

Special Education Program at Princess Nourah University: Evaluation of Program Alignment with the Standards of the Council for Exceptional Children (CEC)

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Abstract

This study evaluated the extent to which the special education program in the College of Education at Princess Nourah University (PNU) in the Kingdom of Saudi Arabia aligns with the standards of the Council for Exceptional Children (CEC). The research utilized a mixed-method approach to examine the preparedness of pre-service special educators currently enrolled in their last year of the special education program. Surveys were used to explore the perceptions of five hundred pre-service teachers of their teacher preparation program as related to the seven standards from CEC's initial special educator preparation standards.

Keywords: pre-service special education teachers, and Council for Exceptional Children, CEC's initial special educator preparation standards.

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Introduction

The roles and responsibilities of in-service teachers in special education can be overwhelming. They are responsible to work with many individuals with a range of abilities, plan and differentiate instructions in addition to managing students' documentation and paperwork. Therefore, teacher preparation programs must be well-equipped with strong standards to prepare pre-service teachers (those training to be teachers) in special education. Needless to say, strong preparation programs for pre-service teachers can eliminate many difficulties that future teachers in special education may face. Aldabas (2015) stated that in Saudi Arabia, special education is not part of the curriculum required for the teacher education programs for general education pre-service teachers. Aldabas further added that to have a strong special education program in the schools, teachers must have strong knowledge and skills to provide high quality education to students with special needs.

The aim of this study was to evaluate pre-service special education program in preparing pre-service teachers to work with individuals with disabilities. The researchers identified the following questions to evaluate the program at PNU:

1. What are the pre-service special education teachers' perceptions of the teacher preparation program in the college of education at Princess Norah University in Saudi Arabia?
2. What are the strengths, opportunities for growth and recommended changes for the current pre-service special education program at PNU?

Literature Review

Numerous studies discussed the characteristics and elements of successful pre-service special education programs. Brownell et al. (2005) identified seven common practices found in effective education preparation programs. These practices include 1) designing comprehensive coursework for pre-service teachers, 2) teaching special education policies and theories to help pre-service teachers establish a strong background in special education, 3) requiring intensive field experience to enhance pre-service skills, 4) linking theories to practicum to reduce the gap that pre-service teachers face during their field experience, 5) providing extensive training to faculty members to work with pre-service teachers from different backgrounds, 6) training pre-service teachers to better communicate with their mentors and future students, 7) emphasizing the importance of collaboration among faculty members, pre-service, and in-service teachers. Mason-William, Frederick, and Mulcahy (2014) stated that one of the most

importance factors in designing special education programs is to maximize the ability of pre-service special educators for doing research. They must have a wide-range of knowledge regarding interventions and be able to design a usable intervention based on evidence-based practices. These knowledge and skills must be integrated throughout a well-designed preparation program. The program should provide opportunities for pre-service special educators to become familiar with research findings, link the results with evidence-based practices, and implement these practices into their own teaching practices. All recommendations from Mason-William et al. (2014) are aligned with the CEC standards, ensuring special education programs provide extensive and rich practical field experiences based in best-practice. Brownell et al. (2005) reviewed special education programs in fifty-two institutions in the US to determine critical features of effective programs, to identify the critical factors of special education teacher preparation at both the undergraduate and graduate levels. The researchers found there is limited research in the field of pre-service preparation in the US when compared with other fields. They suggested improving the quality of preparation programs for beginning special education teachers by including comprehensive and intensive field experiences linked with the acquisition of content knowledge.

Special education teacher preparation in Saudi Arabia:

Teacher preparation programs are tasked with preparing special educators for a range of education settings, and strong special education program can have a considerable impact on the quality of pre-service special educators. Currently, in Saudi Arabia, the field of special education is developing. A well-planned special education program significantly increased the quality of pre-service special educators (Al-Hiary, Almakani and Tabbal, 2015). Needless to say, strong preparation programs for pre-service teachers can eliminate many difficulties that future teachers in special education may face.

Aldabas (2015) stated that in Saudi Arabia, special education is not part of the curriculum required for the teacher education programs for general education pre-service teachers. Aldabas further added that to have a strong special education program in the schools, teachers must have strong knowledge and skills to provide high quality education to students with special needs. Murry and Alqahtani (2015) conducted a study that examined the knowledge of 52 pre-service teachers who graduated from major Saudi Arabian universities regarding special education laws and ethics, and how this knowledge maximized their skills in providing high quality services for individuals with disabilities. Results indicated that pre-service teachers did not have adequate knowledge of the laws and practices in special education, however, they strongly believed in the rights of individuals with disabilities, and wished to receive more training in special education. It is imperative to design high quality teacher preparation programs in special education to fill the existing gap in education and prepare competent future educators.

Method

This study utilized a mixed-method sequential design. It is conducted in two phases with the emphasis being on the first quantitative phase, followed by a second qualitative phase. Integration of the quantitative and qualitative findings occurs during a third integration phase. According to Creswell, (2008) mixed methods using quantitative and qualitative data provide in-depth information regarding the problem or topic being studied.

Participants

The sample consisted of 500 pre-service special education teachers in the special education program at PNU in the last semester of the program and enrolled in a practicum course which included a panel discussion focused on autism and behavioral disorders. A follow-up group interview was held with four pre-service teachers and four in-service teachers who graduated from, or were currently enrolled in the special education program at PNU. The in-service teachers graduated within six months of the start of the study.

Data collection and procedures

The first phase used a questionnaire to collect data from pre-service special education teachers which was administered via Qualtrics, an online software tool. A link to the questionnaire was sent to participants following approval from the Institutional Review Board governing research with Human Subjects. The delivery of the survey followed Dillman's recommendations for survey research. A link to the survey was distributed and kept open for six weeks. Weekly email reminders were sent to all non-responders.

In the second phase of the study, group interviews were used to investigate the strengths and opportunities for growth in the autism and behavioral disorder track in the special education program at PNU. Questions also addressed the program's alignment with the seven standards for beginning special education teachers from the Council for Exceptional Children (CEC). The first author organized and conducted two group interviews using an interview guide developed from the quantitative findings in this study. Four participants were randomly selected from in-service special education teachers who graduated from the special education program in the College of Education at PNU within the last year, and four pre-service teachers currently enrolled in their last semester in the

special education program at PNU. Prior to the start of the group interview, participants were asked to complete a demographic sheet to collect data such as age, job title, experience, work place education and training.

Data Analysis

Quantitative data was analyzed using SPSS. Ordinal data was analyzed using frequencies and interval data was analyzed for means and standard deviations. Confidence intervals were also estimated for means to responses using the formula presented in Table 1. The range is calculated, where it equals $5-1 = 4$. The length of the interval was then calculated by dividing the range by the number of categories (options), then $4/5 = 0.80$. The first category of arithmetical values is: 1 to $1+0.80$. Thus, for the rest of the values of the arithmetic mean, the following table shows the method of interpreting the values of the arithmetic mean:

Table 1 *Confidence Interval Estimates for Response Means*

Minimum mean	Maximum mean	Response
1	Less than 1.8	Very low
1.8	Less than 2.6	Low
2.6	Less than 3.4	Medium
3.4	Less than 4.2	High
4.2	5	Very high

The sample response was analyzed through calculating the frequency rate for each response to the total sample.

Using both qualitative and quantitative methods allowed for more in-depth information about perceptions, insights, attitudes, experiences, and beliefs of pre-service and in-service special education teachers regarding their program of study in special education program at PNU in the Kingdom of Saudi Arabia.

Results

To answer the first question “What are the pre-service special education teachers’ perceptions of the teacher preparation program in the college of education at Princess Norah University in Saudi Arabia?”, the arithmetic mean and standard deviation of the pre-service Special Education teachers’ responses to each item of the first domain were calculated.

Table 2 shows the rankings that were arranged due to the mean of the sample response on each standard and its standard deviation. Specifically, the data represents the effectiveness of Special Education Program of PNU in preparing female teachers to work with students with behavioral disorders and autism spectrum disorders. The mean of pre-service special education teachers’ perceptions of their degree to which the program prepared them for each of the seven standards were all high and ranged from 3.48 to 3.94. Pre-service teachers’ responses indicated that Standard 1 “Learner Development and Individual Learning Differences” was ranked first, with an arithmetic mean of (3.94), representing a high degree of satisfaction with their preparation. Ranked second was Standard 6 “Professional Learning and Ethical Practice” with an arithmetic mean of (3.91) (high). Next, Standard 7 “Collaboration” was ranked third with an arithmetic mean of (3.65). Standard 2 “Learning Environments” was ranked last with an arithmetic mean of (3.48) (high).

Table 2 *Participants’ Rankings of the Effectiveness of Special Education Program by CEC Standard*

Standard	No. of items	Arithmetic Mean	Standard deviation	Ranking	Responses
Learner Development and Individual Learning Differences	6	3.94	0.89	1	High
Learning Environments	6	3.48	0.96	7	High
Curricular Knowledge Content	6	3.61	0.96	4	High
Assessment	6	3.51	0.99	6	High
Instructional Planning and Strategies	5	3.57	1.00	5	High
Professional Learning and Ethical Practice	5	3.91	0.95	2	High
Collaboration	5	3.65	0.99	3	High

Focus Area One: Learner and Learning

Ratings of effectiveness related to standard one by element. To identify the highest-ranking elements in the special education teacher preparation program at PNU, the arithmetic mean and standard deviation of pre-service special education teachers’ responses to each item comprising the seven standards of CEC were calculated.

Table 3 represents participants’ ratings of satisfaction with their preparation relate to the elements associated with Standard 1: Learner Development and Individual Learning Differences.

Table 3 *Pre-service Special Education Teachers' Responses to the Elements Included in Standard 1: Learner Development and Individual Learning Differences*

No.	Element	Arithmetic Mean	Standard deviation	Ranking	Responses
1	Clarifying similarities and differences between the students with special needs and the normal	4.12	0.86	1	Extremely high
2	Introduce the characteristics of students with behavioral disorders and autism spectrum disorder and ways to deal with them as distinct students.	3.90	0.89	4	High
3	Explaining the impact of special needs on the educational pattern of students with behavioral disorders and autism spectrum disorder.	3.82	0.88	5	High
4	Identifying the needs of students with behavioral disorders and autism spectrum disorder.	4.00	0.87	3	High
5	Introducing the role that a family can play in developing the educational aspects of students with behavioral disorders and autism spectrum disorder.	4.02	0.91	2	High
6	Defining the different learning methods and strategies for students with behavioral disorders and autism spectrum disorder.	3.80	0.94	6	High
Total		3.94	0.89	-	High

Data in Table 3 reports a high level of perceived effectiveness (mean rating of 3.94) of the Special Education Program in the College of Education at PNU in preparing the female special education teachers to work with the students with behavioral disorders and autism spectrum disorders on Standard 1. The program was rated as most effective in preparing teachers to "clarify similarities and differences between the students with special needs and the normal" with a mean rating of 4.12 indicating a very high degree of satisfaction.

Ratings of effectiveness related to standard two by element. Table 4 represents pre-service teachers' ratings of satisfaction with their preparation related to the elements associated with Standard 2: Learning Environments.

Table 4 *Pre-service Special Education Teachers' Responses to the Elements of Standard 2: Learning Environments*

No.	Element	Arithmetic Mean	Standard deviation	Ranking	Responses
7	Knowledge of the educational requirements in planning the lessons for students with autism.	3.41	0.94	5	High
8	Consolidating the use of educational technology.	3.51	0.99	3	High
9	Motivating the activation of group collaboration and positive interaction of the students with behavioral disorders and autism.	3.55	0.99	2	High
10	Acquiring the basics of dealing with a group of the different cultural classes.	3.31	0.99	6	Medium
11	Introducing the importance of defining the expectations of personal and social behavior of students with behavioral disorders and autism from different environments.	3.50	0.90	4	High
12	Understanding the methods of designing learning environments that accomplish emotional and psychological safety for students with behavioral disorders and autism.	3.63	0.93	1	High
Total		3.48	0.96	-	High

Data in table 4 provides pre-service teachers' ratings of the effectiveness of their preparation at PNU to work with the students with behavioral disorders and autism related to the elements of Standard 2. All were rated with a high degree of satisfaction with the exception of "acquiring the basics of dealing with a group of the different cultural classes". Results indicated a medium degree of satisfaction (mean of 3.31). The element rated most effective was "understanding the methods of designing learning environments that accomplish emotional and psychological security for students with behavioral disorders and autism" which achieved a mean of (3.63).

**Focus Area Two: Learner and Learning
 Content Knowledge and Professional Foundations**

Table 5 Pre-service special education teachers' responses to the items of standard 3: Curricular Knowledge Content

No.	Standard	Arithmetic Mean	Standard deviation	Ranking	Responses
13	Introducing the basic theories and philosophies of developing curricula and educational practices for the students with behavioral disorders and autism	3.65	0.93	3	High
14	Identifying the technological means that contribute to planning, management of the educational process, and educational environment.	3.44	0.97	6	High
15	A clear sequence of the general and private educational levels	3.49	0.95	5	High
16	Introducing the way of merging emotional, social, and life skills with curricula.	3.53	0.97	4	High
17	Learning certain strategies of dealing with students with behavioral disorders and autism.	3.69	0.94	2	High
18	Illustrating the systems and ethical principles of implementing behavior management	3.84	0.91	1	High
Standard 3: Curricular Content Knowledge		3.61	0.96	High	

Table 5 shows the effectiveness of Special Education Program, College of Education, PNU in preparing the female teachers of special education to work with the students with behavioral disorders and autism on "Curricular Knowledge Content" and its items with a high degree. Its most effective sub-standard was "illustrating the systems and ethical principles of implementing behavior management" with a mean of (3.61), while its least effective one was "Identifying the technological means that contribute to planning, management of the educational process, and educational environment" with a mean of (3.44).

Table 6 Pre-service special education teachers' responses to the items of standard 4: Assessment

No.	Standard	Arithmetic Mean	Standard deviation	Ranking	Responses
19	Introducing the basic theories and philosophies of developing curricula and educational practices for the students with behavioral disorders and autism	3.88	0.89	1	High
20	Identifying the technological means that contribute to planning, management of the educational process, and educational environment.	3.57	0.99	3	High
21	A clear sequence of the general and private educational levels	3.57	0.96	2	High
22	Introducing the way of merging emotional, social, and life skills with curricula.	3.23	0.97	6	Medium
23	Learning certain strategies of handling students with behavioral disorders and autism.	3.43	1.02	4	High
24	Illustrating the systems and ethical principles of implementing behavior management	3.41	0.98	5	High
Standard 4: Assessment		3.51	0.99	High	

Table 6 shows the effectiveness of Special Education Program, College of Education, PNU in preparing the female teachers of special education to work with the students with behavioral disorders and autism on "Assessment" and its items with a high degree, except for "introducing the way of merging emotional, social, and life skills with curricula". It was indicated that it was effective with a mean of (3.23). Its most effective sub-standard was "Introducing the basic theories and philosophies of developing curricula and educational practices for the students with behavioral disorders and autism".

Table 7 Pre-service special education teachers' responses to the items of standard 5: Instructional Planning and Strategies

No.	Standard	Arithmetic Mean	Standard deviation	Ranking	Responses
25	Utilizing evidences in instructional planning to check the appropriateness of educational practices for the learner specific features.	3.42	0.94	4	High
26	Adopting appropriate strategies to facilitate inclusion in the different environments	3.41	0.97	5	High
27	Acquiring different methods and strategies to modify behavior.	3.95	0.95	1	High
28	Acquiring strategies that facilitate the generalization of skills in the various learning environment.	3.51	1.01	3	High
29	Learning the strategies of developing self-awareness, self-management, self-discipline, and problem-solving.	3.58	1.03	2	High
Standard 5: Instructional Planning and Strategies		3.57	1.00	High	

Table 7 shows the pre-service special education teachers' perceptions of the teacher preparation program in the college of education at Princess Norah University in Saudi Arabia on "Instructional Planning and Strategies" and its items with a high degree. Its most effective sub-standard was "Acquiring different methods and strategies to modify behavior" that achieved a mean of (3.95), while its least effective one was "adopting appropriate strategies to facilitate inclusion in the different environments" with a mean of (3.41).

Table 8 Pre-service special education teachers' responses to the items of standard 6: Professional Learning and Ethical Practice

No.	Standard	Arithmetic Mean	Standard deviation	Ranking	Responses
30	Acquiring the ethical and professional values of the teacher of students with behavioral disorders and autism.	4.06	0.91	1	High
31	Illustrating the impact of personal attitudes on working with the students with behavioral disorders and autism.	3.89	0.95	4	High
32	Introducing the importance of continuous learning and self-evaluation of the teacher.	3.92	0.91	3	High
33	Introducing the rules and regulations regarding behavioral disorders and autism.	3.71	1.00	5	High
34	Illustrating the rights and duties of students with behavioral disorders and autism as well as the role of teacher, family, and school.	4.00	0.94	2	High
Standard 6: Professional Learning and Ethical Practice		3.91	0.95	High	

Table 8 shows the effectiveness of Special Education Program, College of Education, PNU in preparing the female teachers of special education to work with the students with behavioral disorders and autism on "Professional Learning and Ethical Practice" and its items with a high degree. While "Acquiring the ethical and professional values of the teacher of students with behavioral disorders and autism" was ranked first with a mean of (4.06), the least effective sub-standard was "Introducing the rules and regulations regarding behavioral disorders and autism" with a mean of (3.71).

Table 9 Pre-service special education teachers' responses to the items of standard 7: Collaboration

No.	Standard	Arithmetic Mean	Standard deviation	Ranking	Responses
35	Acquiring the skills of collaboration with the family and society to serve students with behavioral disorders and autism.	3.83	0.95	1	High
36	Displaying the various samples and methods of collaboration and consultation.	3.58	0.96	3	High
37	Acquiring strategies that help in the participation of students with behavioral disorders and autism, their families, and local community members in planning for the individual program.	3.57	1.01	4	High
38	Acquiring how to make positive relationships between the family and community.	3.78	0.97	2	High
39	Introducing the organizations and services related to students with behavioral disorders and autism.	3.47	0.99	5	High
Standard 7: Collaboration		3.65	0.99	High	

Table 9 shows the pre-service special education teachers' perceptions of the teacher preparation program in the college of education at Princess Norah University in Saudi Arabia on "Collaboration" and its items with a high degree. While "Acquiring the skills of collaboration with the family and society to serve students with behavioral disorders and autism" was ranked the most effective with a mean of (3.83), the least effective was "Introducing the organizations and services related to students with behavioral disorders and autism".

What are the strengths and weaknesses for growth and recommended changes for the current pre-service special education program at PNU?

Table 16 shows the strengths and weaknesses for growth and recommended changes for the current pre-service special education program at PNU

Strengths	Frequency	Weaknesses	Frequency
Field Observation course	24.6%	Lack of the opportunities available for the pre-service special education teachers in program planning.	0.78%
Learning strategies and methods and their varieties	3.13%	Duplicating some topics	14.06%
Content sequencing	1.56%	Lack of information that help the pre-service special education teachers in the field training	0.39%
		Contradiction of the information in the same course and other courses	2.34%
Collaboration of the female faculty	4.30%	Lack of field observation	3.90%
Plenty of practical projects, case studies, and training courses of the scales	2.34%	Plenty of required reports	1.17%
Educating the society of the characteristics of students with special needs	0.39%	Absence of specialization	0.39%
Developing the specialized staff in rehabilitation and special education	1.56%	Absence of good planning of the courses	1.17%
Collaborative learning	1.95%	Lack of practical activities	0.39%
Developing and updating the courses	2.34%	Limitedness of the courses to two only	1.95%
Strength and experience of the faculty	1.95%	Incomprehensiveness of the field training	0.39
Introducing work environment to the pre-service special education teachers	0.39%	Weakness of the female faculty's performance	3.90%
Comprehensiveness of the program	0.78%	Absence of training on treating children with behavioral disorders	4.30%
Multiplicity of learning resources	0.39%	Abundance of group activities and lack of individual ones	1.17%
Just and fair treatment with the pre-service special education teachers	0.39%	Lack of discussing autism disorders in the four levels	3.52%

Strengths	Frequency	Weaknesses	Frequency
Effective community participation	0.39%	Absence of interacting with the pre-service special education teachers	0.39%
		Abundance of pre-service special education teachers in the classroom	1.95%
		Absence of benefiting from field observations	1.17%
		Studying on an unreal and ideal environment	0.78%
		No course updates	2.34%
		Exam stress	1.17%
		Lack of specialized courses	1.56%
		Plenty of projects	2.34%
		No sequencing in some courses	0.39%
		Lack of contracting with training centers	0.78%
		Reliance on giving lessons throughout the year	0.39%
		Lack of jobs and assistance for the female graduates to find work opportunities	0.39%
		Sudden change in plans and curricula	0.78%
		Shortage of courses of behavior modification	0.39%
		Shortage of learning resources	0.39%
		Lack of teaching staff	0.39%

Discussion and Recommendations

Teachers in the field of special education require extensive knowledge and skills in order to successfully work with individuals with disabilities. As such, teacher educators who prepare special education teachers who will be working with individuals with disabilities need to have specific preparation to meet their students' unique needs (Barnhill, Polloway, & Sumutka, 2010). The CEC standards were created based on studies conducted over the past twelve years to determine the essential knowledge and skills required for highly qualified pre-service special educators (CEC, 2014). Research has identified the benefits of quality special education teacher preparation programs. Tillman, Richards, and Frank (2011) examined special educators' preparedness and identified areas of focus for program improvement to address weaknesses. The study used a mixed method approach involving 20 pre-service special educators, 20 cooperating teachers, and four university faculty members. Data collection involved observations and surveys completed by cooperating teachers; observations completed by university supervisors and authors' responses to feedback. Finally, pre-service special educators responded to forms and assessments which were part of the teacher preparation course work. Results indicated that two cooperating teachers reported negative feedback, regarding university supervisor and they reported that faculty supervisor should provide effective feedback and guidance to improve pre-service educators' skills and abilities (Tillman et al., 2011). The findings of this study revealed that the special education program at PNU has significant strengths as well as areas of deficient. The most significant strengths of the Program that were 1) availability of field training, 2) collaboration of the female faculty with pre-service special education teachers, 3) various learning strategies and methods; while the most significant weaknesses that the result highlighted are 1) repeating some topics and content, 2) absence of training on treating children with behavioral disorder, 3) lack of field observation.

More studies are needed to examine the quality of teacher preparation programs and focused on the preparation of special education teachers. Such studies are limited due to a lack of interest by researchers. Many of the current studies in special education, focus on teachers' satisfaction, attitudes, and perceptions. However, research should also be focused on the creation of effective special education teacher preparation programming (Saqr & Tennant, 2016).

Recommendations for educational institutions include: (1) examine special education programs periodically based on the CEC standards. (2), require program faculty to submit ongoing assessment data for national and international accreditation. (3) provide training field supervision for pre-service teachers.

Currently, in Saudi Arabia the field of special education is evolving and growing in knowledge and skills. Therefore, more studies are needed to evaluate the alignment of special education programs in higher education

institutions in Saudi Arabia with CEC standards.

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