Study on Analysing the Student Perspectives on Cultural and Social Diversity in Education

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Abstracts

Education is presently required to create inclusive, supportive, and validating environments for education and experiences, while educational organizations continue to maintain students from many different kinds of cultural and socially diverse backgrounds. This research investigates how students engage and collaborate with diverse cultures and social environments to identify the key features influencing their social relationships and learning outcomes. To determine the possibilities and difficulties that students experience in a varied educational environment and make suggestions for the enhancements and assessment techniques for fostering a multicultural and diverse classroom. In this research, the details gathered from 350 students, and utilize 15 questionnaires related to cultural and social diversity in education that were developed, based on five variables, such as students attitudes towards diversity (SATD), impact on the learning environment (ILE), cultural awareness (CA), perception of cultural and social diversity (PCSD), and social interactions (SI). The Wilcoxon-Mann-Whitney test and inferential statistics analysis methods are evaluated through the SPSS software. From both analyses, the variable PCSD performance is higher than other four variables in the field of student perception of social and cultural diversity in education.

Keywords: education, cultural and social diversity, school, students, perception.

Introduction

The evolution of cultural education has involved several key components, including interaction, involvement, conversation, and assessment. These elements facilitate the technique of developing the ability to connect with people from diverse cultural backgrounds and contribute to developing and identifying cultures [5]. Students who acquire their primary language as an alternate (or additional) language can be found in the majority of educational institutions broadly. Since the instance is not revolutionary, the number of students in it is increasing through worldwide mobility processes [17]. Students acquire knowledge both inside and outside of education as societal individuals. Through the family and social environment, the subject students study in school has societal implications and becomes personal [10]. The method by which difference exists in the field of education needs to be addressed because it determines the parameters of democratic endeavors that support social equity and equality [1]. Growing up in diverse regions demonstrates students to a wide variety of viewpoints, approaches, and cultural norms on a regular basis. To ascertain that basic freedoms of people from all cultural backgrounds are observed and maintained, a tolerance of many perspectives and cultures needs to be established from young ages [15]. Social and cultural globalization processes provide an overall framework for this investigation. These processes frequently require students to interact worldwide and communicate across boundaries of culture to increase their job potential. It is achieved through the gaining of relevant skills and experiences during education [16]. Apart from identity and cultural views, students are expanding their view of diversity to include various signs, including gender, language, class, gender identity, citizenship, immigrant history, distinction, mental and physical ability, religion, location, and culture among young people. These markers are frequently found in education manuals and articles examining diversity [12]. The rising globalization and cultural diversity of facilities have generated the concern from students and professionals about individual differences in adaptability and effectiveness in different cultural environments [3].

I. Aim of this research

This study aims to investigate and determine the student's perspectives on social and cultural diversity in educational environments with a particular emphasis on their thoughts, experiences, and perception of diversity. It finds the important factors influencing students' social interactions and learning experiences by investigating the way students respond and are involved with various cultural and social environments. To improve student outcomes and promote an inclusive atmosphere for learning, educational organizations can enhance and integrate culture and socioeconomic diversity by utilizing the evaluation of the research.

Writing framework: In Phase 2, relevant articles are presented. The research methodology is explored in Phase 3. Performance analysis and discussions are demonstrated in Phase 4. Conclusions are determined in Phase 5.

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Relevant Articles

The objective of the research [13] investigated the opinions of higher secondary school students considered the representation of color and gender in science, technology, engineering, and mathematics (STEM) fields. The perspectives of the participants indicated that schools could widen the scope of popular ideas concerning the things that essentially constitute STEM, contribute to the needs of students' societies and families front and center, and have debates about perceptions and gendered racism. In higher education and secondary education, assessments of pupil perspectives were frequently employed in the article [8] to determine the ability of teachers to be considered by other students. There wasn't sufficient research conducted on individual and cultural factors that affect the variation in student perspectives. Evaluating the factors that influence students' assessments of the quality of education could become beneficial in predicting the way students succeed in education. The intention of the study [9] was to determine the way faculty members perceived diversity and the difficulties, advantages, and disadvantages that appeared to be associated with diversity-related components in university-level education. The results indicated that faculty members were not sufficiently educated concerning the culture that was interpreted by the term diversity, and the faculty members required more education to become adequately able to educate on cultural and social diversity. The social adaptability of socially dominant and excluded cultures in the classroom was explored in the paper [14], including the role that a collaborative educational environment for discussion performed in that relationship. The results showed that culturally diversified and low socioeconomic status (SES) classrooms had weaker social integration rates among students, and open discussion environments cannot mitigate cultural and social diversity. An assessment was created in the study [11] metrics specifically for the work to evaluate pre-service educator perspectives on cultural ability for educating students with culturally and linguistically diverse (CLD). It emphasized the importance of assigning prospective educators constant chances to develop knowledge of culture and culturally relevant methods of teaching in the teacher education courses to qualify the students. The social model that showed the social expenses were related to the number of cultural inconsistencies that were consequently connected to the standard diversity approach was explored in the research [6]. Students reported less cultural confusion and, essentially fewer adverse outcomes from learning in foreign education facilities whereas educators were perceived as employing a multicultural approach, involving cultural variety. To gain more information on two components of students' definitions related to education and the method by which the concepts were determined by the education in terms of socioeconomic status, gender, and the relationship between these two identities, the article [7] conducted qualitative interviews and it raised the theoretical and practical issues concerning the effects of diversity and programs for inclusion in higher learning through observing how participation was described in relation to conditions and identity. To effectively teach refugee students, the paper [4] focused on the perceptions that teachers have concerning cultural diversity. Students claiming suggested the pluralistic approaches could be divided into specific categories based on the results of the cluster analysis. To increase students' comprehension of acceptance and appreciation for diversity, the investigation [2] redesigned and evaluated a course in general education. Results showed that students perceive the culturally oriented educational process as a form of

socialization for developing human existence, showing compassion, sharing skills, and providing care for others, which are essential for promoting tolerance.

Research Methodology

I. Dataset Description

The research investigation into cultural and social diversity in education with student perceptions includes 350 students at the school level as participants. Their demographic information like age (10 - 18), both gender, level of education (secondary school and high school), and family background (low, middle, and high) are demonstrated. Fig 1 shows the percentage of education level and family background.
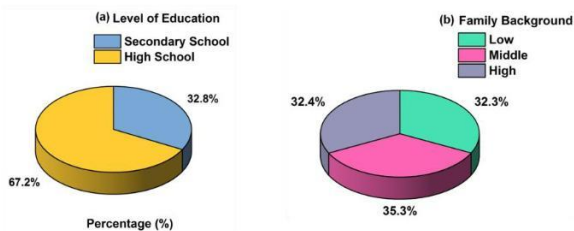

Fig 1 Demographic information

II. Evaluation Variables

The questions were generated based on the five variables such as perception of cultural and social diversity (PCSD), impact on the learning environment (ILE), social interactions (SI), student attitudes towards diversity (SATD), and cultural awareness (CA). The way that the students perceive and appreciate the representation of various social and cultural diversity categories in the context of education is established by the PCSD. The impact of social and cultural diversity on the entire learning environment is assessed by ILE. It covers inclusive teaching methods, an educational program with a variety of resources and viewpoints, and the general culture of respect and inclusion in the classroom. The SI investigates the kind and standard of interactions between students from various cultural and social backgrounds. It explores whether the variety creates more positive or negative social dynamics and how it impacts the student's relationships, collaboration, and communications. Student's attitudes and ideas about diversity are measured through SATD. Their levels of confidence in diversity, their willingness to hear various viewpoints, and their acceptance or avoiding those perspectives are all included. In terms of societal norms, behaviors, and values, the student's comprehension and wisdom of various cultures are evaluated in CA.

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III. Questionnaire Development

The research investigates the student's perception through quantitative survey questionnaires in the field of cultural and social diversity in education. There are five variables perception of cultural and social diversity (PCSD), impact on the learning environment (ILE), social interactions (SI), students attitudes towards diversity (SATD), and cultural awareness (CA) employed for the assessment. Based on the variables, 15 questions were developed and are examined in Table I.

Table I Survey Questions

Variables	Questions
PCSD	What is perception of the levels of social and cultural diversity in classroom?
	How much do teachers and fellow students appreciate and recognize the diversity?
	To what extent do think diversity in terms of culture and society has enhanced education as an entire?
ILE	When engaging in class discussions with a range of cultural and socioeconomic perspectives, how confident?
	How do consider that other viewpoints add to comprehension of the educational content?
	What influence has the diversity of cultures and socioeconomic groups had on the dynamics and surroundings of the classroom?
SI	How much do think social diversity has interfered with your ability to develop relationships and friendships in the classroom?
	Which social abilities and trust have you gained by being part of a diverse student category?
	How frequently do engage in social and cultural interactions with classmates from various backgrounds?
SATD	To what level would be willing to address the assumptions and biases in the classroom?
	In what ways do prefer learning and growing to know about individuals from distinct socioeconomic and cultural backgrounds?
	How much opinion, does accepting diversity contribute to individual development?
CA	How does educational environment impact your comprehension of various aspects?
	What level of familiarity the cultures that exceed your own that you think you have?
	How conscious are of the border controls, attitudes, and opinions of the other cultures among other students in the classroom?

IV. Assessment Techniques

Approaches like inferential statistics and Wilcoxon-Mann-Whitney were employed as the assessment techniques to analyze the data and all these quantitative analyses were performed on the statistical software called Statistical Package for Social Sciences (SPSS). A sample employs inferential statistics in two distinct instances, to estimate a characteristic in a broad population, and to evaluate the results of a study related to a specific group. A random and intended sample from the sample in question needs to be collected to precisely determine observed features, or variables. When the data fails to fit into the normal distribution, the non-parametric statistical

test known as the Wilcoxon-Mann-Whitney test is performed to assess the variances among two distinct sets of data. When interacting with continuous or regular data that ignore the assumptions of the parametric test it is extremely useful to determine that the distributions of categories varied significantly.

Performance Analysis

I. Evaluation of Wilcoxon-Mann-Whitney Test

The Wilcoxon-Mann-Whitney test intended to evaluate the null assumption, which states that the data sets result from similar distributions with an identical central tendency, or the identical data sets were selected from a similar distribution. Table II represents the evaluation results of the Wilcoxon-Mann-Whitney Test.

Table II Estimation of Wilcoxon-Mann-Whitney Test

Variables	Sample size	Mean	Median	Test statistics (U)	Sum of ranks	Effect size (R)	p-value
PCSD	350	188.2	4.3	5491.0	65870	0.33	0.005
ILE	350	165.7	3.8	4789.0	57995	0.20	0.035
SI	350	172.3	4.0	4958.5	60205	0.28	0.012
SATD	350	185.6	4.1	5378.0	64960	0.30	0.008
CA	350	180.5	4.2	5231.5	63175	0.25	0.021

The following statistics have been identified with the 350 sample size (N). In PSCD the test statistics (5491.0), p-value (0.005), effect size (0.33), median (4.3), mean (188.2), and sum of ranks (65870). The SI has a mean value of (172.3), the sum of ranks (60205), p-value (0.012), test statistics (4958.5), effect size (0.28), and median (4.0). CA with a median has 4.2, the test statistics obtained 5231.5, and mean of 180.5, effect size (0.25), p-value (0.21), and sums of ranks has 63175. There are 57995 of rank's sum and the effect size is 0.20. The test statistics (4789.0), p-value (0.035), the mean and median with 165.7 and 3.8 values were obtained in ILE. In SATD, the sum of ranks (64960), test statistics (5378.0), p-value (0.008), mean value of (185.6), effect size (0.30), and median (4.1) were acquired. Fig 2 (a and b) depicts the mean and median results of five variables.
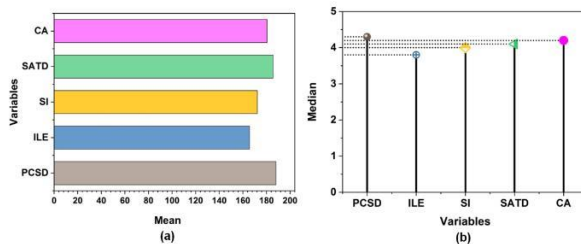

Fig 2 (a) Mean and (b) Median

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II. Inferential Statistics Analysis

Analyzing samples gathered from demographic information using inferential statistics contributes to the development of an adequate comprehension of the data. The use of numerous analytical tests and devices facilitates establishing generalizations on the population. Numerous methods of sampling are employed to select random samples that adequately represent the population. Diversified sampling, grouping, basic randomization, and sequential sampling approaches are several of the significant innovations. When the sample size is less and the data exhibits a student t distribution, a t-test is employed. When the overall variance is unknown, it is employed for assessing the sample with the overall mean. Evaluating the student's parameters can be assisted by a confidence interval (CI). With a hundred measurements using new samples under identical conditions, a 95% confidence interval, for instance, suggests that the estimate qualifies within the range of 95 occurrences out of each test. Table III shows the outcomes of inferential statistics analysis.

Table III Results of Inferential Statistics Analysis

Variables	Mean-Variance	t-test	Lower CI (95%)	Upper CI (95%)	df	p-value
PCSD	0.92	4.21	0.40	1.44	349	<0.001
ILE	0.42	1.89	-0.05	0.89	349	0.060
SI	0.78	3.12	0.28	1.28	349	0.002
SATD	0.55	2.88	0.10	1.00	349	0.004
CA	0.65	2.45	0.15	1.15	349	0.015

Note: "df – degrees of freedom and CI – confidence interval".

Mean-variance with 0.92, t-test (4.21), lower CI (0.40), upper CI (1.44), df (349), and p-value (<0.001) were obtained in PCSD. In CA, the following values were obtained, the mean variance with 0.65, t-test (2.45), upper CI (1.15), df (349), lower CI (0.15), and p-value (0.015). In SI, the t-test (3.12), df (349), upper CI (1.28), mean-variance with 0.78, p-value (0.002), and lower CI (0.28) were acquired. Lower CI (0.10), mean-variance (0.55), Upper CI (1.00), df (349), p-value (0.004), and t-test (2.88) were provided by SATD. The ILE presents the degree of freedom with 349, the upper bound has 0.89, the lower bound gives -0.05, and 1.89 values from the t-test, the mean-variance with 0.42, and the p-value of ILE is 0.060. Fig 3 illustrates the mean-variance outcomes of all variables.
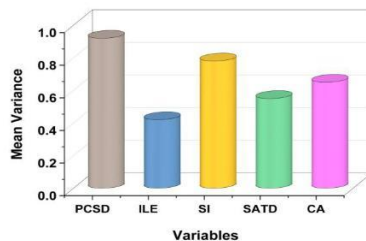

Fig 3 Outcomes of Mean-Variance

III. Discussion

The most supported and effective variable in the research on examining the student's perception of cultural and social diversity in education is PCSD. This variable exhibits a more considerable influence on the educational sector, as demonstrated by the performance estimations of inferential statistics and Wilcoxon-Mann-Whitney test analyses. The test's substantial effect size, highly significant p-value, strong t-test outcome, and CI indicating an improved mean variation all highlight the importance of the effect that the test has the perception of students in social and cultural diversity. To recognize and incorporate various perspectives into educational environments, the PCSD is essential.

Conclusion

Classrooms maintain students from a wide range of backgrounds, including social and cultural diversity, and also need to establish inclusive, supporting, and affirming conditions for learning. To identify the vital factors that affected the students' social interactions and academic performance, it investigated the willingness to engage and communicate with other students from diverse cultural backgrounds. Identifying the opportunities and difficulties that students had a diverse learning environment and offering recommendations for improvements and evaluation methods for enhancing multicultural and diverse classrooms. The study involves 350 secondary and high school students who were selected based on certain variables like SATD, ILE, CA, PCSD, and SI. Fifteen questionnaires about cultural and social diversity in education were developed based on those variables. With the SPSS software, the Wilcoxon-Mann-Whitney test and inferential statistics analytic techniques were evaluated. Based on the two analyses, the PCSD variable performance outperformed all the other variables in the domain of students' perceptions of cultural and social diversity in the educational environment. The emphasis of this study was focused on the high school and secondary school students, and certain locations, that could have an impact on the applicability of the outcomes. To enhance the applicability of the research could cover a wider range of age groups and geographic areas. An in-depth comprehension of social and cultural diversity modifications over time and affects education can be achieved by combining integrated techniques with long-term research.

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