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RESEARCH PAPER

Pedagogical Choices of Special and Inclusive Education Teachers Teaching at Public Schools of Punjab: A Comparative Study

Dr. Hina Fazil*[1] Nadeem Ahmad[2] Sajjad Ahmad [3]

1. Assistant Professor, Institute of Special Education University of the Punjab, Lahore, Punjab, Pakistan
2. PhD Scholar, Institute of Special Education University of the Punjab, Lahore, Punjab, Pakistan
3. M.Phil., Institute of Special Education University of the Punjab, Lahore, Punjab, Pakistan

***Corresponding Author** hinafazil.dse@pu.edu.pk

ABSTRACT

A teacher has versatility in his/her teaching methodologies to create a positive learning environment. Teaching methods highly depend upon the nature of the topic, content, grade level, and needs of students. The present study divulges a comparison between Special Education Teachers (SETs) and Inclusive Education Teachers (IETs) in making appropriate teaching pedagogical choices to clarify the learning concepts of special children in special education and inclusive education classrooms. The sample of the study consisted of 500 inclusive education teachers and 500 special education teachers. The study revealed that there was a significant difference in the pedagogical choices of SETs and IETs based on their gender, locality, education, and experience. The majority of the SETs used the demonstration method, drill method, task analysis method, and activity method, whereas IETs used the lecture method as their preferred teaching method. The study revealed that SETs chose need-based teaching methodologies which were more appropriate to clarify the concept and meet the learners' needs.

Keywords: Inclusive Education Teachers, Pedagogical Choices, Public Schools, Special Education Teachers

Introduction

Education significantly contributes to enhancing students' potential and developing a nation by inspiring and helping them in educational activities. Presently, in Pakistan education of low quality is considered to be a real issue. To tackle this issue countrywide, educational institutes must help improve the standard of education. In every educational setting, there are certain dimensions of teaching and learning interlinked with each other, which must be addressed to improve the educational quality and potential of the students. Teachers always play a very crucial role in educating children. If an educational institute provides ample learning sources to its students but lacks qualified teachers, the desired results may not be achieved and all the efforts and resources will be meaningless. Teachers determine all those factors and services that can improve the outcome of educational institutes.

The quality of an educational system depends on the quality of its teachers. Saihu, (2020) mentioned the following four types of competencies that a teacher must possess to yield target results (a) professional competencies, (b) personality competencies, (c) social competencies, and (d) pedagogical competencies. Every professional teacher must meet the said competencies to become a quality teacher because a teacher's performance is directly based on pedagogical, social, personal, and

professional competencies. If a teacher lacks any of these competencies, his/her performance will be significantly low (Hartinah, et, al. 2020).

Several types of research indicate that a teacher's performance is crucial in improving the standard of education. Hence, the quality of education is a kind of benchmark for a teacher's success and performance (Budiharso, & Tarman, 2020). Pedagogical competencies enable a teacher to realize learners' unique needs and requirements. Pedagogical competencies encompass a wide range of responsibilities of a teacher like; to comprehending a learner's demands realizing his/her learning potential, designing and implementing teaching strategies, and assessing student outcomes. Every inclusive and special education teacher must prepare learning activities and material properly, utilizing suitable learning methods to maximize students learning and achieve the desired results (Prasetya, Daryono, & Murtedjo, 2018)

A study conducted highlighted that pedagogical competencies significantly contribute to refining teacher's performance (Morris, Usher, & Chen, 2017). The study further stated that a better pedagogical understanding and competencies of a teacher will yield better results for the school and the best performance of a teacher (Stronge, 2018). Therefore, this study is aimed to identify the pedagogical choices of special education teachers and inclusive education teachers teaching at secondary-level public schools.

Literature Review

Pedagogical competencies refer to the professional qualification needed for an individual to become a teacher and undertake educational responsibilities. Unskilled teachers tend to have low levels of pedagogical competencies, while pedagogically competent teachers are considered to be professionally trained and skilled (Chow, & Armatas, 2018) Modern educational research primarily emphasizes setting such a teaching-learning environment in educational institutes where teachers have abundant pedagogical competencies utilize their skills persistently to meet the learner's needs and achieve desired results (Murkatik, Harapan, & Wardiah, 2020).

The student's achievements and the teacher's pedagogical choices have significant relationships with each other that support students learning and improve their academic performance (Daily, et, al. 2019). A teacher's understanding of selecting teaching material and methodology while planning a lesson determines his/her competencies and effectiveness. However, social and personal competencies are termed to be teachers' additional skills. Hence, an ideal and effective teacher is someone who is professionally trained enough to teach and has all the essential traits to enable students to perform well academically (Miller, Ramirez & Murdock, 2017).

A professional and result-oriented teacher attends educational conferences and seminars to keep his knowledge updated (Mondol, & Mohiuddin, 2020). At the same time effective communication skills, solid classroom control, strong subject command, and utilizing a variety of pedagogical choices to support student's learning are essential skills of a teacher that contribute to improving the learning atmosphere of educational institutes (Mangal, & Mangal, 2019). Similarly, the selection of a suitable teaching methodology often helps students with varied educational potentials to participate keenly in the learning process and perform better.

Pedagogical competencies enable a teacher to utilize suitable teaching strategies and resources to pursue result result-oriented educational process (Safin, Korchagin, Vildanov & Abitov, 2020). Mostly, special education and inclusive education teachers use a specific teaching method to teach students something in a class. However, it is important to know whether that specific teaching method is most suitable to achieve the desired results or not. Furthermore, very few studies are available that describe the suitability of using a specific teaching method for the better learning of students in special education and inclusive education classrooms (Mitchell, & Sutherland, 2020). Hence, pedagogically competent teachers always use innovative teaching materials and diverse teaching methods for better concept formulation for students in special and even general education (Ellahi & Zaka, 2015).

Teachers always play a very significant role in achieving educational goals and influencing the learning process (Ningtiyas, 2018). Teachers determine the learning pattern and level of performance of students. A competent teacher can contribute to improving student success rate more than his/her potential and expectations. Several studies support the belief that teachers influence the academic achievements of students (Akturk, & Ozturk, 2019).

It is very deplorable that the teaching standard of the Pakistani education sector is far behind the world as it lacks professionally trained teachers, a shortage of resources, and drastic changes are required in its national education policy and education system (Ashraf, & Ismat, 2016). To improve the country's education sector, teachers who have knowledge of the subject and skills must be inducted and encouraged to yield the desired results utilizing the minimum available resources (Pohan, & Isbianti, 2021).

A pedagogically competent teacher influences a learner's moral values, social behaviors, communication skills, and educational goals. Teaching competency is a multidimensional thing as it involves content & curriculum competencies, sociocultural competencies, psychological & emotional competencies, and communication competencies (Ningtiyas, 2018).

Teachers should continuously engage in learning and participate in scientific activities such as training, seminars, and workshops. These activities serve to broaden their knowledge, enrich their experience, and enable them to apply new insights in their teaching and learning practices (Ningtiyas, 2018). To ensure a high level of professionalism, the educational system should establish rigorous standards for teacher training (Mayer, & Mills, 2021). Consequently, teacher training programs should acknowledge the individual differences among teachers, including their preferred learning activities and existing competencies (Puustinen, Säntti, Koski, & Tammi, 2018).

Teaching competence encompasses a range of skills, knowledge, and beliefs that teachers possess, and it plays a crucial role in facilitating effective learning experiences (Santagata & Yeh, 2016). Within teaching competence, pedagogical competence specifically refers to teachers' ability to manage the learning process, including planning learning programs, facilitating interactions, and conducting assessments (Rahman, 2014). Pedagogical competence involves a combination of knowledge and skills, with successful teaching relying on a deep understanding of the subject matter, the ability to connect theory and research to teaching and learning, and the skillful application of knowledge in a meaningful context (Falloon, 2020).

Material and Methods

Research Design

The study utilized a descriptive research design in conjunction with a survey method to examine the pedagogical choices of special education and inclusive education teachers while teaching different subjects and contents to children in special education and inclusive education classrooms.

Sample

The sample of this study consisted of 1000 (500 each) inclusive and special education teachers serving in different special education and inclusive education institutes in Punjab. The researchers obtained a list of teachers from the Directorate of Staff Development Punjab (DSD) who were trained by the DSD and presently were working in inclusive education setups. All the purposively selected participants from special education had degrees of M.A Special Education and M. Phil whereas teachers serving in inclusive education had M.A and M.Phil. degrees with B. Ed and M. Ed in addition.

Instrument

The researchers used a self-developed questionnaire to collect the data from special education and inclusive education teachers. The questionnaire was comprised of 12 sub-scales i.e., improving communication skills, improving reading comprehension, improving socialization skills, teaching environmental concepts, teaching science concepts, teaching economic concepts, teaching mathematical concepts, teaching story/essay/lesson, teaching about Allah & Prophet, teaching Quran & Hadith, teaching Iman & Ebadaat and teaching moralities. These 12 sub-scales consisted of 36 research items to probe their pedagogical choices. The items of the questionnaire were based on relevant literature and validated by experts in relevant fields. The researchers conducted a reliability test on the questionnaire to determine its level of reliability. The obtained Cronbach's Alpha value of .819 indicated that the test is reliable.

Results and Discussion

The collected data underwent analysis using descriptive analysis with the assistance of SPSS 21. Both descriptive and inferential statistics were employed to analyze the data. The findings were presented in the form of tables, displaying frequencies and percentages. Additionally, the study also explored the general concerns of special education and inclusive education teachers concerning the research question.

Table 1
Demographic Information of Special Education and Inclusive Education Teachers

Demographic Information	Special Education Teachers		Inclusive Education Teachers	
	F	%	F	%
Gender				
Male	139	31.2	341	66.9
Female	361	68.8	159	31.1
Age				
Below 30 Years	100	20.0	105	20.5
31-35 Year	160	32.0	139	27.2

36- 40 Year	163	32.6	196	38.4
41 years and above	77	15.4	60	11.9
Locality				
Rural	156	31.2	293	58.6
Urban	344	68.8	207	41.4
Designation				
JSET / PST	384	76.2	208	40.7
SSET / EST	116	23.8	175	34.2
/ SST			117	22.9
Qualification				
M.A / M. A, B. ED	383	76.6	279	54.6
M.Phil. / M. A, M. ED	115	23.0	140	27.4
Ph.D. / M.Phil.	2	.4	81	15.9
Experience				
131 to 5 years	99	19.8	104	20.8
6 to 10 years	144	28.7	150	29.4
11 to 15 years	139	27.8	148	29.0
16 and above years	118	23.6	98	19.6

Table No. 1 presents the demographic information of special education and inclusive education teachers. The data revealed that the majority of the participants from special education (68.8%) were females and (31.2%) were males, while a majority of inclusive education teachers (66.9%) were males and (33.1%) were females. Most special education teachers (68.8%) were residents of urban areas and (31.2%) were living in rural areas. However, the majority of inclusive education teachers (41.4%) were living in urban areas and (58.6%) were residents of rural areas. The designation of majority of participants from special education (76.2%) was junior special education teacher and (23.8%) were serving as senior special education teacher. The data revealed that most of the participants from inclusive education (40.7%) were primary school teachers, (34.2%) were serving as elementary school teachers and (22.9%) were serving as secondary school teachers.

Most of the special education teachers (32.6%) were between 36-40 years of age, (32%) of the special education teachers were between 31-35 years old, (20%) were below 30 years of age, only (15.4%) were having more than 40 years of age. Moreover, a large number of inclusive education teachers (38.4%) belonged to 36-40 years of age, (27.2%) belonged to 31-35 years of age, (20.5%) belonged to below 30 years of age and only (11.9%) belonged to 41 years and above age group.

The data further indicated that the educational qualification of most of the special education teachers (76.6%) was M.A., (23.0%) was M.Phil., and only (.4%) had Ph.D. degrees. Most of the inclusive education teachers (54.6%) were M.A, B.Ed., (27.4%) were M.A, M.Ed., and only (15.9%) were M.Phil. The majority of special education teachers (28.7%) had 6-10 years of experience, (27.8%) had 11-15 years of experience, (23.6%) had 16 and above experience, and (19.8%) had 1-5 years of experience. Most of the inclusive education teachers (29.4%) had 6-10 years of experience, (29.0%) had 11-15 years of experience, (20.8%) had 1-5 years of experience and only (19.6%) had 16 and above years of experience.

Table 2
Mean values of participant's responses based on sub-scales

Sub-scales	Special Education Teachers			Inclusive Education Teachers		
	N	Mean	S.D	N	Mean	S.D
Improving Communication Skills	500	14.04	3.11	500	12.04	3.10
Improving Reading Comprehension	500	14.67	3.32	500	10.68	3.24
Improving Socialization Skills	500	14.96	3.75	500	10.20	3.91
Teaching Environmental Concepts	500	13.24	3.40	500	11.26	3.41
Teaching Science Concepts	500	13.20	3.92	500	10.33	3.96
Teaching Economic Concepts	500	14.89	3.81	500	11.04	3.77
Teaching Mathematical Concepts	500	13.89	3.81	500	11.88	4.17
Teaching Story/Essay/Lesson	500	14.66	3.05	500	11.66	3.13
Teaching about Allah & Prophet	500	13.80	3.67	500	11.76	3.76
Teaching Quran & Adith	500	12.02	3.32	500	10.94	3.31
Teaching Iman & Ebadaat	500	13.11	6.31	500	11.54	6.34
Teaching Moralities	500	14.31	6.32	500	11.13	6.01

Table No.2 indicates the mean values of sub-scales of both special education teachers (SETs) and inclusive education teachers (IETs). The data reveals that the mean values of SETs are higher than IETs. The mean value of SETs in improving communication skills is (14.04), improving reading comprehension (14.67), improving socialization skills (14.96), teaching environmental concepts (13.24), teaching science concepts (13.20), teaching economic concepts (14.89), teaching mathematical1 concepts (13.89), teaching story/essay/lesson (14.66), teaching about Allah & Prophet (13.80), teaching Quran & Adith (12.02), teaching Iman & Ebadaat (13.11), and teaching moralities (14.31). Similarly, the mean value of IETs in improving communication skills is (12.04), improving reading comprehension (10.68), improving socialization skills (10.20), teaching environmental concepts (11.26), teaching science concepts (10.33), teaching economic concepts (11.04), teaching mathematical1 concepts (11.88), teaching story/essay/lesson (11.66), teaching about Allah & Prophet (11.76), teaching Quran & Adith (10.94), teaching Iman & Ebadaat (11.54), and teaching moralities (11.13).

Table 3
Significance difference about sub-scales based on Gender

Sub-Scale		Special Education Teachers					Inclusive Education Teachers				
	Gender	Mean	S.D	*t-value*	*Sig.*	Cohan's *d*	Mean	S.D	*t-value*	*Sig.*	Cohan's *d*
ICS	Male	12.07	3.00	.130	.897	0.097	11.99	3.10	-.534	.000	3.44
	Female	12.03	3.16	.133			3.15	.876	11.41		
IRC	Male	11.61	3.42	-.214	.831	0.017	11.74	3.25	.644	.001	3.04
	Female	11.68	3.29	-.210			4.54	.786	10.31		
ISS	Male	10.99	3.85	.099	.921	0.010	11.22	3.96	.149	.002	3.10
	Female	10.95	3.71	.097			3.16	.984	8.33		
TEC	Male	12.20	3.23	-.149	.885	0.014	12.12	3.35	-1.37	.000	3.01
	Female	12.25	3.46	-.376			4.57	.978	9.42		
TSC	Male	12.09	3.66	-.392	.707	0.016	12.33	3.88	.027	.001	2.89
	Female	12.24	4.03	1.78			4.32	.890	12.21		
TEC1	Male	12.38	3.86	1.76	.075	0.020	12.27	3.80	2.00	.001	2.42
	Female	11.70	3.70	.777			5.55	.908	12.02		
TMC	Male	12.12	4.24	.765	.438	0.018	11.88	4.24	.051	.001	2.61
	Female	11.80	4.09	1.22			4.86	.782	10.52		
TSE	Male	11.93	3.16	1.19	.222	0.015	11.69	3.13	.365	.001	2.11
	Female	11.56	3.01	1.25			5.55	.899	13.46		
TAP	Male	13.07	3.84	.996	.306	0.021	12.57	3.83	-1.68	.084	0.01
	Female	12.70	3.60	1.28			13.18	2.56	-1.73		
TQA	Male	11.33	3.68	1.20	.198	0.018	11.15	3.29	2.14	.001	2.71
	Female	10.90	3.17	1.14			4.48	.673	12.10		
TIE	Male	11.78	3.66	1.36	.157	0.016	11.26	6.43	.676	.001	3.01
	Female	10.86	6.17	1.40			3.84	.670	11.86		
TM	Male	11.78	6.66	1.36	.160	0.015	11.26	6.43	.676	.002	2.11
	Female	10.86	6.17	1.40			4.84	.942	11.86		

Note: ICS= Improving Communication Skills, IRC= Improving Reading Comprehension, ISS= Improving Socialization Skills, TEC= Teaching Environmental Concepts, TSC= Teaching Science Concepts, TEC1= Teaching Economic Concepts, TMC= Teaching Mathematical Concepts, TSE= Teaching Story/Essay/Lesson, TAP= Teaching about Allah & Prophet (PBUH), TQA= Teaching Quran & Adith, TIE= Teaching Iman & Ebadaat, TM= Teaching Moralities

Table No. 3 elaborates the significant difference in sub-scales based on the gender of SETs and IETs. The data highlights that there is no significant difference in the choices of SETs based on their gender small Cohan's d value. All the SETs regardless of their gender use similar kind of teaching methodologies while teaching a subject or the content to children with special needs studying at different class levels.

On the contrary, there exists a significant difference in the choices of IETs based on their gender. The data disseminates substantial variance in the choices of female teachers about the sub-scales with large Cohan's d effect size as ICS= (*t= 11.14, P=.000*), Cohan's d value = (3.44), IRC= (*t= 10.31, P=.001*), Cohan's d value = (3.04), ISS= (*t= 8.33, P=.002*), Cohan's d value = (3.10), TEC= (*t= 9.42, P=.000*), Cohan's d value = (3.01), TSC= (*t= 12.21, P=.001*), Cohan's d value = (2.89), TEC1= (*t= 12.20, P=.001*), Cohan's d value = (2.42), TMC= (*t= 10.52, P=.001*), Cohan's d value = (2.61), TSE= (*t= 13.46, P=.001*), Cohan's d value = (2.11), TQA= (*t= 12.10, P=.001*), Cohan's d value = (0.01), TIE= (*t= 11.86, P=.001*), Cohan's d value = (2.71), TM= (*t= 11.86, P=.002*), Cohan's d value = (3.01). However, both male and female IETs have similar teaching pedagogical choices while teaching about Allah and the Prophet.

Table 4
Significance difference in sub-scales based on Locality

Sub-Scale		Special Education Teachers						Inclusive Education Teachers					
	Locality	N	Mean	S.D	*t-value*	*Sig.*	Cohan's *d*	N	Mean	S.D	*t-value*	*Sig.*	Cohan's *d*
ICS	Urban	139	11.97	3.14	-.365	.715	0.03	341	3.45	.976	10.12	.001	3.83
	Rural	361	12.08	3.10	-.364			159	12.01	3.06	.286		
IRC	Urban	139	11.52	3.29	-.653	.514	0.05	341	5.31	.786	7.73	.002	3.21
	Rural	361	11.73	3.34	-.657			159	11.85	3.35	1.82		
ISS	Urban	139	11.20	3.59	.959	.336	0.07	341	4.63	.912	10.63	.000	3.01
	Rural	361	10.85	3.77	.967			159	11.01	3.91	1.63		
TEC	Urban	139	12.21	3.28	-.144	.886	0.01	341	5.32	.786	7.59	.001	2.91
	Rural	361	12.25	3.45	-.146			159	12.23	3.49	.276		
TSC	Urban	139	11.93	3.79	-1.01	.312	0.03	341	6.24	.910	9.51	.000	2.78
	Rural	361	12.31	3.98	-1.03			159	12.37	4.04	-.359		
TEC1	Urban	139	11.91	3.71	.097	.922	0.04	341	5.21	.980	8.19	.003	2.51
	Rural	361	11.86	3.86	.099			159	12.09	3.90	-.200		
TAC	Urban	139	11.67	4.19	-.796	.426	0.08	341	4.03	.910	9.43	.002	2.98
	Rural	361	11.99	4.10	-.790			159	11.81	4.14	.538		
TSE1	Urban	139	11.72	2.78	.287	.774	0.06	341	3.83	.897	6.40	.003	3.19
	Rural	361	11.63	3.17	.302			159	11.58	3.26	.884		
TAP	Urban	139	13.46	3.70	.972	.332	0.09	341	4.20	.780	8.75	.000	2.97
	Rural	361	12.70	3.65	.966			159	12.56	3.71	1.70		
TOA	Urban	139	10.81	3.38	-.941	.347	0.11	341	5.86	.916	8.34	.002	2.90
	Rural	361	11.11	3,29	-.931			159	10.97	3.24	-.336		
TIE	Urban	139	11.03	6.33	-.189	.850	0.21	341	4.66	.801	7..11	.001	3.92
	Rural	361	11.15	6.31	-.189			159	11.34	6.30	-1.10		
TM	Urban	139	11.05	6.33	-.167	.867	0.12	341	5.66	.910	9.11	.002	2.11

Rural	361	11.15	6.31	-.167	159	11.34	6.30	-1.10	

Table No. 4 explains the significant difference in sub-scales based on the locality of SETs and IETs. The data depicts that there is no significant difference in the choices SETs based on their locality and Cohan's d effect value shows a small effect size. All the SETs regardless of their residential area make similar kinds of teaching pedagogical choices while teaching a subject or the content to children with special needs studying at different class levels.

Whereas, there was a significant difference in the teaching pedagogical choices of IETs based on their location. The data determined substantial variance in the choices of IETs living in urban areas about the sub-scales with large value of Cohan's d effect size as ICS= (*t= 10.12, P=.001*), Cohan's d value = (3.83), IRC= (*t= 7.73, P=.002*), Cohan's d value = (3.21), ISS= (*t= 10.63, P=.000*), Cohan's d value = (3.01), TEC= (*t= 7.59, P=.001*), Cohan's d value = (2.91), TSC= (*t= 9.51, P=.000*), Cohan's d value = (2.78), TEC1= (*t= 8.19, P=.003*), Cohan's d value = (2.51), TMC= (*t= 9.43, P=.002*), Cohan's d value = (2.98), TSE1= (*t= 6.40, P=.003*), Cohan's d value = (3.19), TAP= (*t= 8.75, P=000*), Cohan's d value = (2.97), TQA= (*t= 8.34, P=.002*), Cohan's d value = (2.90), TIE= (*t= 7.11, P=.001*), Cohan's d value = (3.92), TM= (*t= 9.11, P=.002*), Cohan's d value = (2.11).

Table 5
Significant difference in sub-scales based on Experience

Sub-scales		Special Education Teachers			Sub-scales		Inclusive Education Teachers		
		Mean Square	*F*	*Sig.*			Mean Square	*F*	*Sig*
ICS	Within Group	3.25	.334	.801	ICS	Within Group	65.70	4.74	.003
	Between Group	9.75				Between Group	13.84		
IRC	Within Group	19.58	1.77	.150	IRC	Within Group	12.48	.877	.453
	Between Group	11.02				Between Group	14.24		
ISS	Within Group	19.23	1.36	.252	ISS	Within Group	106.8	5.60	.001
	Between Group	14.06				Between Group	19.05		
TEC	Within Group	21.23	1.84	.138	TEC	Within Group	62.87	5.06	.002
	Between Group	11.50				Between Group	12.40		
TSC	Within Group	10.82	.70	.552	TSC	Within Group	70.75	4.53	.004
	Between Group	15.48				Between Group	15.59		
TEC1	Within Group	18.50	1.27	.282	TEC1	Within Group	20.04	1.35	.257
	Between Group	14.49				Between Group	14.83		
TAC	Within Group	2.37	.138	.937	TAC	Within Group	84.71	.4.70	.003
	Between Group	17.16				Between Group	18.00		
TSE	Within Group	6.27	.670	.571	TSE	Within Group	81.17	6.19	.000
	Between Group	9.36				Between Group	13.09		

TAP	Within Group	22.10	1.64	.177	TAP	Within Group	15.56	3.75	.011
	Between Group	13.41				Between Group	13.80		.
TQA	Within Group	1.80	1.62	.922	TQA	Within Group	13.69	.727	.536
	Between Group	11.13				Between Group	18.84		
TIE	Within Group	78.48	1.97	.116	TIE	Within Group	15.41	.418	.740
	Between Group	39.69				Between Group	36.87		
TM	Within Group	8.4	2.02	.110	TM	Within Group	20.97	.516	.640
	Between Group	39.75				Between Group	37.33		

Table No. 5 explains significant differences in sub-scales based on the teaching experience of SETs and IETs. The data reveals that there was no significant variance in the pedagogical choices of SETs despite different teaching experiences. Whereas, a significant variance was observed in the pedagogical choices of IETs based on their experience about the sub-scales ICS= ($\bar{x}$ *= 65.70, P=.003*), ISS= ($\bar{x}$ *= 106.8, P=.001*), TEC= ($\bar{x}$ *= 62.87, P=.002*), TSC= ($\bar{x}$ *= 70.75, P=.004*), TMC= ($\bar{x}$ *= 84.71, P=.003*), TSC= ($\bar{x}$ *= 81.17, P=.000*). However, IETs also have similar kind of pedagogical choices in teaching science concepts, teaching Quran and Adith, Teaching Iman and Ebadaat and teaching moralities.

Table 6
The significant difference in sub-scales based on Education

Sub-scales		Special Education Teachers			Sub-scales		Inclusive Education Teachers		
		Mean Square	*F*	*Sig.*			Mean Square	*F*	*Sig*
ICS	Within Group	4.15	.431	.603	ICS	Within Group	55.60	4.04	.001
	Between Group	8.85				Between Group	13.84		
IRC	Within Group	29.58	1.77	.360	IRC	Within Group	12.48	.617	.453
	Between Group	21.02				Between Group	14.24		
ISS	Within Group	29.23	1.56	.272	ISS	Within Group	71.21	4.60	.002
	Between Group	34.06				Between Group	19.05		
TEC	Within Group	21.23	1.54	.248	TEC	Within Group	69.78	4.07	.001
	Between Group	21.50				Between Group	12.40		
TSC	Within Group	20.82	.781	.612	TSC	Within Group	73.25	4.73	.002
	Between Group	15.48				Between Group	15.59		
TEC1	Within Group	19.50	1.31	.312	TEC1	Within Group	20.04	3.65	.257
	Between Group	16.49				Between Group	14.83		
TAC	Within Group	2.37	.132	.837	TAC	Within Group	78.91	4.20	.002

	Between Group	16.16				Between Group	18.00		
TSE	Within Group	7.27	.762	.521	TSE	Within Group	71.11	5.29	.001
	Between Group	8.36				Between Group	13.09		
TAP	Within Group	23.10	1.32	.217	TAP	Within Group	73.54	4.25	.001
	Between Group	14.41				Between Group	13.80		.
TQA	Within Group	1.90	1.57	.892	TQA	Within Group	81.11	.628	.000
	Between Group	18.13				Between Group	18.84		
TIE	Within Group	71.48	1.67	.216	TIE	Within Group	72.41	.519	.001
	Between Group	33.69				Between Group	36.87		
TM	Within Group	10.41	2.45	.210	TM	Within Group	72.97	.417	.000
	Between Group	41.75				Between Group	37.33		

Table No. 6 describes significant differences in sub-scales based on the educational qualification of SETs and IETs. The data reveals that there was no significant variance in the pedagogical choices of SETs. The majority of SETs used demonstration methods, drill methods, task analysis methods, and activity methods regardless of their educational qualification. However, a significant variance was observed in the pedagogical choices of IETs. The results of the study indicated that IETs with higher educational qualifications chose more appropriate teaching methodologies than those who were less qualified about the sub-scales ICS= ($x\bar{}$= *55.60, P=.001*), ISS= ($x\bar{}$= *71.21, P=.002*), TEC= ($x\bar{}$= *69.78, P=.002*), TSC= ($x\bar{}$= *73.25, P=.002*), TMC= ($x\bar{}$= *84.71, P=.002*), TSE= ($x\bar{}$= *71.11, P=.001*). TAP= ($x\bar{}$=*73.54, P=001*), TQA= ($x\bar{}$= *81.11, P=.000*), TIE= ($x\bar{}$= *72.41, P=.001*), TM= ($x\bar{}$= *72.97, P=.001*).

Table No. 7
Frequency distribution of the responses

	Special Education Teachers							Inclusive Education Teachers						
	M1	M2	M3	M4	M5	M6	M7	M1	M2	M3	M4	M5	M6	M7
Improving Communication Skills														
Improve Grammar	5.4 %	--	53.8 %	--	12.6 %	13.0 %	14.8 %	--	3.9 %	26.2 %	.4 %	9.6 %	48.5 %	9.2 %
Enhance Vocabulary	6.0 %	--	53.9 %	6.0 %	6.4 %	10.6 %	17.0 %	--	4.3 %	28.4 %	4.1 %	4.5 %	43.1 %	13.5 %
Improve Sentence Structure	11.2 %	15.0 %	38.3 %	--	8.8 %	13.0 %	13.6 %	11.5 %	9.8 %	16.6 %	--	6.5 %	47.9 %	5.5 %
Improving Reading Comprehension														
Improve Fluency	7.2 %	12.2 %	37.3 %	--	12.4 %	14.0 %	16.2 %	3.7 %	9.8 %	16.0 %	--	10.6 %	48.7 %	9.0 %
Improve Phonological Awareness	13.6 %	13.8 %	41.0 %	--	6.2 %	13.8 %	11.2 %	12.7 %	12.1 %	23.3 %	--	1.0 %	41.9 %	6.8 %
Help Understand Phonics	12.2 %	10.8 %	36.9 %	--	7.6 %	13.4 %	19.6 %	4.3 %	13.5 %	15.7 %	--	4.7 %	45.4 %	15.3 %
Improving Socialization skills														
Improve Interpersonal Skills	29.2 %	11.2 %	28.9 %	--	3.4 %	12.0 %	14.4 %	25.4 %	3.9 %	13.5 %	--	3.0 %	46.0 %	7.0 %
Collaboration With Peers	26.7 %	10.0 %	22.8 %	--	6.4 %	10.0 %	24.0 %	20.5 %	4.4 %	8.2 %	--	7.3 %	41.5 %	17.2 %
Tolerate Unacceptable Behaviors	27.9 %	22.4 %	16.8 %	--	6.4 %	19.4 %	17.6 %	19.2 %	7.4 %	13.9 %	--	2.7 %	42.3 %	12.3 %
Teaching Environmental Concepts														

Understand Biodiversity	7.8 %	12.6 %	20.6 %	28.1 %	4.7 %	14.7 %	11.6 %	7.1 %	7.4 %	6.5 %	16.5 %	3.5 %	45.6 %	10.6 %
Understand Climate Change	4.2 %	21.2 %	22.6 %	23.6 %	--	21.0 %	7.6 %	3.9 %	22.9 %	11.7 %	11.9 %	44.0 %	--	3.3 %
Understand Soil Conservation	9.0 %	14.2 %	22.4 %	15.8 %	--	20.0 %	18.6 %	4.1 %	12.9 %	7.0 %	11.2 %	1.2 %	49.1 %	12.5 %
Teaching Science Concepts														
Classification of Living Things	7.8 %	9.2 %	11.2 %	14.8 %	14.6 %	15.4 %	27.1 %	10.6 %	10.4 %	11.4 %	11.2 %	9.2 %	47.0 %	5.1 %
Understand Cause and Effect	13.4 %	11.2 %	19.8 %	7.4 %	7.6 %	15.8 %	27.2 %	11.7 %	12.4 %	12.3 %	2.7 %	2.8 %	42.5 %	15.5 %
Understand the Matter of Change	7.4 %	19.0 %	25.0 %	4.2 %	7.4 %	28.8 %	8.8 %	5.9 %	10.4 %	8.0 %	3.7 %	4.7 %	56.8 %	8.4 %
Teaching Economic Concepts														
Concept of Scarcity	16.0 %	12.0 %	14.6 %	6.8 %	5.8 %	18.0 %	29.9 %	14.3 %	10.8 %	9.2 %	4.7 %	4.3 %	48.7 %	8.1 %
Concept of Supply and Demand	18.6 %	8.6 %	15.0 %	10.6 %	--	16.8 %	30.3 %	14.9 %	4.3 %	12.4 %	6.1 %	5.1 %	47.1 %	11.0 %
Concept of Economic Sustainability	6.6 %	11.0 %	24.4 %	7.4 %	7.8 %	30.9 %	12.4 %	3.1 %	8.1 %	8.4 %	4.6 %	4.2 %	58.3 %	13.4 %
Teaching Mathematical Concepts														
Arithmetic Concepts	16.6 %	3.6 %	38.9 %	--	11.5 %	5.5 %	24.4 %	12.9 %	2.2 %	17.2 %	--	14.3 %	34.8 %	18.2 %
HCF & LCM	18.0 %	2.4 %	39.7 %	--	10.8 %	6.4 %	22.8 %	13.5 %	3.3 %	5.1 %	--	14.3 %	37.0 %	16.5 %
Fractions	16.8 %	3.4 %	22.4 %	--	4.4 %	5.6 %	4.3 %	12.1 %	2.3 %	12.7 %	--	9.8 %	35.0 %	18.1 %
Teaching Story/Essay/Lesson														
Urdu Stories/Essay	8.2 %	12.8 %	9.6 %	2.0 %	4.8 %	22.8 %	39.6 %	7.0 %	7.6 %	22.5 %	2.2 %	4.1 %	48.1 %	8.5 %
English Stories/Essays	7.2 %	12.4 %	9.8 %	--	1.6 %	24.2 %	44.9 %	3.1 %	5.2 %	23.6 %	--	3.3 %	53.4 %	11.2 %
Urdu & English lessons	7.2 %	12.8 %	43.5 %	--	3.0 %	23.8 %	9.2 %	6.3 %	11.2 %	23.7 %	2.4 %	1.8 %	49.5 %	4.5 %
Teaching about Allah & Prophet														
Concept of Allah	--	28.1 %	17.8 %	--	--	40.5 %	13.6 %	--	21.9 %	4.5 %	--	1.6 %	57.9 %	12.1 %
Concept of Prophet (PBUH)	--	25.7 %	27.8 %	--	--	44.5 %	12.0 %	--	18.2 %	4.5 %	--	--	69.5 %	7.9 %
Preaching of Islam	12.8 %	11.0 %	30.1 %	11.0 %	9.6 %	16.0 %	9.4 %	11.9 %	10.6 %	14.5 %	8.6 %	8.0 %	38.4 %	8.1 %
Teaching Quran & Adith														
Learn Quran	9.6 %	2.4 %	67.3 %	--	3.6 %	5.8 %	11.4 %	10.4 %	3.8 %	34.8 %	--	3.3 %	37.0 %	7.8 %
Learn Adith	7.2 %	7.2 %	53.1 %	--	6.6 %	8.4 %	17.6 %	4.7 %	4.9 %	26.6 %	--	5.1 %	41.1 %	47.6 %
Follow Quran & Adith	16.8 %	10.8 %	32.3 %	6.8 %	7.0 %	13.6 %	12.8 %	14.5 %	5.9 %	14.5 %	3.7 %	6.3 %	39.7 %	15.5 %
Teaching Iman & Ebadaat														
Concept of Iman & Ibadaat	15.6 %	15.4 %	35.1 %	--	--	18.6 %	15.8 %	11.2 %	9.2 %	20.4 %	--	--	46.1 %	13.0 %
Strengthen Iman on Allah	13.6 %	17.4 %	33.1 %	--	--	20.2 %	15.8 %	11.2 %	7.8 %	21.0 %	--	--	49.3 %	10.8 %
Make Regular in Ibadaat	12.6 %	18.4 %	38.1 %	--	--	15.0 %	16.0 %	11.2 %	10.1 %	20.4 %	--	--	47.7 %	10.8 %
Teaching Moralities														
Concept of Honesty	16.2 %	11.4 %	19.4 %	17.0 %	--	--	36.1 %	11.2 %	7.8 %	18.8 %	--	--	49.3 %	13.0 %
Concept of Helping Others	11.6 %	19.4 %	16.0 %	--	--	17.0 %	36.1 %	11.3 %	7.8 %	20.9 %	--	--	49.4 %	10.8 %
Concept of Abiding Law	14.6 %	16.4 %	34.1 %	--	--	19.0 %	16.0 %	11.2 %	10.0 %	18.8 %	--	--	49.3 %	10.8 %

Note: M1= Demonstration Method, M2= Discussion Method, M3= Drill Method, M4= Field Trip Method, M5= Task Analysis Method, M6= Lecture Method, M7= Activity Method

Table No. 7 describes the overall frequencies of SETs and IETs against each statement of the questionnaire. The data reveals that the majority of the SETs used the drill method to improve grammar (53.8%) enhance vocabulary (53.9%) and improve sentence structure (38.3%). Whereas, the majority of the IETs used lecture methods to improve grammar (28.5%), enhance vocabulary (43.1%), and improve sentence structure

(47.9%). The majority of SETs used the drill method to improve fluency (37.3%), phonological awareness (41.0%), and phonics (36.9%), while IETs used the lecture method to improve fluency (48.7%), phonological awareness (41.9%) and phonics (45.4%).

The majority of SETs used the demonstration method to improve interpersonal skills (29.2%), collaboration with peers (26.7%) and tolerate unacceptable behavior (27.9%) while IETs used the lecture method to improve interpersonal skills (46.0%), collaboration with peers (41.5%) and tolerate unacceptable behavior (42.3%). The majority of SETs used the activity method to clarify the concept of biodiversity (27.1%), climate change (53.9%), and soil conservation (22.4%), however IETs used the lecture method to clarify the concept of biodiversity (45.6%), soil conservation (49.1%) and task analysis method to clarify the concept of soil conservation (49.1%).

A large number of SETs used the activity method to clarify the concept of living things (27.1%), cause and effect (27.2%), and lecture method for matter of change (28.8%), however IETs used the lecture method to clarify the concept of living things (47.1%), cause and effect (42.5%) and matter of change (56.8%). Most of the SETs used activity methods to clarify the concept of economics such as scarcity (29.9%), supply and demand (30.3%), and lecture methods for economic sustainability (30.9%). However, IETs used the lecture method to clarify the concepts of economics such as scarcity (48.7%), supply and demand (47.1%), and economic sustainability (58.3%)

Majority of the SETs used the drill method to teach mathematical concepts like arithmetic concepts (38.9%), HCF & LCM (39.7%), and fractions (22.4%). Whereas, IETs used lecture methods to teach mathematical concepts for example arithmetic concepts (34.8%), HCF & LCM (37.0%), and fractions (35.0%). Most of the SETs used activity methods to teach Urdu stories/Essays (39.6%), and English stories/Essays (44.9%) and used drill methods to teach Urdu & English lessons (43.5%). IETs used lecture methods to teach Urdu stories/Essays (48.1%), English stories/Essays (53.4%), and Urdu & English lessons (49.5%).

A large number of SETs used the lecture method to clarify the concept of Allah (40.5%) and, the concept of the Prophet (44.5%), and used the drill method to clarify the concept preaching of Islam (30.1%). However, IETs used the lecture method to clarify the concept of Allah (57.9%), the concept of the Prophet (67.5%), and the preaching of Islam (38.4%). A large number of SETs used the drill method to teach about the Quran (67.3%), learn Adith (53.1%), and follow Quran & Adith (32.3%). However, IETs used the lecture method to teach about the Quran (37.0%), learn Adith (41.1%), and follow the Quran & Adith (39.7%). The majority of SETs used the drill method to clarify the concept of Iman & Ibadaat (35.1%), Iman on Allah (33.1%), and Regular in Ibadaat (38.1%). However, IETs used the lecture method to clarify the concept of Iman & Ibadaat (46.1%), Iman on Allah (43.9%), and Regular in Ibadaat (47.7%). Most of the SETs used the activity method to clarify the concept of honesty (36.1%), helping others (36.1%), and the drill method to clarify the concept of abiding by the law (34.1%). However, IETs used the lecture method to clarify the concept of honesty (43.3%), helping others (49.4%), and the concept of abiding by the law (49.3%).

The results of the study provided support for the existing literature, which suggests that children with disabilities have distinct educational requirements compared to children without disabilities. It was also found that special needs children may

struggle to perform well in inclusive classrooms if their unique teaching and learning needs are not taken into account when selecting appropriate teaching methodologies.

To promote successful inclusive education in Pakistan, it is crucial to ensure the suitable and individualized selection of teaching methodologies that cater to the specific needs of special needs children in inclusive classrooms. While the lecture method may be effective for typically developing children, it may not be as beneficial for special needs children in terms of addressing their learning needs. Instead, alternative teaching methods such as the demonstration method, drill method, task analysis method, and activity method may prove more effective in clarifying and meeting the learning needs of special needs children.

Conclusion

The study concluded that there were no significant differences in the teaching methodological choices of SETs based on their gender, locality, education, and experience. However, there were significant differences in the teaching methodological choices of IETs based on their gender, locality, education, and experience.

It was concluded that most SETs used different teaching methods to clarify a topic, concept, or subject. The results of the study revealed that SETs used demonstration methods, drill methods, task analysis methods, and activity methods more frequently. The teaching pedagogical choices of the majority of the SETs were appropriate and best suitable to clarify the concept and meet the learning needs of special children.

However, the teaching pedagogical choices of IETs were not appropriate to clarify the learning concepts of children with special needs. The results of the study concluded that the majority of IETs used the lecture method as their preferred teaching method while teaching different subjects at different class levels, even knowing that they have children with special needs. The results of the study concluded that the majority of IETs used lecture methods in inclusive classrooms to clarify mathematical concepts, communication skills, reading comprehension, socialization skills, and science concepts.

Recommendations

The following recommendation has been derived based on the findings of the study:

1. Standardized Pre-service and in-service training modules introducing specially designed pedagogical approaches to teach students with special needs may be introduced to the IETs throughout the province of Punjab regardless of gender, locality, educational qualification, experience, and designation.

2. Disability orientation may be provided to the IETs through continuous refresher courses or workshops for a better understanding of the special educational needs of children with disabilities to select appropriate pedagogical approaches for effective teaching.

3. Special education and inclusive education teachers may be provided with specialized professional development programs with a focus on evidence-based pedagogical strategies, differentiated instruction, and inclusive practices to

enhance their teaching skills and effectiveness in catering to the diverse learning needs of special children.

4. Collaborative practices between special education and inclusive education teachers may be promoted to leverage their expertise and create a more inclusive learning environment. Co-teaching models may also be promoted to facilitate joint planning, instruction, and assessment to better meet the needs of all students.

5. Ensure that both special and inclusive education teachers have access to appropriate teaching resources, assistive technologies, and materials that support diverse learning needs. Providing a well-equipped learning environment will enable teachers to implement various teaching approaches effectively.

6. Establish mechanisms to monitor and evaluate the implementation of pedagogical choices in both special and inclusive classrooms. Regular assessments and feedback loops will help identify areas of improvement and ensure the continuous enhancement of teaching practices.

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