Pakistan Social Sciences Review
www.pssr.org.pk

RESEARCH PAPER

Pedagogy for Sustainable Educational Development of Students with Special Needs: Teacher's Perspective

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PAPER INFO

Received:
November 17, 2019
Accepted:
December 25, 2019
Online:
December 31, 2019

Keywords:
Education, Pedagogy, Students with Special Needs, Sustainable Development

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ABSTRACT

Training, learning, and practical experiences are included in sustainable education in formal and informal settings, increasing the community involvement and personal development of students with special needs. The fourth goal of sustainable development clearly described the surety of quality of education for all. Priority is not only given to the normal students but also included students with special needs. With suitable pedagogy for sustainable educational development, every aspect of students' lives with special needs can be promoted. This study aimed to identify the important components for sustainable educational development for students with special needs. A self-developed questionnaire comprised 20 statements was used to collect the data against the Likert scale (Cronbach Alpha .87). Fifty teachers of special education were selected as a sample to collect the data. Data were analyzed through SPSS using descriptive and inferential statistical tools. The study concluded that according to the perceptions and responses of teachers' poverty reduction, appropriateness of curriculum, active participation of the special students, least restrictive environment, and special students in general setup are the necessary components for the educational sustainable development. It was recommended that teachers should adapt the curriculum and pedagogies to meet the specific learning needs of students with special needs.

Introduction

Among many other challenges of the 21st-century, sustainability and conservation of resources and the social and economic well-being of the people are the biggest. This immense global challenge which United Nations presented in perception of Sustainable Development Goals. U.N developed Seventeen core

sustainable development goals or for the prosperity of mankind on earth (Nevin, 2008). Environment and sustainability of education (ESE) was a key tool for teaching and learning. It was decided, how to deal with these global challenges. The educational quality improvement should be targeted to improve key capabilities that can be important for an individual's life and society (Kankainen, Määttä, & Uusiautti, 2016). Education contents need to be based no longer on the switch of information, as, on their evaluation, important assessment, and realistic software; such abilities shall relate the contents of training to real existence, particular issues, and solutions(Thomas, 2014).Pedagogy can be defined as the learning process and environment normally created and supported by the teachers and educationists. Pedagogy is developed by the beliefs, values, and concerns of an educator of different learning ways. To support students with special needs, it is essential to develop a meaningful classroom relationship before learning. A carefully developed pedagogy help students by enabling them to learn effectively.

Literature Review

According to UNESCO (2014), Education for Sustainable Development helps every human being to learn the awareness, abilities, behaviors, and values required to shape a sustainable future (ESD). The core sustainability improvement matters into instruction and education are identified as education for sustainable development (Nevin, 2008). Disaster risk mitigation, weather conditions, sustainable use, ecology, and poverty reduction are only a few examples. It also necessitates active teaching and learning procedures that motivate and authorize students to improve their behavior and take initiative in the interest of long-term sustainability (Breiting, Mayer, & Mogensen, 2005). As a result, Education for Sustainable Development promotes skills such as anticipating future futures, strategic reasoning, and collaborative decision-making (Thomas, 2014).

Education's position in sustainable development is to motivate the learning community for long-term survival by high-quality education. Under the post-2015 growth plan, improving education and ensuring that all residents have access to a high-quality education would be reaffirmed as a core sustainable development target (James, 2015). One of the characteristics of pedagogical approaches is the incorporation of natural learning methods into classrooms. Between the two exciting types of learning styles, Orion (2003) distinguished himself. He differentiated between normal natural learning" and "non–natural learning.

According to Orion (2003), the persuasive position is in a closed space that has little connection to any learned matter. Has no direct link between the topic to be learned and the learner's relevant environment; very sometimes has actual life practical encounters with the subject to be taught. Oral conversation exchanges the carnival in by the explanation of imaginative situations; learning is carried out within a large organisation, and it is difficult to control learning for individuals. Any of these features are in opposition to those discovered in "herbal getting to know," which is situated at the discontinuity's end**.**

Here is an example of multidisciplinary pedagogy for teaching and learning. An instructor or the different professionals' teachers would teach water characteristics concerning physical characteristics, biological characteristics, and chemical characteristics. To measure the demonstrating properties of water, such as its boiling and freezing thresholds, nitrogen ions, water hardness, overall chlorine, pH, bacterial growth markers, the effects of cleaners on apparent strain and nutrient enrichment, and the effects of water sweeteners on mineral composition in the laboratory. Students may gather a sample of water from a river or a body of water, studies it in the lab or in the field, classify flora and fauna, and evaluate the impact of water contamination on the environment, culture, and biodiversity for additional learning. Additionally, students may evaluate the impacts of exposure on wellbeing and leisure. Physicists, biologists, chemists, economists, and sociologists all contribute to this form of pedagogy. The method is known as a multidisciplinary approach to study, and it is credited in the literature with assisting in the growth of system thought and linkages between causes and results within processes.

In the literature review, the importance of method, feeling, and ESD is heavily emphasized (Hines, Hungerford, & Tomera, 1987; Breiting, Mayer, &Mogensen, 2005; Dodick & Orion, 2003; James & Paul, 2015). If students are to benefit from comprehensive knowledge on environmental issues, a multi-perspective is needed (Breiting, Mayer, & Morgensen, 2005). "What ten years of N.E.E.T.F./Roper study and related studies mean regarding environmental awareness in the United States," According to Coyle (2005), the single largest problem in the ecological intelligence gap in the United States is the absence in indulgence of complex causal connotations? In his book "Capitalism as if the Environment Matters," Porritt (2007) emphasized that the fundamental issue is twisted by the effort to treat them as structures rather than individual elements within those organizations.

Multidisciplinary pedagogy, continuums described as highly engrossed in "natural learning (Orion, 2003)."Investigation designates that attaining ecological information and attitudes does not essentially direct to alteration in actions (Hungerford & Volk, 1990).Additionally, the attitudes cannot forecast the performances; contrariwise, performance cannot forecast the attitudes. (McGuire, 1985). The deficiency of extrapolation association between arrogances and performance has also been investigated in a larger context of intellectual psychology that represented the presence of multifaceted association among these factors (Doyle, 1997). In the literature of psychology, the results of 797 studies: A meta-analysis, originate that situational limitations, for example, professed social compression and professed difficulty, decline the connection between arrogances and performances (Wallace et al., 2005).

Observing species in multidimensional contexts, both in time and space, allows for the development of effective logical methods (Breiting et al., 2005), as well as the acquisition of abilities to think "outside the box" and inspecting organizations in their interactions with other organizations, galaxies, and periods. It helps you to

see how the instinctive sense of non-linear differences in time and space shifts and evolves. Individual sections' independent interactions are typically less essential than the relations within and between multifaceted adaptive institutions (Dodick & Orion, 2003). These links are at the heart of the spread of innovative, valuable, and impulsive abilities, and they are not inherent in either of the distinct systems working alone. System reasonable alone will often supervise these reproduction operations, while multidimensional joint with structure rational will reveal previously unnoticed occurrences (Lane &Maxfield, 1996).

It is a well-known phenomenon that if we just teach our children what we know, they would perform in the same manner that we do. Albert Einstein made a related point, arguing that major issues cannot be overcome with the same thought pattern that created the dilemma in the first place. Having the sense that children must be prepared with skills that allows them to "think beyond the cage," to break free from one-dimensional, mechanical, repetitive learning habits. Yet, a worrying concern remains: does this pedagogy lead to further behavioral changes? Is it correct that pedagogical elements define the fundamental criteria for ESD? The response to this question is that multidisciplinary learning is similar to multidimensional learning in that both are based on cognitive conceptual constructs, and mental structures do not yield shift inspiration.

Achieving quality education and inclusive education for all echoes the acceptance that education is one of the most influential and confirmed vehicles for sustainable development. This goal guarantees that all boys and girls complete free primary and secondary schooling by 2030 (SDGs, 2015). It also aims to provide equal access to affordable vocational training and eliminate the disparities with reference to gender and wealth and achieve universal access to an excellent higher education.

Material and Methods

Type of Research

Researchers follow the descriptive research to conduct the study. Survey method was used to obtain the data.

Population

The population of the study was the teachers of students with special needs working in different special education institutes of Lahore.

Sample of the Study

The study sample was 50 teachers (Male=25 and Female=25),chosen from the special education schools and centers. The sample of this study was selected through random sampling technique.

The Instrument of the study

Researchers developed a close ended Likert type scale in order to get the data from the respondents. The questionnaire comprised 20 statementsona five-point Likert scale. The reliability of the scale was .87 Cronbach Alpha.

Data Collection Method

Researchers personally visited the special education school and centers for the purpose of data collection. All research ethics for collecting data were kept in consideration. The return rate was 100%.

Data Analysis

The collected data was entered through SPSS after applying the coding scheme. Descriptive and inferential statistical procedures were used to analyze the data. The tabular presentation of data is given below:

Results and Discussion

Table 1
Frequency Distribution

Sr. No.	Statements	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
		f	%	*f*	%	*f*	%	*f*	%	*F*	%
1	Include students with special needs in the general setup will help us to gain sustainable educational development.	9	18	32	64	3	6	6	12	0	0
2	Students centered learning is appropriate for SDGs.	21	42	27	54	2	4	0	0	0	0
3	Gender equality is necessary to attain the SDGs.	15	30	30	60	2	4	3	6	0	0
4	Poverty reduction is a basic element to gain sustainable educational development for students with special needs.	29	58	13	26	6	12	2	4	0	0
5	Socio-economic status plays an important role while attaining SDGs.	19	38	25	50	4	8	2	4	0	0
6	Traditional learning is more effective for SDGs as compared to other learning disciplines.	2	4	17	34	9	18	18	36	4	8
7	Multidisciplinary learning is effective in gaining sustainable education development for students with special needs.	26	52	20	40	2	4	2	4	0	0
8	Multidimensional learning plays an important role in gaining sustainability in the educational development of students with special needs.	20	40	25	50	5	10	0	0	0	0
9	Emotional learning is necessary to fulfill SDGs for students with special needs.	12	24	25	50	11	22	2	4	0	0
10	Content of curriculum should be appropriate for attaining sustainability in education for the students with special needs.	31	62	15	30	4	8	0	0	0	0
11	The environment becomes a major barrier to attain SDGs for students with special needs.	20	40	22	44	7	14	1	2	0	0

12	Cognitive learning is a necessary element of pedagogy for sustainable development for students with special needs.	24	48	18	36	8	16	0	0	0	0
13	Experimental learning is the major component of SDGs.	18	36	24	48	6	12	2	4	0	0
14	Active participation of the students with special needs is more helpful for sustainable educational deployment.	27	54	21	42	2	4	0	0	0	0
15	Problem-based learning should be encouraged to attain SDGs for the education of students with special needs.	18	36	21	42	6	12	4	8	1	2
16	Education must be on a dialogue base for sustainable development in education.	12	24	19	38	13	26	6	12	0	0
17	Competencies should enable active, reflective and, cooperative participants towards sustainable educational development.	9	18	28	56	10	20	3	6	0	0
18	Learning must be problem-based on the pedagogy of sustainable development of students with special needs.	15	30	25	50	7	14	2	4	1	2
19	Acquisition of a responsible environment is a must for the SDGs.	11	22	28	56	6	12	2	4	3	6
20	Cultural influence is the major element for the pedagogy of sustainable development of students with special needs.	13	26	23	46	12	24	2	4	0	0

Table 1 shows that 12% of the respondents disagree with the statement that includes the students with special needs in general setup, helping us gain sustainable educational development. 6% of the teachers remained neutral, 64% of the teachers agreed, and 18% strongly agreed to include the students with special needs in the general setup. Just 4% of the respondents remained neutral, 54% of the teachers agreed, and 42% of the students with special needs strongly agreed that student center learning is appropriate for SDGs.

Only 6% of the teachers disagreed with the statement that gender equality is necessary to attain the SDGs. 4% of the respondents remained neutral, 60% of the teachers agreed, and 30% of the students with special needs strongly agreed to gender equality to attain SDGs.

4% of the respondents disagreed that poverty reduction is the basic element to gain sustainable educational development for students with special needs. 12% of the teachers remained neutral, 26% of the teachers agreed, and 58% of the students with special needs strongly agreed that poverty reduction is necessary for SDGs.

4% of the respondents disagreed that socio-economic status plays an important role while attaining SDGs. 8% of the teachers remained neutral, 50% of the teachers agreed, and 38% of the students with special needs strongly agreed to the family's important role of socio-economic status.

Just 8% of the teachers were strongly disagreed, 36% of the respondents disagreed with the statement that traditional learning is more effective for SDGs.

18% of the teachers remained neutral, 34% of the teachers agreed, and 4% of the students with special needs strongly agreed to traditional learning for SDGs. 4% of the respondents disagreed with the effectiveness of multidisciplinary learning for SDGs. 4% of the teachers remained neutral, 40% of the teachers agreed, and 52% of the students with special needs strongly agreed to multidisciplinary learning effectiveness. And 10% of the respondents remained neutral, 50% of the teachers agreed, and 40% of the students with special needs strongly agreed to the importance of multidimensional learning for SDGs for the students with special needs.

4% of the respondents disagreed with the statement that emotional learning is necessary for the students with special needs to attain SDGs. 22% of the teachers remained neutral, 50% of the teachers agreed, and 24% of the students' teachers strongly agreed for emotional learning. 8% of the respondents remained neutral, 30% of the teachers agreed, and 62% of the students with special needs strongly agreed that appropriate curriculum content for the students with special needs is a must for gaining sustainability in educational development.

Only 2% of the respondents disagreed that the environment is a major barrier to gaining SDGs for special needs students. 14% of the teachers remained neutral, 44% of the teachers agreed, and 40% of the students with special needs strongly agreed upon the environment's effects. 16% of the respondents were neutral, 36% of the teachers agreed, and 48% of the students with special needs strongly agreed that cognitive learning is a necessary element of sustainable development for students with special needs.

Just 4% of the respondents disagreed that experimental learning is a major component of SDGs. 12% of the teachers remained neutral, 48% of the teachers agreed, and 36% of the students' teachers strongly agreed with experimental learning. 4% of the teachers were neutral with the statement that active participation of the students with special needs is more helpful for sustainable educational development.42% of the teachers agreed, 54% of the teachers of the students with special needs were strongly agreed for active participation. 2% of the respondents strongly disagreed with the statement that problem-based learning should be encouraged to attain SDGs for the education of students with special needs.8% of the teachers have disagreed, 12% remained neutral, 42% of the teachers agreed, and 36% of the teachers of the students with special needs strongly agreed for problem-based learning.

And 12% of the respondents have disagreed, 36% remained neutral, 38% of the teachers agreed, and 24% of the students with special needs strongly agreed to dialogue-based education.6% of the respondents disagree that competencies should enable active, reflective, and cooperative participation towards sustainable educational development.20% remained neutral, 56% of the teachers agreed, and 18% of the students' teachers with special needs strongly agreed.2% of the respondents strongly disagreed that learning must be problem-based for the

pedagogy of sustainable development of students with special needs. 4% of the teachers have disagreed, 14% remained neutral, 50% of the teachers agreed, and 30% of the students with special needs strongly agreed to problem-based learning.

Just 6% of the respondents strongly disagreed with the statement that acquiring a responsible environment is a must for SDGs. 4% of the teachers have disagreed, 12% remained neutral, 56% of the teachers agreed, and 22% of the students' teachers strongly agreed.4% of the respondents disagreed, 24% remained neutral, 46% of the teachers agreed, and 26% of the students with special needs strongly agreed that cultural influence is the major element for the pedagogy of sustainable development of students with special needs.

Table 2
Independent Samples t-test

Gender of the Teachers	N	Mean	Std. Deviation	t	Std. Deviation	t	Df	Sig. 2 tailed
Female	25	80.9600	7.63479	.824	7.63479	.824	48	.414
Male	25	82.4400	4.72652		4.72652			

Table 2 explain that (t=.824, df=48 and sig.=.414) there is no significance difference in the perception of special education teachers about pedagogy for the sustainable educational development of students with special needs on the basis of their gender.

Table 3
Difference between JSET and SSET teachers based SDGs.

Group Statistics					
	Designation of teachers	N	Mean	Std. Deviation	Std. Error Mear
Total Response	J.S.E.T	25	80.0400	6.84032	1.36806
	S.S.E.T	25	83.3600	5.40740	1.08148

The t-test table 3 shows that there is no significant difference between JSET and SSET teachers about pedagogies and educational sustainable development.

Table 4
The difference among the teachers is based on their job experience

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	12.414	2	6.207	.150	.861
Within Groups	1950.086	47	41.491		
Total	1962.500	49			

Table 4shows that there is no significance difference in the perception of special education teachers about pedagogy for the sustainable educational development of students with special needs on the basis of their job experiences.

Findings

64% of the teachers recommended including students with special needs in general setup for sustainable development. 62% of the teachers strongly recommended the appropriateness of curriculum to make sure the sustainability in education.60% of teachers agreed on gender equality to achieve educational SDGs.58% of the teachers strongly agree on poverty reduction to attain sustainable educational development.56% of the teachers stress on least restrictive environment to gain educational development.54% of the respondents strongly agree with the students' active participation with special needs and sustainable educational development.54% of teachers agreed that student center learning is necessary to make sure educational development.52% of the teachers strongly agreed with the effectiveness of multidisciplinary learning. There is no significant difference between the responses of male and female teachers. There is no significant difference between JSET and SSET teachers. There is no significant difference among the teachers based on their job experiences.

Discussion

Teachers' techniques are a more tangible reflection of their approach to teaching and learning, such as wanting their students to feel comfortable, promoting their involvement, maintaining a cheerful instructor identity, or being perceived as a professional and authoritative individual (Westbrook, et al., 2013). The curriculum is the primary source of information for teachers, especially in developed countries, where it is embedded in official textbooks and teacher manuals, and is often the only resource available to them. The instruction is thereby enacted by the pedagogic methods, techniques, and activities of teachers. The programme connects the macro (officially chosen educational aims and content) and micro (teaching and evaluation in the classroom/school) (Agrawal, 2004). Curriculum, pedagogy, and appraisal are both intertwined and affect each another in the school on a daily basis. The majority of respondents in this study concluded that multidisciplinary learning and the least restrictive learning climate are critical for long-term success. Furthermore, student-related influences such as student agency, inspiration, home language, needs, age, gender, and socioeconomic status influence the understandings and learning that students attain (Aslam & Kingdon, 2011).

Conclusion

The study concluded that according to the perceptions and responses of teachers' poverty reduction, appropriateness of curriculum, active participation of the special students, least restrictive environment, and special students in general setup are the necessary components for the educational sustainable development. It is also concluded that all the teachers' of different gender, pay scale and experiences

have same perception about the educational sustainable development of students with special needs.

Recommendations

Following recommendations were made for the special education teachers:

1. Teachers of students with special needs must ensure the active participation of students in classroom activities.

2. Teachers should adapt the curriculum and pedagogies to meet the specific learning needs of students with special needs.

3. For the inclusion of students with special needs in general education classes suitable education environment and pedagogies should be designed and used by the teachers.

4. The curriculum should meet the needs of the students with special needs.

5. Include students with disabilities in general setup should be encouraged.

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