A Survey of Alternative and Traditional Special Education Teachers' Perception of Preparedness

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Abstract

The purpose of this study was to survey the perception of alternate route and traditional route special education teachers, particularly as it relates to their training received in their teacher preparation programs to meet standards intended to prepare effective special education teachers. The study examined the perceptions of 465 pre-and in-service special education teachers nationwide. The analysis revealed that teachers in alternate route programs and traditional route programs both perceive that teacher preparation programs are providing training toward meeting professional preparation standards. Furthermore, satisfactions with teacher preparation programs are reported. Limitations of the study are described along with implications for education practice and further research on the preparation of alternate route special education teachers.

Keywords*: teacher preparation, alternate certification*

Introduction

As demand for special education teachers increased, university programs worked to produce more teachers (Boe, 2014). Alternative route programs (ARPs) were created to meet the demands for special education teachers (SETs) in the field; being generally shorter in duration, ARPs characteristically involves candidates in teaching immediately or shortly after beginning the program, have an emphasis on field-based training, and are extended to a more diverse candidate population (Connelly, Rosenberg & Larson, 2014; Rosenberg & Sindelar, 2005). "ARPs leading to licensure and certification in special education emerged as significant and viable supplements to traditional teacher preparation programs" (Connelly, Rosenberg & Larson, 2014, p. 216) in order to meet demands to have more qualified teachers in the classroom to teach students with disabilities. Conversely, due to the proliferation of ARPs, studies show that the quality of SETs trained in ARPs have been raised (Nougaret, Scruggs, & Mastropieri, 2005; Robertson & Singleton, 2010).

Sindelar and Marks (1993) assert that ARPs were also created to address shortage areas as well as to attract people who may not have considered teaching as a profession. ARPs give scholars the opportunity to teach while becoming certified before taking education coursework (Rosenberg, Boyer, Sindelar & Misra, 2007). Traditional route programs differ because candidates only teach after coursework has been completed (Greenberg & McKee, 2013). This difference creates questions around the idea of effectiveness and quality of alternative teacher preparation programs compared to those traditional programs. Some studies found that ARPs were either equal or better than traditional route programs, whereas others tended to favor the traditional programs (Benedict et al., 2013; Nougaret, Scruggs, & Mastropieri, 2005; Robertson & Singleton, 2010). Roberston and Singleton (2010) compared teacher retention rates of ARPs to a traditional route program at University of Memphis, which holds a 14-year old alternative Special Education certification program. Since the program began 14-years ago, 50% of teachers from the alternative program were employed compared to 33% of those from the traditional preparation program. A higher number of alternatively trained teachers remained in the field compared to traditional graduates; however, those prepared in the traditional program were more likely to be employed longer than those in the alternatively certified program. It also appeared that more African American students were more likely to enroll in ARPs than traditional route programs; impacting the need to bring forth a more diverse teaching force. This study showed that ARPs can meet the demands of the field as well as produce a more diverse teaching force; though questions still remain about the quality of preparation.

Special Education Teacher Perceptions of Program Preparation

The Council for Exceptional Children (CEC) standards provides direction from the field focusing on what knowledge and skills special educators must have (Griffin, Garderen & Ulrich, 2014 in Sindelar, McCray, Brownell, & Kraft, 2014). While special educators are being prepared to teach students across a variety of disability categories, grade levels and ability levels; they also must be prepared to provide accommodations/modifications to students across all academic subject areas as well. A lack of personnel prepared to provide quality inclusive services to students with disabilities and their families is one of the primary barriers to serving students in the least restrictive, most inclusive environments (Buell, Hallam, Gamel-Mccormick, & Scheer,

1999). Therefore, with the demand for more special education teachers, plus the need to hold teachers to higher standards to address greater accountability for student learning, it is increasingly important that special educators in ARPs and traditional route programs are prepared to meet the competencies to serve students in a variety of different ways within the school settings.

In a study of special educators' perceptions of CEC standards, special educators reported the competencies outlined in these standards are "somewhat important" to important (Othman, Kieran, & Anderson, 2015; Zionts, Shellady, & Zionts, 2006). The standards special educators found to be the most important included instruction and professional development required by law of students with disabilities; understanding students disabilities based on cognitive, physical, cultural social and emotional conditions; collaboration with parents and other professionals in the assessments of students with disabilities; preparing appropriate lesson plans; behavior management techniques; communication with team members; and establishing a rapport with the learner (Zionts, Shellady, & Zionts, 2006). Some of the areas special educators wrote were important but difficult to implement included: developing a comprehensive, individualized student program; selecting, adapting and using instructional strategies and materials according to the characteristics of the learner; using instructional time appropriately; teaching students to use thinking and problem solving to meet their needs; incorporating evaluation, planning and management that match students' needs; and designing, structuring and managing daily classroom routines (Zionts, Shellady, & Zionts, 2006). Although educators found most of the standards to be important; many felt that it was "difficult to implement them, therefore seeing those standards as impractical" (Zionts, Shellady, & Zionts, 2006, p. 10). However, no reports of whether they believed that training on these standards were provided in their TPPs; and there was no distinction made between the perceptions of teachers prepared through ARPs and traditional route programs.

A similar study was conducted to evaluate educator's perspectives on the 2009 CEC advanced content standards; specifically focusing on educator's knowledge, practice and beliefs. The results showed that many teachers agreed or strongly agreed that they possessed the skills outlined in the CEC's six advanced content standards. Sample standards included: teachers were aware of research-based practices; belief that special education programs should include a range of settings and services; possess the knowledge necessary for effective collaboration; and use current assessment methods and tools to evaluate students with exceptional learning needs. There were a total of 24 questions on the survey; and only 83 participants. Although these participants reported they possessed the skills outlined by CEC, the author suggests "investigating further to understand special educators' current status and training needs" (Othman, Kieran, & Anderson, 2015, page 39). The findings from the aforementioned studies indicate that teachers feel the standards set by CEC are important, but subsequent research is needed to understand whether they feel that they are being adequately prepared to meet these standards.

The push for greater accountability to achieve positive student outcomes has led to evaluating teachers from a set of standards. Benedict and colleagues (2013) argue that in order for special educators to meet these standards, they must be exposed to or told ahead of time what they are being assessed on. There are a variety of tools used to evaluate teachers; most of which are evaluated on their performance using an observation checklist (Benedict et al., 2013) that is the same for all teachers; however, "few address the unique challenges associated with evaluating special educators" (Holdheide, Goe, Croft, & Reschly, 2010, p. 4). Other methods include peer-review, CEC standards, Praxis Exams, Portfolios, and value-added modeling.

Nougaret, Scruggs and Mastropieri (2005) used the observation tool to evaluate 40 first year special educators; half were traditionally licensed and the other half were emergency provisionally licensed. Using observations based off of CEC standards and teacher self-assessments, the findings suggested that teachers who were trained traditionally outperformed the emergency licensed teachers; however, teachers rated themselves similarly on the self-assessment scales, indicating teachers are not aware of their strengths and weaknesses. The scant findings between special education teachers in ARPs and traditional programs raise concerns about preparation and whether both groups truly are being trained to effectively meet the knowledge and skills covered in the standards. Therefore, the purpose of this study was to gain information about ARPs and traditionally trained special education teachers' perception of their training on professional preparation standards targeted at what effective special education teachers should know, and the extent of their training on these skills in their teacher preparation programs. Three research questions were developed to guide this study:

1. To what extent do ARP and traditionally prepared special educators feel that their preparation program prepared them with the skills to meet the special education professional standards?
2. Is there a difference in the level of perceived preparedness between special educators who earned an alternative license versus traditionally prepared teachers?
3. To what extent do special education teachers feel satisfied with the training received in their preparation program and, is there a difference in satisfaction of teachers in ARP's and traditional route programs?

Method

The *Special Education Teacher Preparation Toward Standards* (SETPT) survey was developed to collect data from teachers to gain an understanding of the preparation of SETs on preparation standards. The survey was focused on exploring the relationships between those that are trained through ARPs versus those trained through traditional route programs. A descriptive research design was utilized for this study to collect and analyze the data.

Instrumentation

Survey development. The survey was developed based off three sets of standards: (1) national standards from The Council for Exceptional Children's (CEC) Initial Specialty Set for Individualized General Curriculum National Standards, (2) Virginia Standards for the Professional Practice of Teachers of Special Education, and (3) the Standards for the VA Standards for the Professional Practice for All Teachers. The CEC standards are based off of peer reviews and therefore are a comprehensive representation of what teachers need to use. However, to ensure consistency on what states required, Virginia standards were selected as well to identify if state's standards for special education certification aligned with the national standards. VA standards were chosen based on the researchers' familiarity with the state and certification of special education teachers. A matrix was developed to see how CEC and Virginia standards aligned to guide the preparation of special education teachers. To see if the CEC and Virginia standards aligned, the first author used the matrix to align the CEC six CEC Standard Sections (Learning Development and Individual Learning Differences, Learning Environments, Assessment, Instructional Planning and Strategies, Professional Learning and Ethical Practice,

and Collaboration) with the six VA State Standards (Professional Knowledge, Instructional Planning, Instructional Delivery, Assessment of and for Student Learning, Learning Environment, and Professionalism). Standards were compared across all areas using the matrix (see Figure 1). Survey questions were created from commonalities between national and state standards, as well as further incorporating national standards not addressed in VA standards. The end result was 55 competencies across 6 competency areas: Knowledge, Planning, Delivery, Assessment, Environment, and Professionalism.

	VA Standards for All Teachers						
CEC Core Concepts	VA Special Educator Core Concepts						
	1	**2**	**3**	**4**	**5**	**6**	**7**
Learner Development and Individual Learning Differences							
Etiology/Causes							
Characteristics	◆			◆			
Effects of Disabilities	◆				◆		
Communication deficits							
Levels of support	◆			◆	◆ ●	◆	
Learning Environments							
Barriers	◆	◆	◆	◆			
Adaptation	◆		◆ ●		◆		
Methods			●		◆		
Variety of settings	◆		◆		◆		
Routine					◆		
Assessment							
Procedures for assessing and reporting behaviors				◆	◆		
Specific assessment instruments	●	●		◆ ●			
Select, adapt, modify assessments	◆	●	●	◆ ●			
Early identification of students who may be at risk							
Instructional Planning & Strategies							
Research supported methods	◆					◆	
Subject specific methods	●	◆ ●		●			
Methods for increasing accuracy and proficiency in math calculations and application							
Methods for guiding individuals in identifying and organizing content							
Interpret sensory, mobility and perceptual information to create/adapt appropriate learning plans							
Understand how design and implement instruction strategies for medical self-management							
Adaptations and technology	◆	●					
Use information to guide instructional decisions	●	◆ ●	◆	◆ ●	◆		
Teach strategies for varying content areas		●	◆		◆		
Specialized instructional and assessment strategies			◆ ●		◆		
Age & Ability appropriate instruction		◆	◆	●	◆		
Select, design and use technology and materials		●	◆	●			
Curriculum & Instruction that address independent living and career education		◆					
Understand prevention and intervention strategies for							

students at risk for a disability							
Professional Learning and Ethical Practice							
Definitions and issues related to identifying students with disabilities	◆			◆			
History of special education (laws & current issues)	◆					◆ ●	
Placement of students with exceptionalities	◆						
Organizations and services available	◆		●			◆	
Advocacy						◆	
Collaboration							
Collaborate with students and families	◆	◆ ●		◆	◆	◆ ●	
Co-planning and co-teaching methods to strength content knowledge		●		◆	◆ ●	◆ ●	
Collaborate with team members to develop transition plans		◆				◆	
Select, plan and coordinate related services			●		◆	◆	

Key:
VA Standards for Special Educators: ◆
VA Standards for all Educators: ●

Figure 1. Matrix Comparison of all National and Virginia Standards.

A draft of the survey was sent to 3 experts in the field familiar with teacher preparation standards and to 5 doctoral candidates to help establish content validity. The survey was pilot tested by 28 students enrolled in one of the researchers graduate-level special education course in order to minimize error in survey implementation. The expert reviewers, doctoral candidates, and students enrolled in the researchers' course provided feedback about the clarity of each question and each section of the survey, length of the survey, and how to get potential participants motivated to take part in the survey. Three other questions were removed from the final survey and several questions were refined or re-grouped based on the feedback from the reviewers. The final survey consisted of 26 questions, with many questions having multiple sub-questions.

Survey. The final survey instrument for this study consisted of two sections. The first section (a) gathered demographic characteristics of the participants (e.g., age, gender, education level) and included the (b) route sought to complete teacher license, (c) overall satisfaction with their teacher preparation program, and (d) the courses participants found most useful in their teacher preparation programs. The second section of the survey was entitled *Preparation Standards* and documented the sets of standards that were derived from the Virginia and CEC standards described earlier. This section consisted of only 6 subsections that had multiple questions that was categorized by each standard. The rating scale for questions in the second section of the survey ranged from 1 to 5 with 1 representing "strongly disagree" and 5 representing "strongly agree." The first subsection was entitled "Knowledge" and focused on the ability of participants to understanding curriculum, content, and developmental needs of students with disabilities. For example, the first question in this section asked participants' agreement level with whether their teacher preparation program prepared them with the skills to understand how students with disabilities learn and develop. The second subsection was entitled "Planning" and focused on participants' ability to use state standards, school's curriculum, and using effective strategies, resources and data to make decisions and meet students' needs. The third subsection was "Delivery" and focused on instructional strategies to meet students' needs. The

fourth subsection was "Assessment" and focused on participants' ability to gather and analyze data to track academic progress, guide instructional content and delivery methods, and provide feedback to teachers and families. The fifth subsection was "Environment" and focused on participants' ability to use provide a safe, productive, and student-centered learning environment. The final subsection was "Professionalism" and focused on participants' ability to provide professional practice and collaboration (e.g., ethics, communication, responsibility) to enhance student learning.

Procedures

The survey was sent electronically to special education teachers between November and December of 2016. Participants were recruited nationally through a two-step process. First, the survey was posted to two active social media groups on Facebook for special education teachers. The groups, which has over 1,000 members collectively, also provided a representative sample of special educators working in K-12, in public and private school settings. Secondly, we forwarded the survey to several coordinators of special education programs at higher education institutes and requested that they forward the survey to in-service and pre-service teachers. These schools were purposefully selected based on the types of programs that are offered, to provide a comprehensive sample of participants. The author requested that program coordinators send a reply email to the second author with the approximate number of students the email was forwarded to in order to help with calculating the return rate of the survey; no responses were received. Along with the questions, the survey included a brief introduction message that explained the IRB approval and intent of the study. Approximately 14 days after the initial survey was disseminated, an email was sent as a reminder to those individuals that did not have a chance to participate in the study. A second reminder notice was sent approximately 30 days after the initial survey. Roughly, two months following the initial dissemination a final request was sent to hopeful participants.

Data Analysis

Descriptive statistics were used to analyze the demographic content of the survey, as well as for rankings for perceptions of preparation on standards, satisfaction, and frequency. In particular, means and standard deviations were analyzed from the quantitative data. Pearson's correlation (correlation coefficients) statistic was used to evaluate the relationship between variables addressed in the related research questions. In addition, a two-sample *t*-test was used to determine whether difference existed between teacher groups in alternative and traditional licensure programs as it relates to the standards. Finally, analysis of variance (ANOVA) was used to determine differences between teacher perceptions based on program and additional variables.

Results

There were 491 surveys returned in the original sample of which 26 were unusable. Unusable surveys were those that were only partially completed by the respondent. As a result, the final sample consisted of 465 fully completed surveys. While it is difficult to calculate the response-rate based on the recruitment through social media, and e-mails sent; a representative sample from across the nation was provided.

Characteristics of Participants

The demographic results from the survey are presented in Table 1. From the pool of 465 respondents, there was representation from all 50 states with large majority being from VA (64%). In all, the majority of the respondents in this study identified that they were female (91.2%) and males represented 8.8% of the pool. Overall, respondents were majority White (83.8%) and between the ages of 41-50 (27.5%). For those who indicated they were alternatively trained, 82% of respondents were white, 15% were black, and 3% were Hispanic or Other. Comparatively, 83% of respondents who were traditionally prepared were white, 10% were black, and 7% were Hispanic, Asian, or Other. 92% of traditionally prepared teachers were females, which is similar to that of alternatively prepared teachers. In terms of the educational background of the respondents, nearly 68.9% held bachelor's degrees and 64.1% indicated earning a master's degree (respondents were able to mark all levels of education completed). The majority of respondents (55%) indicated they completed all of the requirements for a full license in special education at the time they were hired to teach. And, a majority of respondents (73.7%) indicated that they now hold a full license to teach special education.

Type of Program

Respondents were asked to describe the type and format of their teacher licensure program and what type of training and courses were experiences of the program. Overall, nearly half of the respondents (42.8%) completed a fifth year or master's degree program that led to certification in special education, while 18.9% indicated they completed an alternative license (non-traditional) program. Respondents were asked in what format was their preparation program delivered. Of those who indicated they were prepared traditionally, 11% of the responded their program was delivered in a hybrid format; 14% indicated their program was delivered online and 73% indicated the program was delivered in person. For those who indicated they were alternatively prepared, 31% indicated they were a hybrid program, 25% were instructed face-to-face, and a majority of 43% indicated the program was delivered online. One hundred and three respondents (about 22% of the total respondents) described their preparation program as an ARP and, 78% described their program as a traditional route program.

Respondents were asked which disability category they were certified or certifying to teach after program completion. Over two-thirds of the respondents indicated preparation to teach students identified with a specific learning disability (80.2%), intellectual disability (64.6%) and emotional disturbance (62.5%). Finally, respondents were asked about courses in their teacher preparation program that they found more useful in their training to meet the challenges they face as special education teachers. There were a wide range of responses, however characteristics of students with disabilities (70%), behavior and classroom management (62.3%), and assessment and evaluation of students with disabilities (60.7%) received higher than 50% average from respondents. A complete list of the demographic and teaching background findings can be found in Table 1.

Table 1. Demographic Data Results

Demographic		*n*	%
Age			
	Under 30	87	18.7
	30-40	122	26.2

41-50	128	27.5
51-60	191	21.7
61-70	27	5.8
Gender		
Female	423	91.2
Male	41	8.8
Ethnicity		
White, Non-Hispanic	378	82.5
Black, Non-Hispanic	50	10.9
Hispanic	4	.8
Native American	1	.2
Asian/Pacific Islander	11	2.4
Other	14	3.1
When hired, did you meet all requirements for a full teaching license?		
Yes	252	54.9
No	207	45.1
Certification Route		
Bachelor's	133	28.6
Fifth-year or Master's	196	43.2
Alternative	84	18.1
Other	47	10.1
Format of Licensure Program Delivery		
Hybrid	71	15.3
In person	300	64.7
Online	93	20
Currently Teaching		
Yes	418	91.9
No	37	8.1
Number of years as a Special Educator		
1-5 years	197	42.9
6-10 years	84	18.3
10 years+	178	38.7

Notes: n = Number of Participants, % = Percentage of Total Answers

Extent to which TPP Prepared SETs to Meet the Special Education Professional Preparation Standards

Table 2 displays the means and standard deviation for each standard and how respondents reacted to whether their program prepared them to meet the standard. On average, respondents indicated that they *agree* (M = 3.93, SD = .04) that TPP's provide overall training that prepares SET's with *Professional Knowledge* of curriculum and development practices to meet the needs of students with disabilities. In the next section we asked whether respondents perceived their TPP prepared them with the skills to use effective strategies to *Plan Instruction* to meet the needs of students. These results revealed respondents agree (M =3.69, SD =.05) that TPP's are providing this training. In the next section, respondents were asked about their preparation to *Deliver* a variety of instructional strategies, and similarly results revealed that respondents agree (M = 3.93, SD = .04) that TPP's are providing the training. The fourth section reported respondents' perception of preparation on standards relating to the *Assessment* of and for student

learning. Overall, respondents agreed (*M* = 3.99, *SD* = .04) that TTP's are providing training in this skillset. The next set of standards related to managing and providing a safe student-centered learning *Environment.* A majority agreed (*M* = 4.09, *SD* =.04) that they are being prepared to meet these standards. Finally, standards relating to maintaining a commitment to the *Profession* and collaboration were answered. Like the previous standards, respondents agreed (*M* = 4.04, *SD* = .04) that they feel TPP's are providing preparation to meet this standard.

Table 2. Descriptive Statistics of Standards Based on Certification

	Traditional Certification			Alternative Certification		
Standard	*n*	*M*	*SD*	*n*	*M*	*SD*
Knowledge						
Understand how students learn and develop.	334	4.17	.746	83	4.23	.754
Design, implement and evaluate instructional methods that enhance social participation & make subject matter meaningful.	333	3.99	.885	81	4.10	.784
Review data, assessments, and diagnostic information to develop and modify appropriate IEPs.	334	3.99	.925	83	4.16	.876
Maintain confidentially and respect privacy of students, families, colleagues and administrators.	333	4.31	.718	83	4.34	.801
Identify, assess, use and maintain assistive technologies.	334	3.49	1.146	83	3.66	.991
Understand the causes, diagnoses, and medical aspects of disabilities.	332	3.84	.990	82	3.93	.913
Understand the similarities and differences of varying disabilities.	333	4.12	.804	81	4.20	.714
Understand the educational implications of disabilities as they relate to varying areas of development.	334	3.93	.953	82	4.02	.831
Understand the characteristics and effects of culture and environment.	334	3.87	.957	81	3.99	.783
Understand the laws, regulations and policies.	334	4.14	.801	83	4.20	.745
Understand the historical background of special education.	333	4.19	.800	83	3.89	.827
Plan, implement and assess standards specifically in math and reading.	332	3.70	1.047	83	3.89	.827
Know how to implement age and ability appropriate research-based, instructional strategies.	334	3.88	.976	83	4.17	.678
Use research supported methods for transition and other non-academic instruction.	333	3.74	1.049	82	3.96	.895
Understand the barriers to accessibility and promote access of related services.	333	3.81	.970	82	3.96	.823

Encourage social and emotional growth by acknowledging the effect of peers on social-emotional development.	333	3.91	.929	81	3.94	.871
Understand the effects of language development and listening comprehension on academic and non-academic learning.	332	3.89	1.004	82	3.99	.923
Understand communication and social interaction alternatives for individuals who are nonspeaking.	332	3.57	1.173	81	3.63	1.066
Recognize and understand typical language development and how it may differ.	332	3.79	1.030	82	3.82	1.008
Planning						
Design lessons focused around subject matter, community, IEP goals and student's needs.	331	4.09	.871	82	4.15	.877
Collaborate with colleagues to develop and implement instructional programs focused on transition.	332	3.76	1.080	82	3.89	1.066
Plan, differentiate, modify and adapt instruction in a variety of settings.	332	4.09	.875	82	4.21	.885
Use sources of specialized materials, curricula and resources.	331	3.92	.901	82	4.06	.851
Select, plan and coordinate activities with related services.	332	3.65	1.045	82	3.78	.969
Implement methods for increasing accuracy and proficiency in math.	330	3.53	1.043	82	3.41	1.111
Implement methods for guiding individuals in identifying and organizing content.	331	3.72	1.007	82	3.67	.982
Interpret sensory, mobility and perceptual information to create and adapt appropriate lessons.	330	3.56	1.094	80	3.63	1.060
Understand how to design and implement instructional strategies for medical self-management.	330	3.07	1.252	82	3.22	1.238
Understand prevention and intervention strategies for students at risk for a disability.	328	3.55	1.180	82	3.66	1.136
Delivery						
Use appropriate instructional strategies and practices to foster positive interactions.	332	4.11	.796	83	4.14	.828
Use a variety of materials, technologies and resources that promote independence, self-determination, problem solving, and study skills.	333	3.85	.986	82	4.10	.826
Understand the effects of cultural and linguistic differences on student growth, development, behavior, and communication.	330	3.74	.994	83	3.94	.980

Use varying strategies to elicit responses across settings.	331	3.93	.917	82	4.09	.773
Assessment						
Communicate expectations, while using a variety of assessment strategies to monitor student progress and provide feedback.	330	4.08	.841	83	4.12	.817
Use functional assessments to set measurable and appropriate goals for students and monitor progress.	330	3.98	.899	83	4.13	.908
Use data to guide instructional decisions, make placement or eligibility decisions, and provide feedback.	330	4.00	.914	83	4.14	.899
Select, adapt, and modify assessments to accommodate each student while recognizing limitations of assessments.	331	3.95	.976	83	4.01	.819
Recognize, develop and modify individualized assessments.	328	3.99	.919	83	4.12	.861
Use multiple sources of data when making a decision.	326	4.12	.826	83	4.17	.838
Assess and recognize methods of early identification of students who may be at risk for a disability.	329	3.80	.995	82	3.85	.995
Environment						
Establish a consistent classroom routine.	331	4.08	.868	84	4.19	.898
Create a learning environment that students learn self-determination, discipline and feel empowered.	330	4.05	.903	84	4.15	.857
Use non-aversive techniques to control targeted behavior.	332	3.94	.948	84	4.02	.883
Establish and maintain rapport with students and families.	331	4.13	.864	84	4.20	.773
Organize, design and sustain a safe, supportive environment that allows student be actively engaged.	331	4.18	.802	84	4.21	.793

Create a learning environment that shows effective management skills.	328	4.08	.872	83	4.07	.880
Use and implement appropriate behavior management procedures for assessing social behaviors.	329	4.07	.914	84	4.12	.884
Professionalism						
Collaborate with administrators, colleagues, families, students and community members.	331	3.94	.913	83	4.00	.855
Communicate effectively and in a timely manner with families.	332	4.04	.861	84	4.00	.878
Collaborate with team members and use resources to plan transitions at all levels, that encourage inclusion & participation.	332	3.81	.966	84	3.92	.947
Reflect on what, how and whom you teach to improve their practice.	329	4.08	.839	84	4.05	.877
Keep up on the current research-based practices education.	330	4.02	.863	83	4.07	.823
Model professional and ethical standards.	330	4.22	.797	83	4.34	.737
Engage in professional activities that benefit individuals, families and colleagues.	332	4.08	.831	83	4.07	.880
Understand the roles of professional groups, agencies, and related service providers.	331	4.01	.891	84	4.11	.892

Note. Scale: 5= Strongly Agree, 1= Strongly Disagree.
SD = Standard Deviation, *n* = Number of Participants, *M* = Mean

Relationship Between Teachers Prepared Through ARPs and Traditional Route Programs

To determine if a relationship existed between preparation routes (i.e. alternate route and traditional route) and perception of training on the standards, the researchers used Pearson correlation product-moment correlation coefficient analysis. The results revealed a significant positive relationship between teacher preparation route and perception of preparation based on the standards, $r(463) = .93$; $p = .007$.

Difference in Preparation Between Alternatively and Traditionally Trained SETs

The second research question that was used to guide the study was focused on whether differences in preparation on the standards existed between SET's prepared through ARPs and those teachers prepared through traditional route programs. Figure 2 displays an error bar chart which shows the average (and 95% confidence interval for the average) SET perception score,

separately for teachers prepared in ARPs and those trained in traditional route programs. The figure shows that there was no significant difference that existed between the two groups.

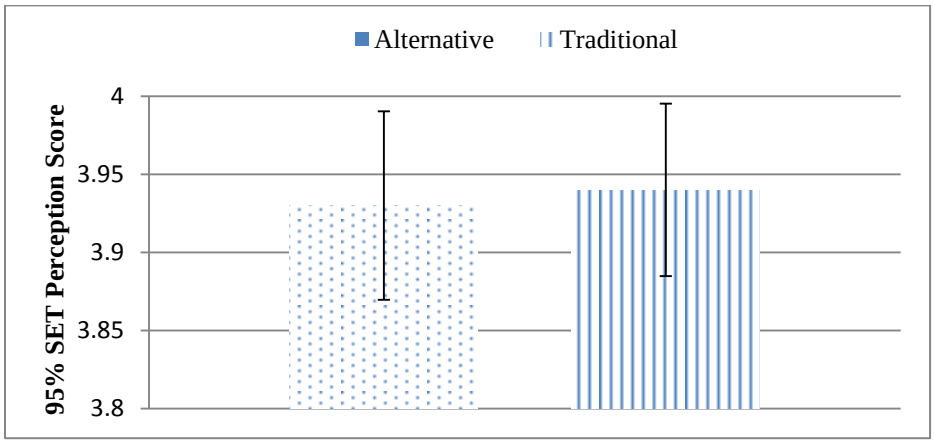

Figure 2. Preparation perception of alternatively and traditionally prepared SET.

A two-sample *t*-test were performed on the research question. The average SET perception score was 3.92 (.06) versus 3.96 (.06) for teachers in ARPs, and teachers in traditional route programs, respectively, t (10) = 2.23; p = 0.594. Therefore, we cannot conclude that a significant difference exists between SET's perceived preparation on the standards based on preparation route.

As a final point, to determine if perception of training existed between alternatively and traditionally trained teachers to work with students based on disability categories (i.e. high or low incidence), a one-way fixed ANOVA was run. Results suggest that there was not a significant effect of disability categories on overall perception of preparation program, based on the results of the Welch (F (2, 71.075) = 2.843, p = .065) and Brown-Forsythe (F (2, 123.457) = 2.823), p = .063) tests. These tests were used in place of the omnibus F-test as Levene's test (F (2, 445) = 3.619, p < .05) suggests that the group variances were not equal. Therefore, it is evident that preparation to work with students based on disability categories (high or low incidence) does not have an effect on overall perceptions of standards.

Extent SETs Are Satisfied with Training in TPPs

The third research question that was used to guide the study asked SETs to rate their satisfaction with the training received in their TPP. Overall, the majority of respondents indicated a very positive rating (36.6%) of their TPP; followed by 30.8% with an extremely positive rating, 23.1% positive, 8.5% positive, and only 1% with a not at all positive rating of their preparation. The overall mean rating of the satisfaction of teachers enrolled in ARPs were M = 3.81, SD =0.11 vs. traditional programs M = 3.77, SD = 0.06. A two-sample t-test was conducted for differences between the groups according to overall satisfaction of program and training received on standards, respectively, t(1) = 12.71; p = 0.66. Therefore, it was determined there was no significant difference that exist in satisfaction ratings between teachers in ARPs and traditional route programs.

Discussion

Limitations of the Study

There were several limitations of this study. Despite the authors' attempt to develop a survey that would ensure consistent standards across national and state preparation requirements, the instrument did not cross examine the standards from each of the 50 states and hundreds of programs that may not be CEC certified, where some study participants were recruited. The instrument did not inquire from participants whether there were more or less standards that should be considered, nor did it inquire whether differences existed between standards represented in their own state and program. This factor may affect whether ARP or traditional route programs are doing more or less to effectively prepare their teachers. This study also did not address implementation of the standards and how preparation impacts performance of the standards. The study sought out participants who were pre-service and in-service teachers. Therefore, another limitation would include some of the participants were not finished with their programs; which could have impacted the results of identifying fully qualified teachers.

Additionally, the respondents were asked to generate answers based on their own perceptions of whether programs are teaching the standards. A self-report survey often comes with biases, and answers of participants can often be driven by the self-interest of the respondents (Swann, Chang-Schneider, & McClarty, 2008). Despite these limitations, this study is a unique example of teacher preparation across ARPs and traditional route programs on this topic and represents a reasonable start for future research on this issue.

Extent ARP and Traditionally Prepared Teachers Feel TPPs are Preparing Them to Meet Standards

As specified previously, ARPs were created to meet the demand of the field; however, questions exist regarding the effectiveness of the programs. Research has acknowledged that ARPs can increase the number of SET's in the field, while also creating a more diverse teacher population (Robertson & Singleton, 2010). Though, questions still exist around ARPs and their ability to prepare teachers to meet the needs of students with disabilities. Some research suggests that teachers who were trained traditionally typically outperform those trained alternatively (Scruggs & Mastropieri, 2005). Personnel preparation programs play a critical role in preparing special educators to meet the needs of students in the classroom and also meet a set of standards (Griffin, et al., 2014). Most special educators feel it is important that they understand the competencies outlined in the CEC standards (Zionts et al., 2009); however, no study was conducted on whether teachers felt that ARPs were providing training to meet these standards. Furthermore, no study was conducted to determine how teachers of ARPs and traditional TPPs perceive their training toward meeting standards despite the differences in preparation routes. The present study sought to gather information from SETs to determine if a difference existed between the ARPs and traditional route programs to meet standards. The respondents were asked specific questions about how they felt their TPP prepared them to meet each standard. By understanding this, researchers can better comprehend if there is a difference in the preparation of ARP and traditionally licensed teachers.

A majority of SETs in the present study reported that their TPPs are preparing them to meet professional preparation standards (M = 3.93, SD = .04). Because TPPs have a central role in training teachers to meet these standards, it is important that national (e.g., CEC) and state professional standards are incorporated in program preparation. It is positive to see that SETs' perceive that training is being provided across each set of standards. While the results reveal that

TPPs are preparing teachers to meet the standards, we were specifically interested in whether teachers of ARPs perceived they received training toward the standards. Overall, the results of this study indicated that there was no significant difference between ARPs and traditional route programs giving SETs the skills to effectively meet the standards, indicating that programs are giving teachers the abilities to meet the standards; as perception score was 3.92 (.06) versus 3.96 (.06) for teachers in ARPs and teachers in traditional training programs, respectively, $t(10) = 2.23$; $p = 0.594$. This finding is similar to those of Othman et al. (2015) participants that felt they possessed the skills necessary to meet the standards. This study drew from a larger population and included more standards; however, teachers from both types of programs felt they were being adequately prepared.

A final point on this topic revealed that regardless of preparation toward working with students based on disability categories, SETs in ARPs and traditional route programs both indicated training on standards. This was an interesting finding considering the CEC national standards chosen for this topic were commonly focused on special education general curriculum, which is often associated with high incidence disabilities (e.g., specific learning disabilities, emotional disturbances). This may suggest that programs are preparing teachers to have the skills and competencies to meet the needs of students across the disability spectrum. Though both teacher groups (ARP and traditional route program) perceived training is not as strong on standards often identified for students with low incidence disabilities such as *understanding how to design and implement instructional strategies for medical self-management, 3.07* (1.25) versus 3.22 (1.24). The authors did not find this incredibly troublesome given the overall results but offer this standard as a point of conversations for both ARPs and TPPs.

ARPs and Traditional SETs Feel Satisfaction with Training

Regarding how satisfied teachers feel about the training received in their preparation programs, an overwhelming majority (99%) had a positive rating of their TPPs; reaffirming that SETs perceive that TPPs are preparing them to meet the needs of their students. Teachers trained in both ARPs ($M = 3.81$) and traditional route programs ($M = 3.77$) each positively rated their training with no significant difference between the groups. We believe that this is a positive finding for ARPs that ratings are the same and even slightly higher than ratings of teachers in TPPs. That despite the fact that questions about adequacy about preparation exists, ARP teachers perceive that their programs are providing adequate preparation to meet the needs of students and that overall ARP teachers have a positive rating of the training received in their preparation programs.

Future Research and Conclusion

There are several implications for future research to be discussed. First, this study addressed a topic about the preparation of ARP and traditional route programs special education teachers on national and state competencies. What is recommended is a follow-up to examine teachers of ARP and traditional route programs on the effectiveness of mastering competencies in the field to meet the needs of students. This study did not observe ARP and traditionally prepared teachers to see if differences existed in their perception of effective delivery of standards. Second, a closer inspection of accreditation of ARP and traditional route programs may be justified as this information can assist in determining priorities of programs that help to prepare special education teachers. A follow up study that focused more on training goals of ARP and traditional route programs (similarities and differences) would be an important

extension of related research and may be able to offer solutions to questions about the significance of ARP programs when compared to traditional programs. Thirdly, it may be useful to conduct a study that investigates whether VA standards are consistent with teacher certification standards across all 50 states compared with the national CEC standards. This would allow for a strong comparison of the standards that teachers are being held to and what would identify a teacher as being qualified.

The results of this study provided insight into the perception of training special education teachers prepared through ARP and traditional route programs received. We believe that findings suggest that from the perception of alternate route and traditionally prepared teachers, that irrespective of preparation route, TPPs are helping to effectively meet national and state standards. Given the limited research on the effectiveness of ARPs and the questions about ARP adequacy, the findings from this study provide insight into the quality of ARPs as perceived by the teachers prepared in the programs.

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