update their technology skills due to lack of time resources or low self-efficacy. While this study focused on one institution and specific educational technologies, its findings can be used by other teacher education programs to assess their effectiveness of technology integration and provide ideas for future research.

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## 6. Appendix A: Preservice Teacher Survey Instrument

### 6.1 Preamble

You have been identified as a Pre-Service candidate enrolled in the Introduction to Teaching and/or Teaching with Technology course. I am requesting you to participate in the research study to determine your perceptions towards integrating educational technology into your curriculum. The results of this survey will provide important data about the technological training needs of your field as well as, identify best practices for integrating technology.

How familiar are you using word processing software?

1      2      3      4      5

Novice User      Competent User

How would you rate yourself integrating multimedia into your curriculum?

1      2      3      4      5

Novice User      Competent User



How would you rate yourself using a smartboard in the classroom?

1    2    3    4    5

Novice User      Competent User

How familiar are you using mobile technology for the classroom?

1    2    3    4    5

Novice User      Competent User

How comfortable are you using the Ipad in the classroom to teach?

1    2    3    4    5

Novice User      Competent User

How comfortable are you using social media to teach in the classroom?

1    2    3    4    5

Novice User      Competent User

How comfortable are you using tablets to teach in the classroom?

1    2    3    4    5

Novice user      Competent User

How comfortable are you integrating Web 2.0 tools into your curriculum?

1    2    3    4    5

Novice user      Competent User

How comfortable are you using interactive educational websites and webcasts?

1    2    3    4    5

Novice User      Competent User

Are you comfortable using problem-solving/inquiry-learning technologies in your classroom?

1    2    3    4    5

Novice User      Competent User

How comfortable are you using digital cameras, editing software and scanners?

1    2    3    4    5

Novice User      Competent User

Are you comfortable downloading apps for teaching and learning?

1    2    3    4    5

Novice User      Competent User

Do you know how to use technologies that promote communication and collaboration?(digital games for learning, online posters, translation software)

1 2 3 4 5

Novice User      Competent User

How comfortable are you using e-books?

1 2 3 4 5

Novice User      Competent User

How would you rate yourself using technology to locate, evaluate and collect educational research?

1 2 3 4 5

Novice User      Competent User

How would you rate yourself applying technology trouble-shooting strategies?

1 2 3 4 5

Novice User      Competent User

How comfortable are you evaluating and selecting educational software for your classroom?

1 2 3 4 5

Novice User      Competent User

How comfortable are you using technology with students to solve authentic problems? (database and spreadsheet applications)

1 2 3 4 5

Novice User      Competent User

How comfortable are you in creating an electronic portfolio?

1 2 3 4 5

Novice User      Competent User

How comfortable are you using technology to facilitate and deliver instruction?

1 2 3 4 5

Novice User      Competent User

How comfortable are you using spreadsheet software?(MS Excel\_

1 2 3 4 5

Novice User      Competent User

How comfortable are you using presentaton software?(Power Point)

1 2 3 4 5

Novice User      Competent User