2018

Perceptions of ATP Certified Occupational Therapy Practitioners on Assistive Technology Education in Occupational Therapy Programs

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PERCEPTIONS OF ATP CERTIFIED OCCUPATIONAL THERAPY PRACTITIONERS ON ASSISTIVE TECHNOLOGY EDUCATION IN OCCUPATIONAL THERAPY PROGRAMS

Presented in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Occupational Therapy

Eastern Kentucky University
College of Health Sciences
Department of Occupational Science and Occupational Therapy

Karen Dishman
2018

EASTERN KENTUCKY UNIVERSITY

COLLEGE OF HEALTH SCIENCES

DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

Certification

We hereby certify that this Capstone project, submitted by Karen Dishman, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the project requirement for the Doctor of Occupational Therapy degree.

Approved:

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EASTERN KENTUCKY UNIVERSITY

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DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

This project, written by Karen Dishman under direction of Dr. Julie Baltisberger, Faculty Mentor, and approved by members of the project committee, has been presented and accepted in partial fulfillment of requirements for the degree of

DOCTOR OF OCCUPATIONAL THERAPY

CAPSTONE COMMITTEE

Julie Baltisberger — 08/22/18

Faculty Mentor — Date

Leslie J. Hawk — 08/22/18

Committee Member — Date

Executive Summary

Background: Literature reviewed coupled with needs assessment data verify that occupational therapy (OT) practitioners perceived they did not obtain adequate training on the use of AT within the collegiate setting or continuing education after. Further research is necessary to determine what education is missing from the occupational therapy curricula and what types and categories of post professional training are most effective in developing assistive technology (AT) skills.

Purpose: This capstone project focused on identifying which categories of AT practitioners perceive to be needed in entry-level master's OT programs; and validating the need for post-professional AT training and post-professional AT certificate programs.

Theoretical Framework: This capstone project utilized a descriptive, quantitative study with a transformational worldview. Due to using Likert scale questions in the survey to collect statistical data, as well as open ended questions, the design was a quantitative approach with some qualitative data.

Methods: For this capstone project, a survey approach was used as the data collection method. The purpose of the survey was to determine perceptions of OT practitioners on AT education received during their entry-level OT program. The invitation to participate and survey were distributed successfully to 700 practitioners throughout the United States. The survey included 12 closed and three open-ended questions.

Results: OT practitioners with ATP certification indicated the need for more AT education in entry-level OT programs. Participants reported that seating and mobility, computer access, augmentative and alternative communication (AAC), and technology for learning disabilities were the categories they desired more training in. The AT categories that participants reported using most in intervention included seating and

mobility, environmental modifications, sensory (hearing and vision), and computer access which also matches the AT categories that participants desired more training on and received training on as a professional.

Conclusions: Future research with a larger sample size and more generalized sample of OT practitioners is necessary to compare results for more detailed evidence of the AT categories needed in entry-level OT programs. This evidence could be utilized to improve the education of OT students and assist the profession in full acceptance of AT as a vital part of the OT profession.

Acknowledgements

I would like to express my sincerest appreciation and gratitude to my capstone mentor, Dr. Julie Baltisberger. Through encouragement and guidance, you have increased my confidence and convinced me that I could become a researcher. Your humility and willingness to listen and learn has allowed me to feel like a colleague instead of a student. You allowed me to be independent but still provided the guidance and feedback needed to foster my learning. I would also like to thank Dr. Leslie Hardman, my committee member. It was a pleasure to have your thoughts and feedback on my capstone project. It was difficult to envision what this project could become but you both were able to guide me to the bigger picture that you had in sights. I would like to thank the EKU Master's and OTD staff that contributed to my learning and growth as a person, especially Dr. Dana Howell and Dr. Shirley O'Brien. I will never forget my first class in the Master's program with Dr. Howell and the impact the experience had on me.

I am especially grateful to Dr. Jessica Mason. Jessica, you started out as my student and became both my mentor and my good friend. We got through much of this program together, and I hope we have the pleasure of experiencing much more of life together as a team. Thank you for listening almost every day! To my husband, Chad, and our children, Luke, Logan, Evan, and Emma, thank you for supporting me and sacrificing so that I could do my homework. Even though it was a difficult three and a half years, you never doubted that I would make it through. I love you all.

EASTERN KENTUCKY UNIVERSITY

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DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

CERTIFICATION OF AUTHORSHIP

Submitted to (Faculty Mentor's Name): Dr. Julie Baltisberger

Student's Name: Karen Dishman

Title of Submission: Perceptions of ATP certified occupational therapy practitioners on assistive technology education in OT programs

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Certification of Authorship: I hereby certify that I am the author of this document and that any assistance I received in its preparation is fully acknowledged and disclosed in the document. I have also cited all sources from which I obtained data, ideas, or words that are copied directly or paraphrased in the document. Sources are properly credited according to accepted standards for professional publications. I also certify that this paper was prepared by me for this purpose.

Student's Signature: Karen Dishman

Date of Submission: 9/5/18

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Section One: Nature of Project and Problem Identification

From baby boomers to preschoolers, technology has become an inseparable part of the human persona. This technology explosion has allowed individuals with disabilities access to many new opportunities through assistive technology. Assistive technology (AT) devices are defined as "an item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities" (American Occupational Therapy Association, 2015, para. 2). AT services are defined as "any service that directly assists a child with a disability in the selection, acquisition, and use of an AT device" (American Occupational Therapy Association, 2015, para. 2).

According to the American Occupational Therapy Association (AOTA), an occupational therapist's goal is to "enhance or enable meaningful participation in the occupations (activities) important to the clients served" (American Occupational Therapy Association, 2015, para. 1). Since participation in technology has become a part of engagement in occupations, clients require access to universal and assistive technology (American Occupational Therapy Association, 2015). In 1991, the American Occupational Therapy Association (AOTA) indicated that for the schools to be accredited, they must include AT into their curriculum (Angelo, Bunning, Schmeler, & Doster, 1997). The National Board for Certification in Occupational Therapy (NBCOT) performed focus groups in 1990 to determine the need to include AT on the certification exam (Angelo, Bunning, Schmeler, & Doster, 1997).

Even with AT education being required in higher education curriculums, many occupational therapy (OT) and occupational therapy assistant (OTA) practitioners do not feel comfortable and confident in utilizing AT as part of their intervention strategies. Practitioners

have indicated that educational programs did not adequately prepare them for the provision of AT (Lahm & Sizemore, 2002). If students are not prepared for using AT in intervention, how much education on AT are OT students receiving in their collegiate experience? Brady, Long, Richards and Vallin (2007) found that the amount and categories covered in OT programs varied between institutions significantly. Students received more education on low tech AT related to activities of daily living (ADL) (Brady, Long, Richards, & Vallin, 2007). This variation between OT programs depended on the Accreditation Council on Occupational Therapy Education (ACOTE) requirements and the institution's interpretation of them. Although ACOTE standards address AT in two locations, interpretation could be varied due to the imprecise details (Accreditation Council for Occupational Therapy Education, 2018).

Post professional training and education on AT for OT practitioners may provide the additional training and education practitioners need to utilize AT in intervention. Research is limited on the types and categories of AT training practitioners have obtained. OT practitioners did indicate the effectiveness of hands-on and active learning strategies in AT (Long, Woolverton, Perry & Thomas, 2007). With the rapid advancements and changes in AT, therapists cannot rely on collegiate programs to be their only training source. Technology is now embedded in all aspects of daily life and continued education on advancements and strategies is imperative for best practice in intervention. Further research on collegiate education of AT and post professional training is needed to determine best educational practices both in higher education and beyond.

Problem Statement

Needs assessment survey data collected from OT and OTA practitioners in southern Indiana indicated they did not feel knowledgeable about AT and did not receive adequate

training in many categories of AT (Dishman, 2017). Literature reviewed coupled with needs assessment data verified that OT practitioners felt they do not receive adequate training on the use of AT within the collegiate setting or post professionally. Further research is necessary to determine what education is missing from the OT curricula and what types and categories of post professional training are most effective in developing AT skills.

Purpose

The purpose of this capstone project was to determine the perceptions of Assistive Technology Practitioner (ATP) certified occupational therapists on the education on AT they received in OT entry-level programs and post professionally. ATP stands for assistive technology professional awarded as a certification by the Rehabilitation and Engineering Society of North America (RESNA). ATP certification is obtained by taking an exam demonstrating knowledge of a wide variety of AT categories.

Project Objectives

1. Determine the perceptions of ATP certified OT practitioners on the amount and categories of AT education provided in entry-level OT programs.
2. Identify which categories of assistive technology ATP certified OT practitioners perceive to be needed in entry-level master's OT programs.
3. Identify the need for post professional AT training and post professional AT certificate programs.

Theoretical Framework

This research topic best fits the transformative worldview because the researcher identified a potential gap in the OT educational curriculum and would like to ultimately see change (Creswell, 2014). Due to using Likert scale questions in the survey to collect statistical

data, as well as open ended questions, the design was a quantitative approach with some qualitative data. According to Creswell (2014), quantitative research involving survey provides information describing the trends of a specific population. In the case of this capstone topic, survey research of ATP certified occupational therapists was the population, and the information and trend were the perceived AT education provided in OT programs. Kielhofner (2006) provides further details that descriptive, quantitative designs explain naturally occurring details of the population. From the descriptions provided by both Creswell (2014) and Kielhofner (2006), this research approach would most accurately be described as a descriptive, quantitative study using a transformational worldview.

Significance of the Study to Practice

Occupational therapists are in an ideal position to recommend and implement the appropriate use of AT. "Occupational therapists' training in the use of activity analysis and adaptation suggests a logical connection for the use of AT as a modality to promote function" (Long, Woolverton, Perry, & Thomas, 2007, p. 346). The education and experience OT practitioners possess should give them knowledge and basic skills to evaluate clients and provide AT devices and services (American Occupational Therapy Association, 2015). Literature examined indicated that OT and OTA practitioners do not feel comfortable and confident to utilize AT as part of intervention strategies in several categories including cognitive aids, access to computers, electronic ADLs, learning and studying aids, and AAC (Rehabilitation Engineering and Assistive Technology Society of North America, 2017). Further study could determine what areas of AT are missing from our OT educational curriculums and what further education practitioners may need to develop competency.

With technology equipment and strategies changing at an extremely rapid pace, AT is a continually evolving and dynamic area (Smith & Okolo, 2010). Consider how much technology has developed in the past 10 years and how much of the population now use it each day. OT curricula must evolve with the technology to incorporate new content into coursework. For those practitioners already in the workplace, further education on AT is imperative to meet the needs of future intervention. Outcomes from this research study could also lead to development of further education for therapists such as an AT certificate program and continuing education opportunities.

Summary

The AOTA's centennial vision is that, "occupational therapy is a powerful, widely recognized, science-driven, and evidence-based profession with a globally connected and diverse workforce meeting society's occupational needs." (American Occupational Therapy Association, 2017, "Centennial vision"). For OT to continue to evolve to meet the description of the centennial vision, all categories of AT must be addressed in the education and continuing education of practitioners. Results of the needs assessment concur with research literature gathered that OT practitioners do not feel knowledgeable or comfortable utilizing AT in intervention (Dishman, 2017). The purpose of this quantitative, survey design was to examine the perceptions of ATP certified occupational therapists on the education on AT received in OT entry-level programs. An outcome of this research was to gather evidence to support the need for future changes to OT curricula to include more education on AT and to determine what categories of AT should be included in certificate programs for practitioners.

Section Two: Detailed Review of the Literature

Requirements for AT education in OT programs was first addressed in 1991 and 1993. AOTA's Technology Special Interest Section developed AT competencies for occupational therapists in 1991 that included a textbook and focused on the categories of seating and mobility, prosthetics and orthotics, rehabilitation technology, and computer access (Hammel & Smith, 1993). The AOTA Technology Competencies committee determined that, "all occupational therapists should know about technology applications within a functional perspective at a minimal level" (Hammel & Smith, 1993, p. 971). This foundational level indicates that the practitioner knows about basic AT devices; how to use them; and how to determine the need for each client (Hammel & Smith, 1993). AT devices are viewed on a continuum from high-tech items such as communication devices, computers, and power wheelchairs to low-tech items such as simple seating modifications, adapted writing utensils, and picture schedules (Wilcox, Campbell, Fortunato, & Hoffman, 2013).

ACOTE standards regarding AT are both found in section B.5.0: Intervention Planning (Accreditation Council for Occupational Therapy Education, 2018). Standard B.5.10 says, "Articulate principles of and be able to design, fabricate, apply, fit, and train in assistive technologies and devices (e.g., electronic aids to daily living, seating and positioning systems) used to enhance occupational performance and foster participation and well-being" (p. 25). Standard B.5.24 says, "Select and teach compensatory strategies, such as use of technology and adaptations to the environment that support performance, participation, and well-being" (p. 27). These standards reveal the need for AT as part of intervention but remain vague in details. The wording of the standards allows achievement by only covering one or two AT categories.

Assistive Technology Competency

According to literature reviewed, OT practitioners do not perceive themselves to have competency in use of most AT. Therefore, AT devices or strategies are not being utilized effectively in OT interventions. Lahm and Sizemore (2002) studied the factors that influence occupational therapists, physical therapists, and speech-language pathologist's decisions regarding AT in early intervention. They also studied the amount of AT training practitioners had obtained; how AT decisions were made; issues in AT delivery; and perceived barriers. They utilized a level III, quantitative, non-experimental design with use of semi-structured interviews. Fifteen Kentucky First steps providers in the profession of speech-language pathology, education, and OT with at least 2 years of experience participated in the interviews. Results indicated that 83% of participants reported that their education did not adequately prepare them for provision of AT intervention. Participants reported that their interest in using AT was usually precipitated by either a family member needing AT or a peer mentor utilizing AT in practice. Several participants reported that when they attended OT programs, technology was not at the level of usage it is now.

Another similar state-based study by Gitlow and Sanford (2003) identified the amount of AT education allied health practitioners received and what categories they desired to learn more about. The survey was returned by 62 professionals in Maine including occupational therapists, physical therapists, and speech-language pathologists with 21 respondents being occupational therapists. More than 2/3 of respondents reported they have only basic knowledge or no knowledge in most AT areas, and greater than 50% of respondents reported a moderate to significant need for education in all areas of AT apart from ADLs. In perceived level of competence, 67% of respondents rated themselves as having some competency but with critical

gaps, and 15% of respondents rated themselves as lacking basic competence. More than 77% reported a significant need for information on AT funding.

Another study of exclusively occupational therapists, by Long, Woolverton, Perry, and Thomas (2007), examined 272 pediatric occupational therapists and their perceptions of the need for training in AT and delivery of AT services. They used a level III, quantitative, randomized, and non-experimental design with use of a survey questionnaire of multiple choice and open-ended questions. Approximately 40-73% of the participants reported "inadequate or no training" in all AT areas assessed (Long et al., 2007, p. 348). Most occupational therapists that were surveyed (67-92%) did not have confidence in their knowledge to provide AT especially in sources of funding and AT services. By analyzing results, researchers revealed that respondents felt more competent in their ability to identify a child who may benefit from AT and in working with low-tech devices but less competent in their ability to assess, select, and evaluate outcomes of AT. Results also indicated the preference of learning strategies for occupational therapists as hands-on and group education.

Based on literature reviewed, a needs assessment was performed to determine the relevance of this study on the amount of training and knowledge that practitioners obtained in both in their educational program and post professionally. After distribution of 26 surveys, 12 responses were received including four occupational therapists and eight OTAs that attended the University of Southern Indiana (USI) (Dishman, 2017). Participants responded that 67% had some knowledge of AT while 75% indicated they either slightly or somewhat use it in intervention. No one responded that they use AT quite a lot or always even though 75% responded that they feel AT is either quite a bit or very important to OT intervention. More

specific studies on the categories of AT therapists feel competent using in intervention is needed to design training in higher education and continuing education opportunities.

Assistive Technology Education in OT Curriculums

Occupational therapists report that AT education and training provided in higher education was limited in quantity and focused more often on the categories of ADLs, prosthetics, and seating and mobility. In 1991, Kanny, Anson, and Smith studied technology training in entry-level curricula and sought to identify what factors were barriers and which factors facilitated improved technology training. They utilized a level III, quantitative, non-experimental design with the use of a mailed survey questionnaire. The survey was returned by 59 entry-level, OT program directors. Results indicated that a large percentage of the programs did not offer any training in one or more of 11 areas of technology. Areas of technology studied included AAC, cognition and memory, device interfaces, environmental access, computer technology, funding issues, prosthetics and orthotics, role of service providers, sensory aids, vehicle modifications, and wheeled mobility. Almost 90% of respondents reported that they believed introductory technology skills should be included in OT curricula. A follow up study by Kanny and Anson (1998) found that the overall education in AT increased significantly with more stand-alone courses and lectures available. Largest increases in training included the topics of environmental controls, wheeled mobility, and interface devices. They still found that large variations on amount and content of AT training existed between programs.

In 2007, Brady, Long, Richards, and Vallin studied the extent of which AT devices and service training were provided in curricula of occupational therapists, physical therapists, special education teachers, and speech-language pathologists. They utilized a level III, quantitative, non-experimental design with the use of an online survey. The survey was returned by 153

professional program directors of which 32 respondents were OT directors. All of the OT programs reported teaching about AT in their curriculum. Almost 70% of the OT programs reported that one to three courses included AT content. Only 30% of OT programs had four to six courses with AT content with the average time studying AT being 20 hours. Of the 24 responses from OT programs, the most covered AT devices were recreational/toys, computer access, and positioning. The least covered AT devices were educational software, reading software, and hearing devices. The results from this study indicate that the amount of AT training for occupational therapists varies significantly between institutions revealing the need for more standardized training recommendations.

Information obtained from the needs assessment indicated that practitioners received varying amounts of AT training but all agreed that it was not enough to perceive competency (Dishman, 2017). When asked what type of AT education participants received in their OT/OTA programs, answers varied even though students attended the same university with 33% indicating they had a lecture, assignment, and some clinical experience. Part of the variation may have been due to how long ago therapists had attended USI and whether they were in the OT or OTA program. Participants responded that they would have liked more AT training in learning disabilities, sensory (hearing and vision), environmental activities of daily living (EADLs), AAC, computer access, and cognitive aids (33-42% of respondents).

Assistive Technology Learning Preference

The results of one study indicated the preferred learning strategies of practitioners when receiving training on AT topics. Smallfield and Anderson (2012) studied how active learning strategies integrated into an AT course for OT students improved abilities to use AT. They used a level IV, case series, quantitative study using a course evaluation. Participants were

approximately 111 OT students at the University of South Dakota who completed the AT course called Therapeutic Adaptations to Enhance Occupational Performance. The intervention was the AT course taught by two instructors at the University of South Dakota. The course used the active learning philosophy where the students completed several guided, occupation-based laboratory experiences, including experiences outside of the classroom environment to make the learning more meaningful. After completing the course, participants completed a course evaluation rating specific objectives regarding teaching method and style. Most participants (91-99%) rated the hands-on activities, discussions, and applying scenarios to real-life situations as a 4 or 5 on the Likert scale on course evaluation. Many participants (77-88%) rated the following areas as a 4 or 5 on the course evaluation: gained specific skills to be a professional in the field; assignments and tests required creative thinking; and learned how to find resources. The results of the course evaluations indicated that the active learning style of teaching and strategies should continue to be used in this course, and that this course prepares students to apply AT knowledge in OT practice.

Conclusion

Three distinct themes were formed from studying the literature that provided support and background for this study on perceptions of AT education provided in OT curricula and post professionally. In the first theme, the researcher explored the history of the profession related to AT. Beginning in 1990, NBCOT determined the need to include AT on the certification exam. Following NBCOT's changes to the certification exam, in 1991, AOTA indicated schools must include AT into their curriculum to be accredited (Angelo, Bunning, Schmeler, & Doster, 1997). ACOTE standards specified the need for education on AT including the creation, application, and compensatory training necessary for occupational performance (Accreditation Council for

Occupational Therapy Education, 2018). Although, these standards have assisted OT programs in making significant improvements in AT education, more improvements in AT education of OT students are needed.

The second theme was research regarding the amount of knowledge occupational therapists perceive they have on AT and the professional development they wanted to pursue. Lahm and Sizemore (2002) focused on what knowledge occupational therapists have regarding AT for early intervention and factors regarding how decisions were made for intervention. They concluded with the need for more training on AT to increase confidence and collaboration. Gitlow and Sanford (2003) provided information on what knowledge occupational therapists, physical therapists and speech-language pathologists have regarding provision of AT devices and services, as well as, the lack of competence they perceive they have in AT. Particularly, therapists indicated they have enough training in ADL. Finally, Long, Woolverton, Perry, and Thomas (2007) specified the knowledge that pediatric occupational therapists have on the provision of AT. They provided details of what areas pediatric occupational therapists indicated they need the most training in including funding and high-tech devices. They also specified that pediatric occupational therapists learn best from hands-on and group strategies for AT training.

The final theme developed from the literature was AT being taught in higher education curricula. Beginning in 1991, Kanny, Anson, and Smith provided a baseline study of AT education. Kanny and Anson (1998) followed up the study by demonstrating an increase in AT education provided in higher education curricula. Brady, Long, Richards and Vallin (2007) expressed the continued growth of AT training but also indicated that many AT areas continued to be missing from OT curricula. Then, Smallfield and Anderson (2012) provided data on active learning strategies for AT education and the competence that students develop from these

strategies. Although, the highest level of research utilized was level III, the quality and quantity of quantitative information provided adequate literature to support the capstone project of studying AT education for occupational therapists both during entry-level programs and as a professional.

Section 3: Methods

Project Design

This research project was a quantitative, survey design to examine the amount and categories of AT education provided in entry-level OT programs. The online survey was distributed to ATP certified occupational therapists registered by the RESNA. This study's outcome may contribute to determining what categories of AT are missing from OT educational curricula and what further education practitioners may need to develop competency. Outcomes from this research study could also lead to development of further education for therapists such as AT certificate programs and continuing education opportunities.

Setting

Due to the study being an online survey, there was no specific setting for research or intervention. The Qualtrics program at the University of Southern Indiana in Evansville, Indiana was utilized to create, distribute, and analyze the survey.

Participants

Participants were ATP certified occupational therapists identified through the RESNA online directory. Purposeful sampling was used to select participants. Purposeful sampling is the selection of participants in a research study based on specific criteria (Dickerson, 2006). Participants were excluded if they were not both occupational therapists and ATPs certified by RESNA. Participant information was gathered and organized from the RESNA ATP directory. After IRB approval, contact information gathered on the 782 ATP certified occupational therapists was utilized to distribute the online survey.

Project Methods

For this quantitative survey, an instrument created specifically for this research was utilized with Qualtrics to distribute the online format. The survey questions are located in Appendix C. Using a program like Qualtrics is important for easy distribution and provides the ability to produce descriptive statistics and graphing (Creswell, 2014). The major sections in the survey were addressed in a cover letter sent via email with the survey link information. Creswell (2014) discusses the inclusion of demographics, behavioral descriptions, specific study information, and closing instructions. Provided in the cover letter was information about the purpose of the study with a brief description of literature to support the need. Instructions informing the participants about deadlines for completing the survey and ways to be more involved in the study were included. Creswell (2014) also mentions field testing the survey to gather content validity of scores and, as a result, make changes to questions. The survey was field tested with professors teaching in the entry level Master's program at USI, as well as, a mentor and professor at Eastern Kentucky University.

Outcome Measures

To analyze and interpret data, Creswell (2014) recommends providing the data collected in a sequence of steps to easily allow others to understand how one step precedes another. Step one in the process involves reporting statistics about how many survey responses were received versus how many did not respond (Creswell, 2014). This will be expressed in both narrative and table format. Response bias must be determined in step two of the process which entails finding the effect that those who did not respond may have on the results of the study (Creswell, 2014). Step three in the process encompasses developing a descriptive analysis of the data collected including the means, standard deviations and range of scores (Creswell, 2014). Descriptive

analysis was utilized to illustrate the quantitative data from the survey and may be expressed using charts and tables. The fourth step in analyzing data concerns studying the data with a type of instrument. The results of the data analysis should be depicted in tables, graphs and charts to assist with understanding of outcomes (Creswell, 2014). Qualtrics and Microsoft Excel were used to develop tables and charts to describe the results of the research study. This information should lead the researcher to interpret the quantitative research through re-examination of the objectives (Creswell, 2014). Besides the numerical and ordinal data collected, open-ended questions provided narrative information on the participant's definition of AT and what education would best benefit OT practitioners. Common thoughts and answers will be reflected in chart, table and narrative formats.

Validity

Researchers must validate the conclusions or interpretations of the data analysis, and statistical assessments assist in determining the validity (Kielhofner & Coster, 2017). Validity of assessments are provided not only by the current study but many studies produced over time (Kielhofner & Coster, 2017). Therefore, threats to validity include the lack of evidence to support the topic studied and provision of content or defining information about the topic. One strategy to establish validity in this study was to use literature defining AT and AT categories, as well as literature providing information about the amount and types of AT education provided in OT curricula. Another strategy was to express the conclusions and interpretations with the stipulation that this study will lead to further studies to increase the evidence for validity. Another threat to validity of this study is the population that was sampled. Due to the participants all being ATPs, they may be biased toward the importance of AT education.

Ethical Considerations

Creswell (2014) addressed the need for research writers to anticipate ethical issues that may occur during their study and to plan strategies and solutions to address them. In this quantitative, survey study, ethical considerations involved the examination of the participant's opinion of the survey questions and the impact of the results. Potential risks to participants during the data collection were their reaction to the survey questions. One important strategy to prevent this concern was participating in field testing of the survey questions (Creswell, 2014). Another potential risk involved the interpretation of data or the outcomes of the study. Creswell (2014) indicates that ethical considerations would include avoiding disclosure of only favorable results and results that could harm participants. One method used to prevent this ethical issue was obtaining IRB approval from Eastern Kentucky University. The researcher continually monitored how the results were analyzed and interpreted to ensure that they did not only include results that support research objectives. Participants could be concerned that data they provided was not analyzed correctly which could lead to lack of participation in future studies.

Capstone Timeline

Table 1

Time Frame of Capstone Project

Time Frame	**Expected Results**
January 2018	Finalized capstone project topic
February 20, 2018	Survey questionnaire completed and contact information for potential participants collected
February 26, 2018	Submitted IRB application
March 8, 2018	IRB was approved
March 28, 2018	Survey completed in Qualtrics program

March 31, 2018	IRB Revision submitted
April 4, 2018	IRB Revision approved
April 5, 2018	Surveys distributed
May 4, 2018	Due date for return of surveys
June 27, 2018	Capstone paper completed
July 2018	Presentation of completed Capstone Project

This research study did not have a financial cost associated with it, but did require participation by a significant number of ATP certified occupational therapists to allow for a successful and significant study.

Section 4: Results and Discussion

Introduction

The data collected and analyzed from this study displayed are based on the project objectives. Data analysis revealed occupational therapist's perceptions of AT education they have received both during and after their collegiate experience. Data was collected from participants using Likert type scales, multiple choice responses, and open-ended responses to identify specific categories of AT participants received instruction in and what types of training are most beneficial for AT education. Results indicated how much training they received on the following AT categories: AAC, cognitive aids, computer access, EADLs, sensory (vision or hearing), seating and mobility, recreation, environmental modification, accessible transportation, and technology for learning disabilities.

Invitations to respond were distributed to 782 potential participants with 82 invitations being returned due to incorrect email addresses. A total of 148 survey results were analyzed and reported in the findings for a response rate of 21%. The participants utilized a link to the online Qualtrics system provided in the invitation email with attached informed consent. By proceeding to the first survey question, individuals consented to participating in the research study. Participants were all occupational therapists that were certified as an ATP through the RESNA. Experience as an occupational therapist varied with the majority (71%) having 15 years of experience or more. Experience as a certified ATP varied with the majority of participants (39) having 2-5 years of experience and 35 participants having 6-10 years of experience.

Results

Quantitative Data

Qualtrics program data reports were utilized for statistical analysis of Likert scale and multiple choice responses. Microsoft Excel was used to analyze and make comparisons from open ended responses. Most participants (71%) reported having 15 or more years of experience as an occupational therapist (Table 2). Years of experience as an ATP varied with the most participants (39) having 2-5 years of experience (Table 3). Of the 148 participants, 112 indicated that they have obtained other specialty certification or training. The most common type of certification and training was in seating and mobility (Table 4). The most prevalent practice areas for participants were school-based practice, seating and mobility, and outpatient (Figure 1).

Table 2

Years of Experience as an Occupational Therapist

Years of Experience as an Occupational Therapist	**Number of Participants**	**Percentage of Participants**
1 year or less	0	0
2-5 years	8	5%
6-10 years	15	10%
11-15 years	20	14%
Over 15 years	105	71%

Table 3

Experience as an ATP

Numbers of Years of Experience as ATP	Number of Respondents
1 year or less	23
2-5 years	39
6-10 years	35
11-15 years	23
Over 15 years	28

Figure 1

Participant's Primary Practice Area

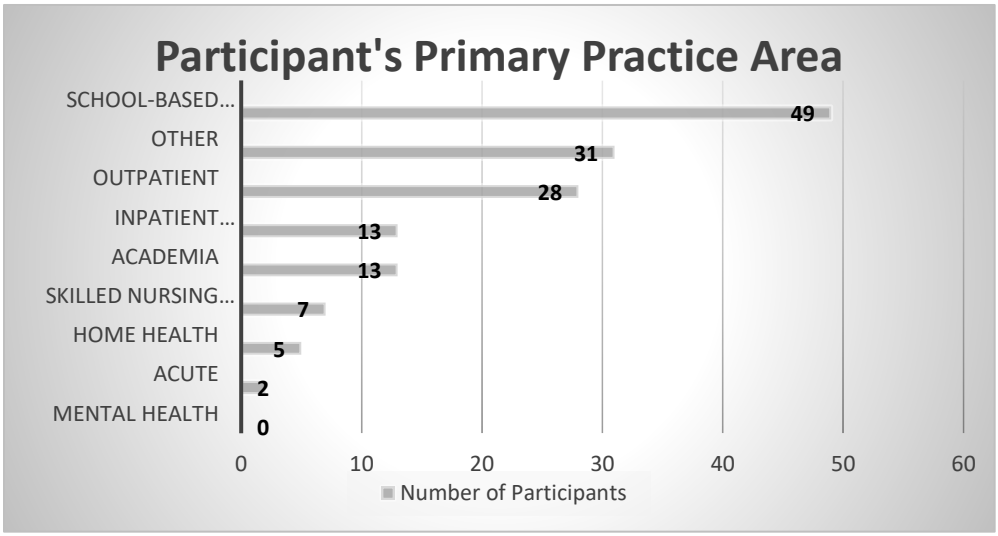


Table 4

Primary Practice Areas Responded as Other

Other Primary Practice Areas	Number of Participants
Assistive Technology	4
Seating & Mobility	3
Private Practice	3
Center for Developmental Disabilities	3
Veteran Hospital or Center	2
Programs of All Inclusive Care for the Elderly (PACE)	2
Supplier Home Medical Equipment	2
State AT Act Program Director	1
Driver Rehabilitation	1
Long Term Care- Medically Fragile, Intellectual Disabilities	1
Administration	1
Pediatrics	1
Continuing Care Retirement Community	1
Community Hospital	1
Rural – All Areas	1
Vocational Rehabilitation	1
Primary Care Practice	1
Wheelchair Management	1
Wheelchair Manufacturer	1

Participants were asked to indicate which of the 10 categories they received AT education in during their OT program and post professionally. Of 148 participants, 82% received training in environmental modifications; 80% were trained in seating and mobility; and 71% were trained in AT for vision and hearing issues during their entry-level OT program (Table 5). In contrast, only 43% reported they received training in AAC and computer access, and 33% reported they received education in technology for learning disabilities during their entry-level OT programs. Post professionally, participants reported that 97% received training in seating and mobility; 94% received training on environmental modifications and computer access; 93% received training on AAC; and 92% received training on AT for vision and hearing issues.

Table 5

Number of Participants That Received Education in Assistive Technology Categories during OT Program & Post Professionally

Assistive Technology Categories	**Participants that Received Education during OT Program**	**Participants that Received Education during OT Program**	**Participants that Received Education Post Professionally**	**Participants that Received Education Post Professional**
Environmental Modifications	113	82%	131	94%
Seating & Mobility	111	80%	138	97%
Sensory (Vision & Hearing)	98	71%	121	92%
Cognitive Aids	76	56%	118	88%
EADLs	76	56%	126	91%
Recreation	75	55%	98	75%
Accessible Transportation	65	49%	119	85%
AAC	60	43%	129	93%
Computer Access	59	43%	130	94%
Technology for Learning Disabilities	44	33%	112	82%

Participants reported that environmental modifications, seating and mobility, and sensory (hearing and vision) were the top three AT categories participants reported receiving training in during their entry-level OT program (Figure 2). On the contrary, technology for learning disabilities, computer access, and AAC were the AT categories that participants reported receiving no training in during their entry-level OT program (Figure 3).

Figure 2

Top Three Categories of AT That Participants Received During Their OT Program

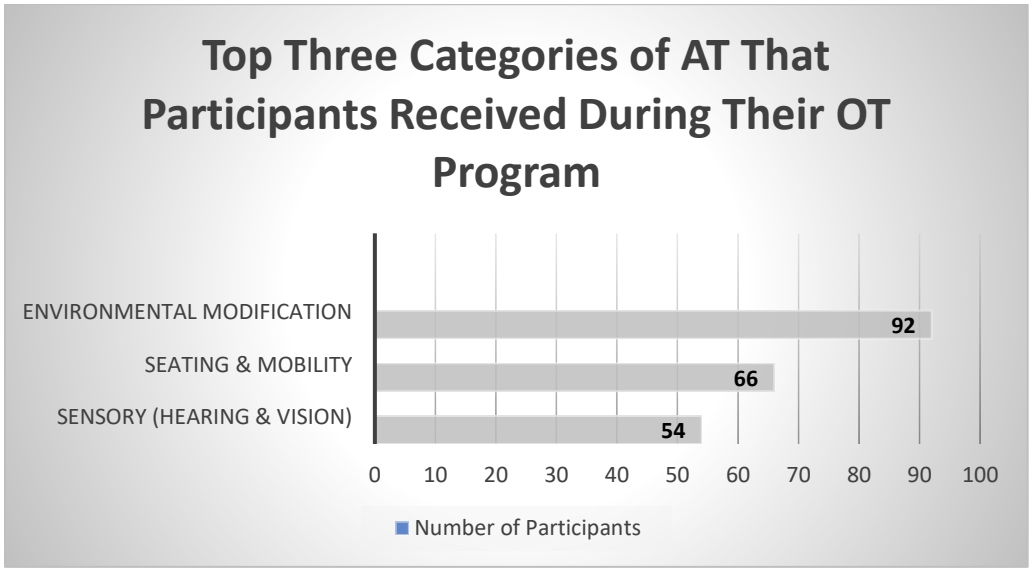
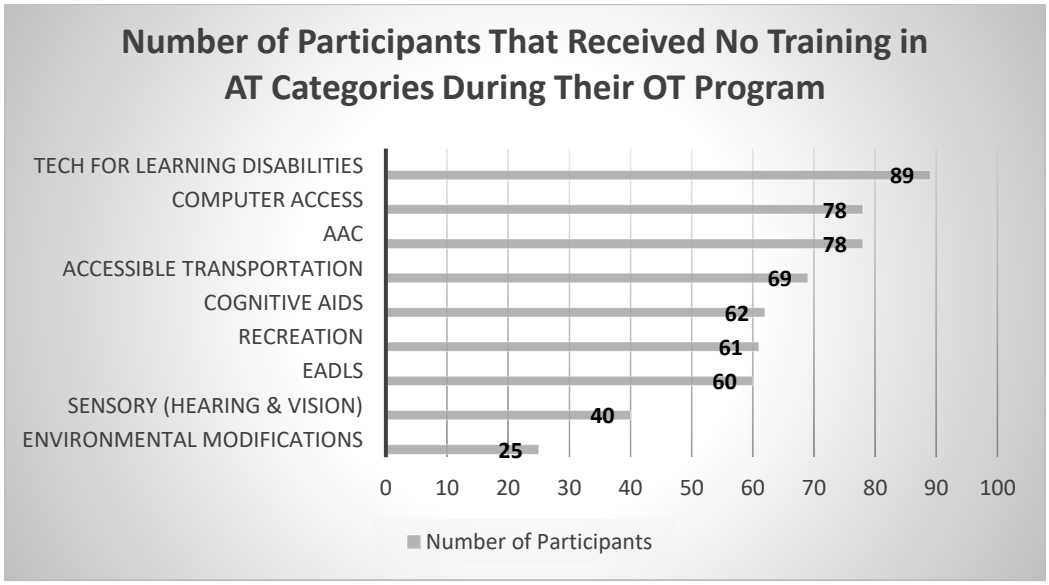


Figure 3

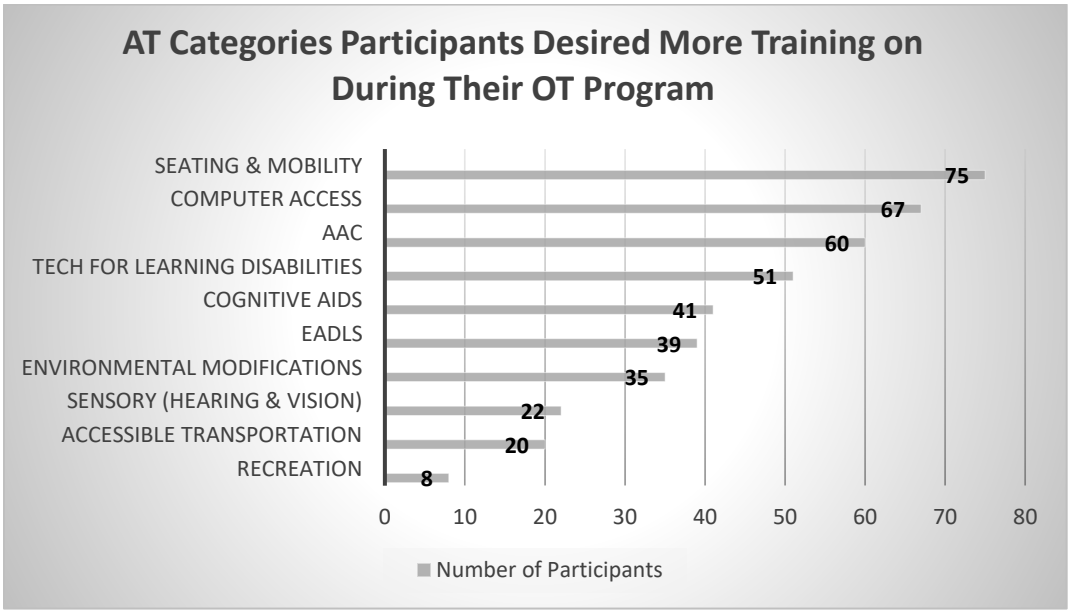
Number of Participants That Received No Training in Assistive Technology Categories During Their OT Program



Research participants reported which AT categories they would have wanted more training on during their entry-level OT program. The top four categories that participants desired more training on were seating and mobility, computer access, AAC, and technology for learning disabilities (Figure 4).

Figure 4

AT Categories Participants Desired More Training on During Their OT Program



As a professional, the AT categories of recreation, technology for learning disabilities, and accessible transportation were reported to be areas that participants did not have additional training on (Figure 5). Participants reported that 91% utilize AT either always or often in OT intervention (Figure 6). Participants reported using AT in the categories of seating and mobility, environmental modifications, and sensory (hearing and vision) most often in intervention (Figure 7). Technology for learning disabilities, accessible transportation, and recreation were the AT categories used by the least about of participants in intervention (Figure 8).

Figure 5

Number of Participants That Received No Training in Assistive Technology Categories Post Professionally

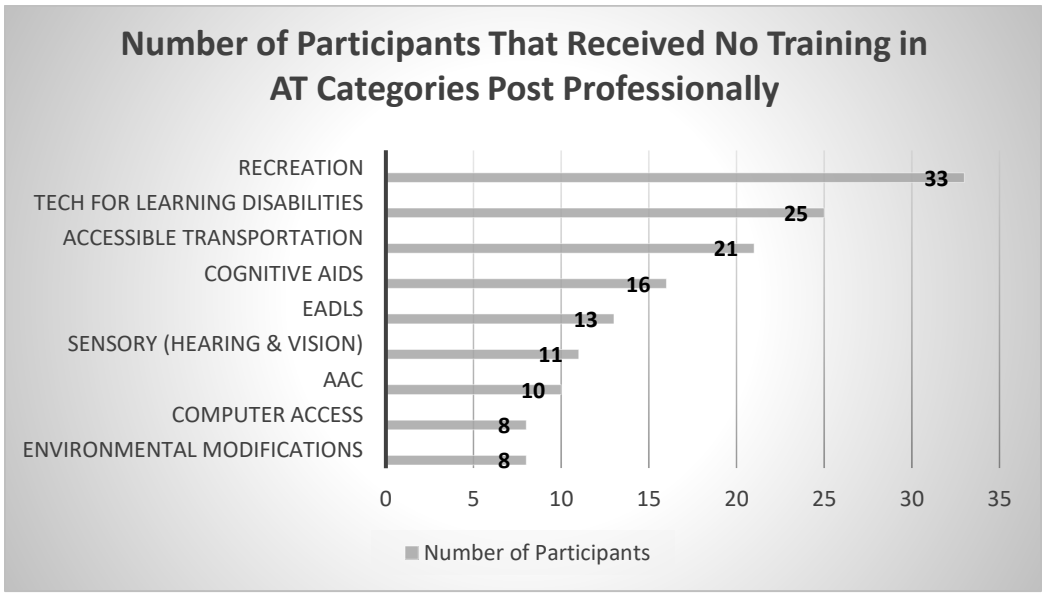


Figure 6

How Often Participants use Assistive Technology in Intervention

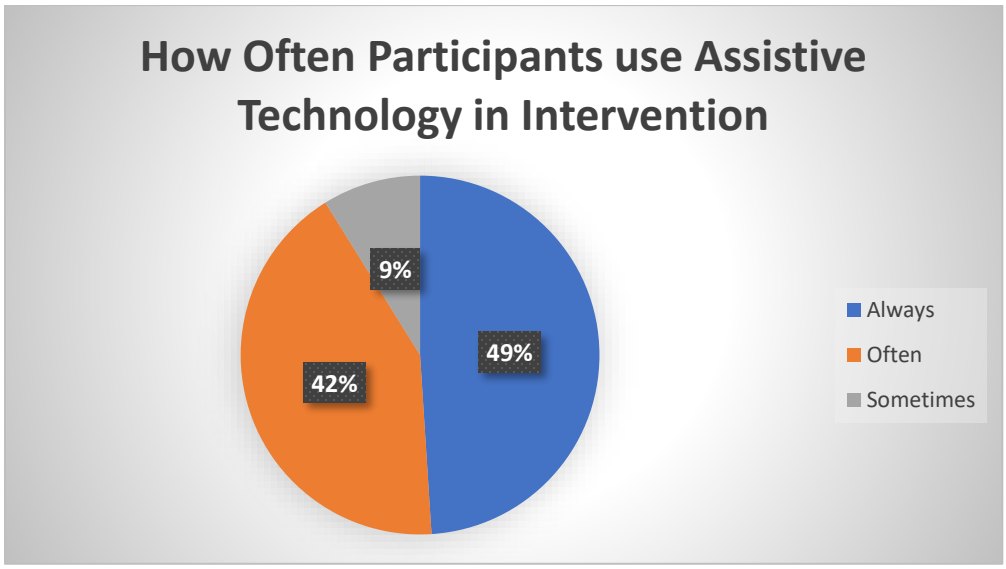


Figure 7

AT Categories Participants Utilized Most in Intervention

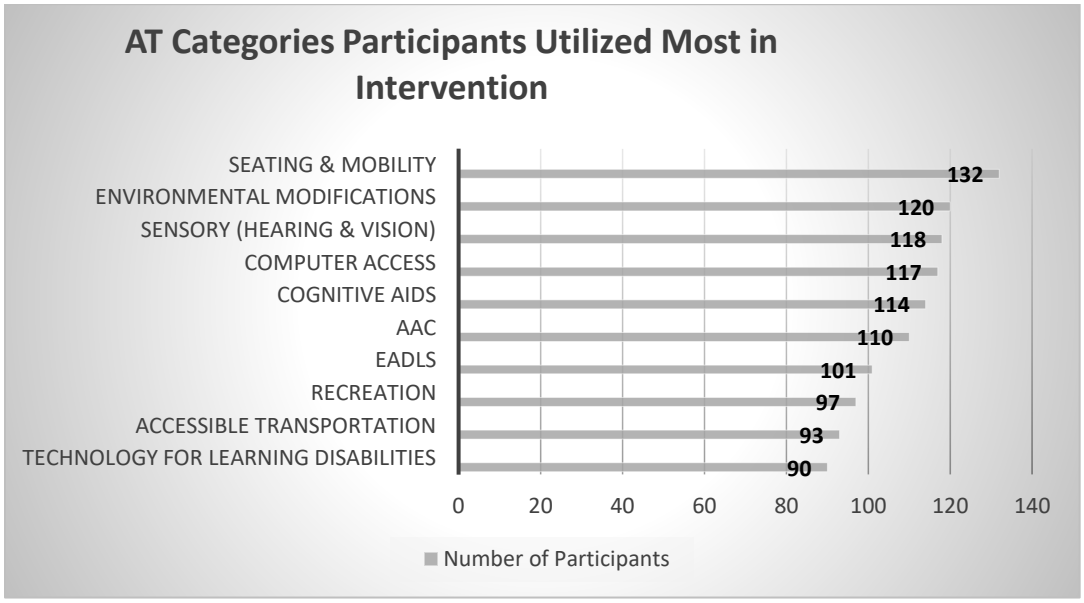
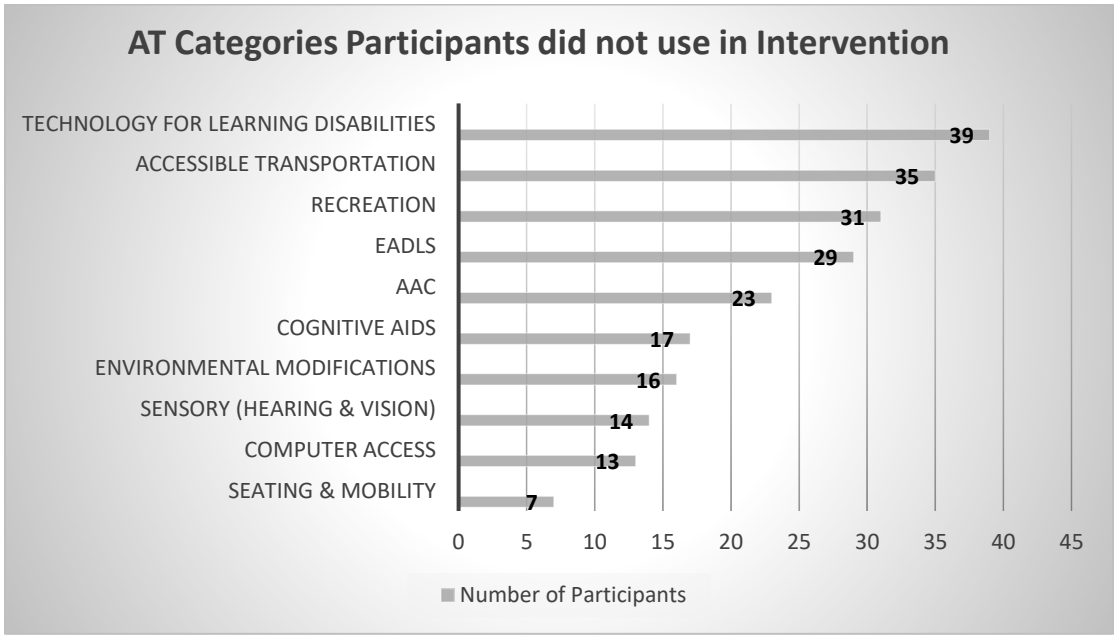


Figure 8

AT Categories Participants did not use in Intervention



Qualitative Data

Three open ended questions were asked in the survey including:

1. How do you explain assistive technology to others including practitioners and clients?
2. What specific education do you feel OT students should receive on assistive technology during their education?
3. What strategies or suggestions would you recommend to OT practitioners to assist them to feel comfortable and confident using AT in intervention?

Many participants indicated that they described AT as a way of increasing a person's independence; tools to assist clients; and the classic Individuals with Disabilities Education Act (IDEA) definition (Table 6). One participant answered, "AT is tools to help the student accomplish his/her goal and demonstrate the skills and knowledge that they already have". Another participant answered, "Devices and equipment that improve function to achieve greater independence, safety, productivity, self-determination, communication, social connections, and community inclusion".

Table 6

How to Explain Assistive Technology to Others Including Practitioners and Clients

Answer	
Independence	32
Tools	23
IDEA definition	10
Participation	6
Makes life easier	6
Function	4
Activities of Daily Living (ADLs)	4
Help with activity a person can't do	4
Access	3

Participant's answers to question two varied with many different thoughts, however, many agreed that basic AT information and seating and mobility were categories that should be included in OT entry-level curriculum (Table 7). One participant answered, "I always stress that 'AT' is a high-tech evolution of 'adaptive equipment' and shouldn't be treated as a separate entity. They should at least understand that they should know the role that AT plays and actively embrace technologies as new tools for achieving OT goals". Another answered, "I think that specialty certifications or "concentrations" should be part of the masters and OTD programs and all areas of AT should be addressed". A third participant responded, "I feel like assistive technology is a specialty area of practice, so, a general curriculum should highlight some of the topics. I don't feel like an entry level OT should be expected to come out with advanced knowledge of assistive technology".

Table 7

Specific Education OT Students Should Receive on Assistive Technology During Their Education

Answer	Number of Participants
Basic Assistive Technology	26
Seating & Mobility	17
All Areas	16
Continuing Education	9
Hands-on	5
Computer Access	4
Updated Technology	3

Many participants indicated that continuing education opportunities and hands-on experience would be the most effective strategies to educate OT practitioners on AT (Table 8). One participant answered, "Seek out continued professional development and shift your perspective from "OT" strategies to "AT" supports- they are often one in the same". Another

participant said, “Use the fundamentals of activity analysis and ergonomics and then search for the simple solution- letting the patient guide the way”.

Table 8

Strategies to Recommend to OT Practitioners to Help Confidence Using AT in Intervention

Answers	Number of Participants
Continuing Education opportunities	30
Hands-on	20
Mentoring	12
Practice	12
Vendors	6
Become an ATP	5
Try AT products	3
Read manuals	3

Discussion of Findings

The purpose of this capstone project was to determine the perceptions of ATP certified OT practitioners on the amount and categories of AT education provided in OT programs; identify which categories of AT practitioners perceive to be needed in entry-level master’s OT programs; and identify the need for post-professional AT training and post-professional AT certificate programs. Seating and mobility and environmental modifications were the assistive technology categories that participants reported receiving the highest level of training in both in an entry-level OT program and as a professional. Gitlow and Sanford (2003) found that participants reported they received adequate training in AT for ADLs during their OT program. AT for ADLs or environmental modifications may be an AT category that students are receiving an adequate amount of training on in entry-level OT programs.

Augmentative and alternative communication (AAC) and computer access were two of the lowest categories of training received during the participant’s OT program but also two of the

highest training categories as a professional. This indicates a possible need for more training in AAC and computer access for students in the entry-level OT programs. Other AT categories including cognitive aids, accessible transportation, and EADLs were areas that only half of practitioners were trained on in school but a majority pursued training as a professional. This supports the open ended responses indicating that students should receive training on all categories of AT. Only one quarter of participants reported receiving training in technology for learning disabilities in their entry-level OT program, however, most received training as a professional. These results demonstrate the recent advances and recognition in technology for learning disabilities, and the fact that a majority of participants have been professionals for 11 or more years.

When asked what AT categories they desired more training on during their OT program, participants reported the areas of seating and mobility, computer access, AAC, and technology for learning disabilities. Brady, Long, Richards and Vallin (2007) found that pediatric OT practitioners desired more AT training in the areas of funding and high tech devices. Findings agree with the literature that more training on high tech assistive technology is necessary to meet the needs of OT practitioners. The AT categories that participants reported using most in intervention included seating and mobility, environmental modifications, sensory (hearing and vision), and computer access which also matches the AT categories that participants desired more training on and received training on as a professional. Many participants recommended that occupational therapists pursue continuing education opportunities involving hands-on learning followed by mentoring and practice. Brady, Long, Richards and Vallin (2007) found similar results that participants responded positively to hands-on education. Continuing

education and AT certificate programs must be designed with the hands-on approach as an essential component.

Strengths and Limitations of the Project

Strengths

This capstone project answered the research questions proposed. Data was collected and presented on the amount and categories of AT education participants received in their entry-level OT programs. Results indicated which categories of AT practitioners perceived to be needed in entry-level master's OT programs. Finally, the open-ended questions assisted in identifying the need for post-professional AT training and post-professional AT certificate programs. The knowledge base of the research members, including the faculty mentors and student researcher, was another strength of this capstone project. Each of these individuals have additional training and experience with AT categories and services.

The opportunity to present this capstone research to the researcher's current employer, a higher education institution, and to the researcher's attending university is a significant strength of the study. Through presentation of this research to the two universities, the researcher is sharing knowledge that could lead to reflection and adjustment of the OT curriculum to include more AT training and categories. The possibility of increased collaboration among ATP certified OT practitioners is another strength of the project. This collaboration could be initiated through presentation of this study at both the Assistive Technology Industry Association (ATIA) International Conference and RESNA Annual Conference, as well as, the AOTA conference and AOTA Annual Education Summit. The final strength of this study is the further knowledge

gained from the insight of these willing participants. This will lead to further study in the specific areas needed to be addressed regarding AT categories in entry-level OT curriculums, as well as, future studies into the post professional training needed in AT.

Limitations

Some limitations of this capstone study were identified early on while others were discovered in the latter part of the project. Although 782 participants were identified through the RESNA database, 82 invitations were returned due to incorrect email addresses. The total number of participants was only 148. One issue with the database was the inaccuracy of the information. A significant number of email addresses were returned as not active or correct accounts. Another limitation to the study was the group chosen to survey. Due to the practitioners all being ATP certified and knowledgeable about AT, they could be biased to the importance of AT in practice and the desire to include more AT in OT curriculums. As a result, another limitation to consider is generalizability. These practitioners' opinions may not represent the entire population of practitioners within the OT profession.

A possible limitation to this research was participant interpretation of survey questions. Some participants answered survey questions with seemingly incorrect responses. Some participants also answered open-ended questions as if they misunderstood the questions. Related to this limitation of interpretation was that some survey questions were skipped. A significant number of participants did not answer the open-ended questions. One final limitation relates to the number of years that participants have been OT practitioners. With the advancement of technology and AT being the greatest in the last 10-15 years, the fact that a majority of

participants had 11 or more years of experience as a practitioner could be a one-sided representation of OT professionals.

Implications for Practice and Education

According to AOTA, an OT's goal is to "enhance or enable meaningful participation in the occupations (activities) important to the clients served" (American Occupational Therapy Association, 2015, para. 1). Adaptive equipment or AT is one essential way that occupational therapists provide clients with the ability to participate in occupations. With the advancement of technology in the past 10 years, it has been challenging for OT curriculums to keep up with the ever changing needs. This capstone project offered perspectives of what AT categories practitioners received during their collegiate experience, as well as, which AT categories may be lacking in OT curriculums and what categories may be more appropriate to pursue training on after becoming a professional.

This capstone project also affirmed the need for additional and continuing training as a professional. Continuing education on new and updated AT based on the practitioner's practice area is necessary for comfortable and confident use of AT in OT interventions. Participant's responses revealed the type of training was vital including the necessity for hand-on practice and mentoring.

Future Research

The results of the capstone project provided research to support the need for reflecting and adapting OT entry-level curriculums to include more training on various categories of AT. Specifically, the AT categories of seating and mobility, environmental modifications, computer access, AAC, and technology for learning disabilities were reported as the most desired categories. Data collected also revealed the need for continued education and training on AT as

a professional. Future research with a larger sample size and more generalized sample of OT practitioners is necessary to compare results for more detailed evidence of the AT categories needed in entry-level OT programs. This evidence could be utilized to improve the education of OT students and assist the profession in full acceptance of AT as a vital part of the OT profession. Other future research on the study of best practices for post professional training on AT categories is needed to generalize the results.

Summary

The purpose of this capstone project was to determine the perceptions of ATP certified occupational therapists on the education on AT they received in OT entry-level programs and post professionally. The online survey was distributed to AT professional (ATP) certified occupational therapists registered by RESNA. A total of 148 survey results were analyzed and reported in the findings for a response rate of 21%. Seating and mobility and environmental modifications were the AT categories that participants reported receiving the highest level of training in both in an entry-level OT program and as a professional. AAC and computer access were two of the lowest categories of training received during the participant's OT program but also two of the highest training categories as a professional. This indicates a possible need for more training in AAC and computer access for students in the entry-level OT program.

When asked what specific AT education OT students should receive in entry-level OT programs, most frequent answers were basics on AT, seating and mobility, and all areas or categories. For the type of strategies to teach AT, participants recommended that OTs pursue continuing education opportunities involving hands-on learning followed by mentoring and practice. The results of this capstone project provided research to support the need for reflecting and adapting OT entry-level curricula to include more training on various categories of AT.

Specifically, the AT categories of seating and mobility, environmental modifications, computer access, AAC, and technology for learning disabilities were reported as the most desired categories. This evidence could be utilized to improve the education of OT students and assist the profession in full acceptance of AT as a vital part of the OT profession.

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Appendix A

Consent to Participate in a Research Study
Perceptions of ATP certified occupational therapy practitioners on assistive technology education in OT programs

Why am I being asked to participate in this research?

You are being invited to take part in a research study about the education on assistive technology provided in entry-level occupational therapy programs. You are being invited to participate in this study because you are a assistive technology professional (ATP) certified occupational therapist (OT). If you take part in this study, you will be one of about 800 people to do so.

Who is doing the study?

The person in charge of this study is Karen Dishman, MS, OTR, ATP, who is an assistive technology coordinator for the Evansville Vanderburgh School Corporation and an adjunct instructor at the University of Southern Indiana. This study is part of her Occupational Therapy Doctoral Program at Eastern Kentucky University. She is being guided in this research by Julie Baltisberger, PhD, OTR/L. There may be other people on the research team assisting at different times during the study as part of the research team providing feedback to Karen on the research process.

What is the purpose of the study?

The results of this study will help determine if entry-level occupational therapy programs need to utilize more time and resources on educational coursework covering assistive technology categories and types of training that would be beneficial as a professional.

By doing this study, we hope to:

1. Determine the perceptions of ATP certified OT practitioners on the amount and categories of assistive technology education provided in OT programs,

2. Identify which categories of assistive technology ATP certified OT practitioners perceive to be needed in entry-level master's OT programs,
3. Identify the need for post-professional assistive technology training and post-professional AT certificate programs

Where is the study going to take place and how long will it last?

This research will be conducted online beginning April 2018 through March 2019. The total amount of time you will be asked to volunteer for this study is 10-15 minutes.

What will I be asked to do?

As a participant of this research study you will be asked to complete a short survey. This survey will occur one time during the duration of the study. The survey consists of Likert scale ratings and short responses. Survey questions seek to gather information on the amount and categories of assistive technology education provided in entry-level occupational therapy programs and training on AT as a professional.

Are there reasons why I should not take part in this study?
You should not participate in this study if you are not an occupational therapist or are not an assistive technology professional (ATP).

What are the possible risks and discomforts?
The survey will pose no more risk of harm than you would experience in everyday life or if you do not complete the survey.

Will I benefit from taking part in this study?
The benefit from participating in this research is the knowledge that you are contributing to the education of occupational therapists on assistive technology.

Do I have to take part in this study?
If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer.

If I don't take part in this study, are there other choices?
If you do not want to be in the study, there are no other choices except to not take part in the study.

What will it cost me to participate?
There are no costs associated with taking part in this study.

Will I receive any payment or rewards for taking part in the study?
You will not receive any payment or reward for taking part in this study.

Who will see the information I give?
Your information will be combined with information from other people taking part in the study. When the study is written all information will be deidentified.

This study is anonymous. That means that no one, not even members of the research team, will know that the information you give came from you.

However, there are some circumstances in which we may have to show information to other people. For example, the law may require us to show your information to a court. Also, we may be required to show information that identifies you to people who need to be sure we have done the research correctly; these people would be the chair of the doctoral committee and necessary members at the Eastern Kentucky University.

What if I have questions?

Before you decide whether to accept this invitation to take part in the study, please ask any questions. Later, if you have questions about the study, you can contact the investigator, Karen Dishman at 812-449-4487. If you have any questions about your rights as a research volunteer, contact the staff in the Division of Sponsored Programs at Eastern Kentucky University at 859-622-3636. A copy of this consent will be provided for you.

What else do I need to know?
No other information is needed.

I have thoroughly read this document, understand its contents, have been given an opportunity to have my questions answered, and by completing this survey I agree to participate in this research study.

Appendix B

Dear ATP Certified Occupational Therapist,

You are invited to take part in *Perceptions of ATP certified occupational therapy practitioners on assistive technology education in OT programs,* a short survey to obtain feedback from occupational therapists with assistive technology certification regarding the amount and categories of assistive technology education received in your entry-level occupational therapy program and training on AT you have obtained as a professional.

Your opinions and views are highly valued and appreciated. The results of this survey will help determine if entry-level occupational therapy programs need to utilize more time and resources on educational coursework covering assistive technology categories and types of training that would be beneficial as a professional. Please use the link below to complete the online survey. The survey should take no more than 10 to 15 minutes to complete. All replies will be deidentified and confidential.

(Link to survey will appear here once determined.)

If you desire more information regarding this survey, please contact me at 812-449-4487 or karen_dishman2@mymail.eku.edu. Please see below for brief, literature review.

Sincerely,

Karen Dishman, MS, OTR, ATP

Data collected from a needs assessment survey from occupational therapy and occupational therapy assistant practitioners in southern Indiana indicated they did not feel knowledgeable about assistive technology and did not receive adequate training in many categories of assistive technology (Dishman, 2017). Literature from Kanny, Anson, and Smith (1991) and Brady, Long, Richards and Vallin's (2007) agreed with this needs assessment indicating that many categories of assistive technology continue to be missing from higher education curricula. Results of the needs assessment concur with research literature gathered that occupational therapy practitioners do not feel knowledgeable or comfortable utilizing AT in intervention (Dishman, 2017).

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Appendix C

ATP Certified Occupational Therapist Assistive Technology Survey

Perceptions of ATP certified occupational therapy practitioners on assistive technology education in OT programs

You are invited to take part in Perceptions of ATP certified occupational therapy practitioners on assistive technology education in OT programs, a short survey to obtain feedback from occupational therapists with assistive technology certification regarding the amount and categories of assistive technology education received in your entry-level occupational therapy program and training on AT you have obtained as a professional. This survey is being conducted by Karen Dishman as part of her doctoral research at Eastern Kentucky University.

Your opinions and views are highly valued and appreciated. The results of this survey will help determine if entry-level occupational therapy programs need to utilize more time and resources on educational coursework covering assistive technology categories and types of training that would be beneficial as a professional. The survey should take no more than 10 to 15 minutes to complete. All replies will be de-identified and confidential. Your decision to participate in this study is voluntary and you have the right to terminate your participation at any time. You may skip any questions you do not wish to answer. If you are interested in receiving the results of the study, there will be an opportunity to provide your email at the end of the survey.

Question	**Answer Choices**
1. How long have you been an occupational therapist (OT)?	1. 1 year or less 2. 2-5 years 3. 6-10 years 4. 11-15 years 5. Over 15 years
2. How long have you been an assistive technology professional (ATP)?	1. 1 year or less 2. 2-5 years 3. 6-10 years 4. 11-15 years 5. Over 15 years
3. What is your primary area of practice within the occupational therapy profession? (Please select one.)	1. Acute Care 2. Inpatient Rehabilitation 3. Outpatient 4. Home Health 5. School-based Practice 6. Skilled Nursing Facility 7. Academia 8. Mental Health 9. Other (Please Specify): _____

<table>
<tr>
<td>4. Do you have any additional specialty training or continuing education in assistive technology?</td>
<td>1. Yes
2. No

If yes, please list: _____</td>
</tr>
<tr>
<td>5. Regarding your entry-level OT program, what categories of assistive technology did you receive training on and how much training in each category?</td>
<td>
<table>
<tr><th>AT Category</th><th>Training Received</th><th>How Much?</th></tr>
<tr><td>Augmentative & Alternative Communication</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Cognitive Aids</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Computer Access</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Electronic Aids to Daily Living</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Sensory (Vision or Hearing)</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Seating & Mobility</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Recreation</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Environmental Modification</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Accessible Transportation</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Technology for Learning Disabilities</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
<tr><td>Other (Please Specify):</td><td>Yes or No</td><td>None, A Little, Some, A Lot</td></tr>
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<tr>
<td>6. Please identify the top 3 categories you received education on during your entry-level OT program.</td>
<td>1. Augmentative & Alternative Communication (AAC)
2. Cognitive aids
3. Computer access
4. Electronic Aids to Daily Living (EADL)
5. Sensory (Vision or Hearing)
6. Seating & Mobility
7. Recreation
8. Environmental modification
9. Accessible transportation
10. Technology for learning disabilities
11. Other (Please Specify):
_____</td>
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<tr>
<td>7. Please identify the top 3 categories you would have liked more education on during your OT program.</td>
<td>1. Augmentative & Alternative Communication (AAC)
2. Cognitive aids
3. Computer access
4. Electronic Aids to Daily Living (EADL)
5. Sensory (Vision or Hearing)
6. Seating & Mobility
7. Recreation
8. Environmental modification
9. Accessible transportation
10. Technology for learning disabilities
11. Other (Please Specify):
_____</td>
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<tr>
<td>8. Regarding training received as a professional, what categories of assistive technology have you received training on and how much training in each category?</td>
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<tr>
<td>9. How often do you use assistive technology in your therapy intervention?</td>
<td>o Never
o Sometimes
o Often
o Always</td>
</tr>
</table>

<table>
<tr><td>10. How important do you feel assistive technology devices and services are to providing OT intervention?</td><td>o Not at all important
o Somewhat important
o Important
o Very Important</td></tr>
<tr><td>11. What categories of assistive technology do you utilize in OT intervention and how much?</td><td>
<table>
<tr><th>AT Category</th><th>Use in intervention?</th><th>How Much?</th></tr>
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<tr><td>12. Please identify the top 3 AT categories you feel are the most important when providing OT intervention.</td><td>1. Augmentative & Alternative Communication (AAC)
2. Cognitive aids
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13. How do you explain assistive technology to others including practitioners and clients?	
14. What specific education do you feel OT students should receive on assistive technology during their education?	
15. What strategies or suggestions would you recommend to OT practitioners to assist them to feel comfortable and confident using AT in intervention?	
16. Thank you for completing the survey! If you would like a copy of the results of this research study, please provide your email address below.	