

ISSN- 0975-8720

Journal of Education

June 2024

Volume 14



DEV SAMAJ COLLEGE OF EDUCATION

Sector 36-B, Chandigarh

Accredited with 'A' Grade by National Assessment and Accreditation Council (NAAC), Bangalore

We all know that education is harmonious and over all development of learner. But the cause of concern is the means to achieve the aims of education. Without research we can't answer the what, whom, and how of education. Research is a basic tool to layout the foundations of future education . The journal of education is an effort to collect and publish the quality research papers.

The journal is peer reviewed and refereed, published annually by Dev Samaj College of Education, Sector 36-B, Chandigarh.

The purpose of the journal is to provide a forum for teachers, teacher educators, educational administrators and research workers to encourage critical thinking in contemporary education.

It is our sincere hope that this issue will help the reader to reflect on various issues of education development in our country .

Dr. (Mrs.) Agnese Dhillon
Principal

Patron

Dr.(Mrs.) Agnese Dhillon

Chief Editor

Dr. (Mrs.) Seema Sareen

Editors

Dr. (Mrs.) Anita Nangia
Dr. (Mrs.) Neeru Malik
Dr. (Mrs.) Kamini Gupta

Review Committee

Dr. Jatinder Grover, Panjab University, Chandigarh

Prof. Ram Mehar, USOL, Panjab University, Chandigarh

Dr. Kanwalpreet Kaur, Institute of Educational Technology & Vocational Education, P.U. Chandigarh

Dr. Manoj Thakur, National Institute of Open Learning, New Delhi

SUBSCRIPTION RATES

	ANNUAL MEMBERSHIP	LIFE MEMBERSHIP
INDIVIDUAL	Rs. 500.00	Rs. 3000.00
INSTITUTION	Rs.750.00	Rs. 5000.00

Copy right of the articles published in this journal will rest with Dev Samaj College of Education and may not be produced in any form without the written permission of Dev Samaj College of Education, Sector 36 - B, Chandigarh .

Subscriptions are invited from educationists , institutions , research scholars, teachers and students for the Journal of Education published by Dev Samaj College of Education, Sector 36- B, Chandigarh.

JOURNAL OF EDUCATION

Peer Reviewed & Refereed

ISSN-0975-8720

June 2024

Volume 14

CONTENTS

Topic & Author	Page No.
Self-Disclosure of Secondary School Students in Relation to Demographic Variables <i>Dr. Anuradha Agnihotri</i>	1
Occupational Self-Efficacy of School Teachers In Relation To Perceived Administrative Effectiveness of Principals <i>Mr. Ravinder Kumar**Dr. Rohit Bhandari*</i>	11
Hailakandi Block under Hailakandi Status of Anganwadi workers in Early Childhood Care and Education of District of Assam <i>Arpita Singha</i>	21
Adjustment In Relation to Emotional Intelligence of Adolescents <i>Ms. Aarushi Sharma</i>	28
Exploring Shadow Education Practices: Implications for Educational Equity and Social Justice <i>Deeksha Sharma, Prof. Satvinderpal Kaur</i>	34
Integration of Synectic Model of Teaching to Enhance Mathematical Communication Skills of Students <i>Ms. Amandeep Kaur, Dr. Kanwal Preet Kaur</i>	42
Greening Educational Institutions: Advancing Sustainability in Chandigarh through NEP 2020 and SDG Initiatives <i>Prof. Deepika Kansal & Dr. Preeti Sharda</i>	49
From Classrooms to Clicks: Social Media's Influence on Pedagogy and Practice in Higher Music Education in India <i>Dr. Rajbir Kaur</i>	57
The Challenges to Access Higher Education in India <i>Dr. Deepti Kashyap</i>	77
The Digital Dementia: A Research Review on Cognitive Impairment and Intervention Strategies for Adolescents <i>Dr. Shefali Cheema & Dr. Shikha Bahri</i>	83
Cultural Exchange Programme in Indian Higher Education: Transforming Pedagogical Approaches to Music <i>Dr. Jasbeer Singh</i>	89

SELF-DISCLOSURE OF SECONDARY SCHOOL STUDENTS IN RELATION TO DEMOGRAPHIC VARIABLES

Dr. Anuradha Agnihotri, Associate Professor,
Dev Samaj College of Education, Chandigarh
E-mail: anuagnihotri123@gmail.com

Abstract

Self-disclosure is letting another person know what you think, feel or want. It is the most direct means by which an individual can make himself known to another person. The present study was taken up with the aim of studying self-disclosure of secondary school students in relation to demographic variables such as type of school and gender. The sample of the study included 200 secondary school students of Class IX in the age group of 14-16 years from randomly selected govt. and private schools of Chandigarh. The tool used for data collection was Self-Disclosure Inventory for adolescents by Dr. Virendra Sinha (1971). The findings of the study were that significant differences were found between govt. and private school students with regard to Money, Personality, Study, Body, Interest, Feeling & Ideas; whereas no significant differences were found on the areas of Vocation and sex. Significant differences were found between boys and girls on only two aspects of self-disclosure i.e. 'Money' (girls talk more about it than boys) and 'Sex' (boys discuss more freely than girls). The educational implications of the study have been discussed.

Keywords: *Self-disclosure, Govt. school students, Private school students*

Introduction

In today's world the adolescents face numerous challenges and many a times they want to confine their problems to themselves and not discuss freely with their elders and friends. An adolescent lacking in self-disclosure feels inferior, discouraged and helpless in dealing with different situations of environment.

The variable self-disclosure consists of two words, self and disclosure. 'Self' refers to the inner image of one's own conscious and reflective personality of an individual. Disclosure is a general term used, wherein a stress moment one person (self) speaks to another about himself. Disclosure is both the conscious and unconscious act of revealing more about oneself to others. This may include, but is not limited to, thoughts, feelings, aspirations, goals, failures, successes, fears, dreams as well as one's likes, dislikes, and favorites.

Freud (1938), Allport (1955) have proved that whenever a person discloses himself to another

they feel better.

Horney (1939) has remarked that more the individual ignores his real feelings, wishes and wants, more alienated he is from the real self. This estrangement- alienation from one's real self is at the root of the neurotic personality of our times.

According to Jourard (1959), self-disclosure is a means of talking about one to another person. He further states self-disclosure is the extent to which a person reveals things about himself to others.

According to Sinha(1971), self-disclosure is the ability to express one's real self to others.

According to International Encyclopedia of Psychology (1996), self-disclosure is the process of

*M.Ed student

**Associate Professor, Dev Samaj College of Education, Chandigarh

communicating personal information to another individual, It involves a willingness to reveal intimate thoughts and feelings rather than superficial or obvious characteristics.

Self-disclosure is a process of communication through which one person reveals information about himself or herself to another (Sprecher et al. 2013).

So, it may be concluded that self-disclosure is the extent to which a person reveals things about himself to others and a willingness to reveal intimate thoughts and feelings rather than superficial or obvious characteristics. It implies how much a person express his/her desires, ideas and feelings in whom a person will disclose more and it differs from person to person.

The purpose of the present study is to probe into various aspects of self-disclosure and study them with certain demographic variables of type of school i.e govt. and private and also with regard to gender i.e. boys and girls. In the past attempts have been made to find out the relationship of self-disclosure with other variables but very few studies have been conducted to study it in depth. This has motivated the investigator to unfold the intricacies involved in its various aspects.

Review of Related Literature

The research studies conducted on the variable under study are reported as follows:

Singleton (1976) found that males were as open as females in the willingness to self-disclosure and indicate a readiness to communicate. The findings revealed significant difference in the amount and content of personal information disclosure to target person.

Gill (1984) conducted a study of self-disclosure of boys and girl adolescents. This indicated that boys were more likely to disclose to their closest friends than the girls, because of their extroversion qualities. Girls disclosed themselves lesser than the boys because of their secretive and submissive nature.

Kaur (1986) conducted a study on self-disclosure among adolescents results indicated that there was no significant difference between the adolescents of English medium school and non-English medium schools with respect to different areas and target person.

Vidyapati (1987) conducted a study on “self-disclosure pattern in vocations of male and female adolescents in Allahabad city”. The study that was conducted on 20 male and 20 female Indian adolescents (aged 12–18 yrs), who completed a self-disclosure inventory. Results show insignificant gender differences in self-disclosure.

Sprecher, Treger, & Wondra (2012) experimentally examined whether giving or receiving self-disclosure leads to greater liking and other positive impressions (e.g., closeness) in initial

interactions. Pairs of unacquainted undergraduates completed a structured self-disclosure task. One subject was randomly assigned to disclose while the other listened in a first interaction; participants switched roles for a second interaction. After the first interaction, listeners (vs. disclosers) reported more liking and other positive interpersonal impressions. These differences disappeared after participants switched roles in the second interaction. Furthermore, listening was associated with greater degrees of perceived similarity.

The study by Aldahadha(2023) aims to test how self-disclosure relates to mindfulness, whether self-disclosure or mindfulness best predicts happiness and well-being, and whether there are significant differences between happiness and well-being levels due to self-disclosure and mindfulness. Data from a public sample was collected using e-mails and social media platforms (N = 486). The findings demonstrated a weak relationship between mindfulness and self-disclosure ($r = 0.16$) and acting with awareness but a strong relationship between happiness, wellness, mindfulness, and its factors.

The review of related literature presented above clearly indicates that although some studies have been conducted on self-disclosure by taking into consideration variables such as liking, closeness, mindfulness, happiness and well-being but

not in relation to demographic variables. Thus, the investigator felt a need to study the variable self-disclosure in relation to demographic variables such as type of school and gender among secondary school students.

Objectives

The study was carried out with the following objectives:

1. To compare the self-disclosure among Government and Private school students.
2. To compare the self-disclosure among secondary school boys and girls.

Hypotheses

The null hypotheses formulated for the study were:

1. There will be no significant difference in the self-disclosure of Government and Private school students.
2. There will be no significant difference in the self-disclosure among secondary school boys and girls.

Method and Procedure

The study followed descriptive survey method for data collection (Best & Kahn, 1981). In accordance with the various objectives and the stated hypothesis, the investigator tried to obtain pertinent and precise information concerning the current status of phenomena and wherever possible draw valid conclusions from the

facts that were discovered.

The sample in the present study comprised of 200 Class IX students in the age group of 14-16 years. Equal number of students (boys and girls) were taken from Govt. and private schools. Simple random sampling technique was applied to select the sample.

The tools used for data collection were Self-Disclosure Inventory for adolescents by Dr. Virendra Sinha (1971). The investigator collected the data personally for present study.

Analysis of Data and Interpretation of Results

Hypothesis 1

Hypothesis 1 stating “there will be no significant difference in the self-disclosure of Government and Private school students” was tested by employing t-test. The results are entered in table 1 and its graphical form is given in fig 1.

Table-1 Comparison of Mean scores of Self-Disclosure between Government (N=100) and Private school students (N=100)

Areas of self-disclosure	Group	Mean	SD	t-ratio	Level of significance
Money	Govt.	33.82	13.87	5.96	0.01
	Private	44.91	12.41		
Personality	Govt.	34.71	14.31	4.59	0.01
	Private	43.81	13.74		
Study	Govt.	46.60	20.26	6.35	0.01
	Private	65.47	21.74		
Body	Govt.	42.05	17.40	3.39	0.01
	Private	50.56	18.11		
Interests	Govt.	53.33	21.44	3.54	0.01
	Private	63.76	20.24		
Feelings and Ideas	Govt.	43.68	18.10	4.61	0.01
	Private	56.73	21.67		
Vocation	Govt.	50.22	20.82	1.23	N.S.
	Private	53.89	21.45		
Sex	Govt.	23.90	13.01	1.43	N.S.
	Private	21.03	15.26		

Discussion of Results

Table 1 shows the area wise mean scores, standard deviation and t-ratio of self-disclosure of the secondary school students in different areas i.e. Money, Personality, Study, Body, Interests, Feelings and Ideas, Vocation and Sex.

Money

The mean scores of secondary school students studying in Government school was 33.82 and that of Private school was 44.91 respectively. The standard deviation of government school students was 13.87 and that of private school students was 12.41. The calculated t-ratio between the two mean scores was 5.96 which is significant at 0.01 level.

Personality

The mean scores of secondary school students studying in Government school was 34.71 and that of Private school was 43.81 respectively. The standard deviation of government school students was 14.31 and that of private school students was 13.74. The calculated t-ratio between the two mean scores was 4.59 which is significant at 0.01 level.

Study

The mean scores of secondary school students studying in Government school was 46.60 and that of Private school was 65.47 respectively. The standard deviation of government school students was 20.26 and that of private school students was 21.74. The calculated t-ratio between the two mean scores was 6.35 which is significant at 0.01 level.

Body

The mean scores of secondary school students studying in Government school was 42.05 and that of Private school was 50.56 respectively. The standard deviation of government school students was 17.40 and that of private school students was 18.11. The calculated t-ratio between the two mean scores was 3.39 which is significant at 0.01 level.

Interests

The mean scores of secondary school students studying in Government school was 53.33 and that of Private school was 63.76 respectively. The

standard deviation of government school students was 21.44 and that of private school students was 20.24. The calculated t-ratio between the two mean scores was 3.54 which is significant at 0.01 level.

Feelings and Ideas

The mean scores of secondary school students studying in Government school was 43.68 and that of Private school was 56.73 respectively. The standard deviation of government school students was 18.10 and that of private school students was 21.67. The calculated t-ratio between the two mean scores was 4.61 which is significant at 0.01 level.

Vocation

The mean scores of secondary school students studying in Government school was 50.22 and that of Private school was 53.89 respectively. The standard deviation of government school students was 20.82 and that of private school students was 21.45. The calculated t-ratio between the two mean scores was 1.23 which is not significant.

Sex

The mean scores of secondary school students studying in Government school was 23.90 and that of Private school was 21.03 respectively. The standard deviation of government school students was 13.01 and that of private school students was 15.26. The calculated t-ratio between the two mean scores was 1.43 which is not significant

Conclusions

The descriptive analysis reveals that students of private schools show higher means in the area of Money, Personality, Study, Body, Interest, Feeling & Ideas and Vocation as compared to the secondary school students studying in govt. schools, except for the area 'sex' which was found to be higher among Govt. school students, which implies that they are more open about sex than their counterparts studying in private schools.

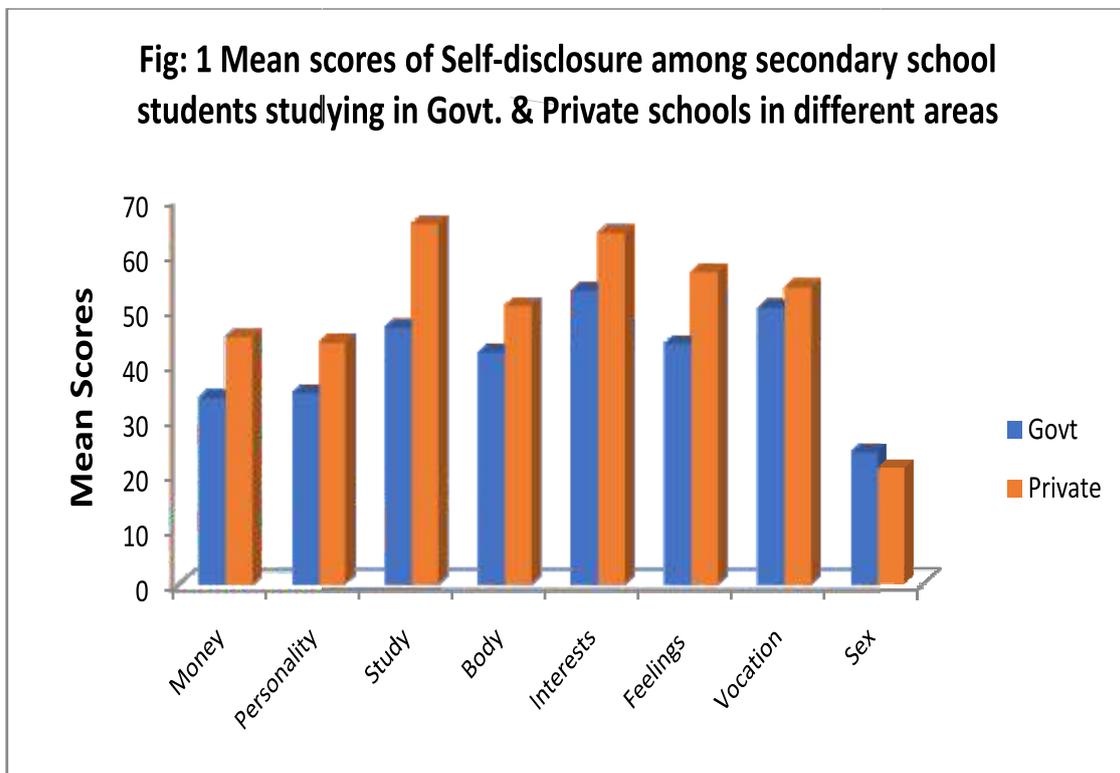
The calculated 't' ratiobetween secondary school students studying Govt and Private Schools are significant in the area of Money ($t=5.96$), Personality ($t=4.59$), Study ($t=6.35$), Body ($t=$

3.39), Interest ($t=3.54$) and Feelings and Ideas ($t=4.61$). However, the 't' ratio between secondary school students studying in Govt and Private schools in the area of Vocation ($t=1.23$) and Sex ($t=1.43$) were not found to be significant.

Thus, the first null hypothesis that, “there will be

no significant difference in the self-disclosure of Government and Private school students” is rejected to a great extent. These results are further clear from fig 1 showing higher means of private school students on various aspects of self-disclosure than private school students, except for the area of sex.

Fig. 1



Hypothesis 2

Hypothesis 2 stating “there will be no significant difference in the self-disclosure among secondary school boys and girls” was tested by employing t-test. The results are entered in table 2 and its graphical form is given in fig.2.

Table-2 Comparison of Mean scores of Self-Disclosure of Secondary School Boys (N=100) and Girls (N=100)

Areas of self-disclosure	Group	Mean	SD	t-ratio	Level of significance
Money	Boys	37.20	15.11	2.17	0.05
	Girls	41.53	13.06		
Personality	Boys	38.24	15.61	0.98	N.S.
	Girls	40.28	13.77		
Study	Boys	55.37	25.06	0.41	N.S.
	Girls	56.70	20.82		
Body	Boys	48.38	20.63	1.62	N.S.
	Girls	44.23	15.26		
Interests	Boys	56.50	22.85	1.35	N.S.
	Girls	60.59	19.85		
Feelings and Ideas	Boys	50.96	22.91	0.53	N.S.
	Girls	49.39	18.90		
Vocation	Boys	49.21	22.48	1.91	N.S.
	Girls	54.90	19.45		
Sex	Boys	24.98	13.88	2.54	0.05
	Girls	19.95	14.17		

Discussion of Results

Table 2 shows the area wise mean scores, standard deviation and t-ratio of self-disclosure of secondary school boys and girls in different areas i.e. Money, Personality, Study, Body, Interests, Feelings and Ideas, Vocation and Sex.

Money

The mean score of secondary school boys was 37.20 and that of girls was 41.53 respectively. The standard deviation of boys was 15.11 and that of girls was 13.16. The calculated t-ratio between the two mean scores was 2.17 which is significant at 0.05 level.

Personality

The mean score of secondary school boys was 38.24 and that of girls was 40.28 respectively. The standard deviation of boys was 15.61 and that of girls was 13.77. The calculated t-ratio between the two mean scores was 0.98 which is not significant.

Study

The mean score of secondary school boys was 55.37 and that of girls was 56.70 respectively. The standard deviation of boys was 25.06 and that of girls was 20.82. The calculated t-ratio between the two mean scores was 0.41 which is not significant.

Body

The mean score of secondary school boys was 48.38 and that of girls was 44.23 respectively. The standard deviation of boys was 20.63 and that of girls was 15.26. The calculated t-ratio between the two mean scores was 1.62 which is not significant.

Interests

The mean score of secondary school boys was 56.50 and that of girls was 60.59 respectively. The standard deviation of boys was 22.85 and that of girls was 19.85. The calculated t-ratio between the two mean scores was 1.35 which is not significant.

Feelings and Ideas

The mean score of secondary school boys was 50.96 and that of girls was 49.39 respectively. The standard deviation of boys was 22.91 and that of girls was 18.90. The calculated t-ratio between the

two mean scores was 0.53 which is not significant.

Vocation

The mean score of secondary school boys was 49.21 and that of girls was 54.90 respectively. The standard deviation of boys was 22.48 and that of girls was 19.45. The calculated t-ratio between the two mean scores was 1.91 which is not significant.

Sex

The mean score of secondary school boys was 24.98 and that of girls was 19.95 respectively. The standard deviation of boys was 13.88 and that of girls was 14.17. The calculated t-ratio between the two mean scores was 2.54 which is significant at 0.05 level.

Conclusions

The descriptive analysis reveals that mean scores of boys are higher than girls in the area of Body, Feeling & Ideas and Sex. It is indicated that boys disclose more about their body, feelings and ideas and sex as compared to girls. Moreover, higher means of girls as compared to boys were found in the areas of Money, Personality, Study, Interests and Vocation. It indicates that girls like to disclose more about their Money, Personality, Study, Interests and Vocation as compared to boys.

The calculated 't' ratio between secondary school boys and girls in the areas of Self-disclosure i.e. personality ($t=0.98$), Study ($t=0.41$), Body ($t=1.62$), Interest ($t=1.35$) Feelings and Ideas ($t=0.53$) and Vocation ($t=1.91$) are not significant. Significant 't' ratio was found between boys and girls only in the area of Money ($t=2.17$) and Sex ($t=2.54$). It shows that money and sex are two major areas what adolescent boys and girls like to discuss.

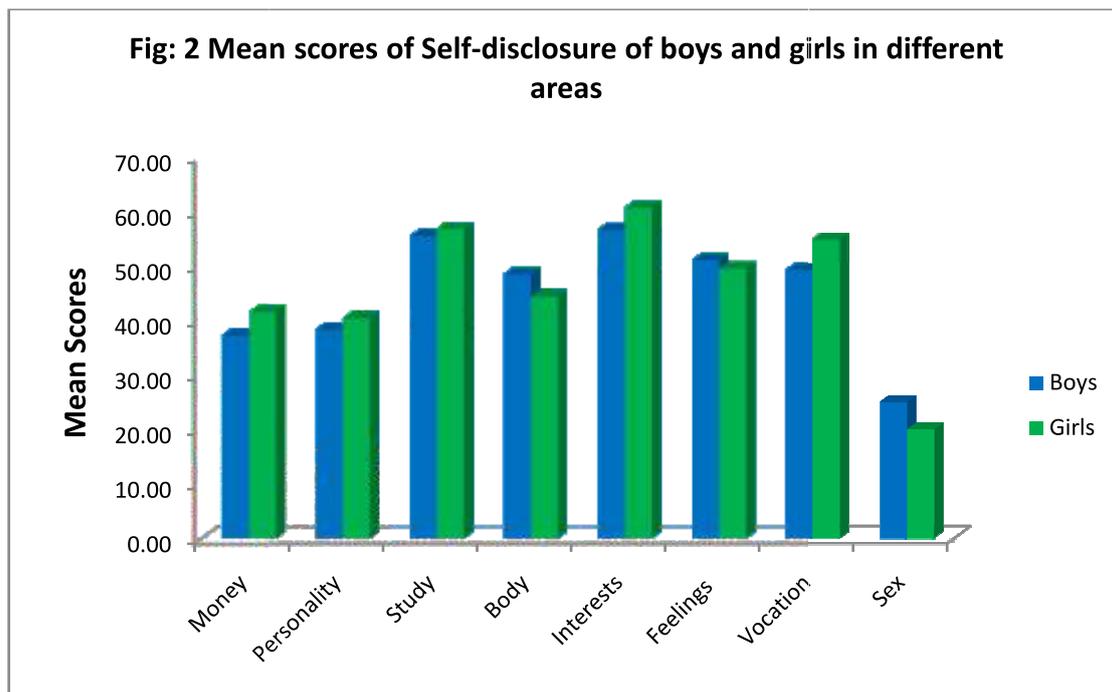
Thus, the second null hypothesis that "There will be no significant difference in the self-disclosure among secondary school boys and girls" is accepted to a great extent.

The findings of present study have been supported by Vidyapati (1987) who has also reported no difference in self-disclosure of boys & girls.

These results are further clear from fig 2 showing mean scores of boys are higher than girls in the area of Body, Feeling & Ideas and Sex. Higher mean

scores of girls are evident in the areas of Money, Personality, Study, Interests and Vocation as compared to boys.

Fig. 2



Findings of the Study

The findings of the present study are as follows:

1. Significant differences were found on self-disclosure between Govt and Private Schools in the area of Money, Personality, Study, Body, Interest, Feelings & Ideas. However, no significant difference was reported in the areas of Vocation and Sex.
2. No significant differences were found on self-disclosure between secondary school boys and girls in the areas of Personality, Study, Body, Interest, Feelings & Ideas and Vocation except for two areas of self-disclosure i.e. Money and Sex, where there was significant difference

among boys and girls.

Educational Implications

The study finds various educational implications that may be useful for the teachers, administrators, policy makers and planners.

1. The findings bring to the light the fact that private school students talk freely about their Money, Personality, Study, Body, Interest, Feeling & Ideas and Vocation as compared to the Govt. school students. The higher mean scores of Govt. School students with respect to Sex indicate they are more open about sex than their counterparts in private schools. The teachers have to ensure and guide students that

there is optimum level of self-disclosure among students irrespective of type of school i.e. Govt. or private.

2. Another finding that emerged out of the study was that the secondary school level boys talk more about their body, feelings and ideas and sex as compared to girls as indicated by their higher means scores. On the contrary it was found that the girls talk freely more about their Money, Personality, Study, Interests and Vocation as compared to boys. This gives a reflection to the educators about what they should guide to the girls and boys of this age group. Their discussions and disclosures need to be healthier and more focused about making the present efforts more fruitful to help them achieve their future goals rather than wasting their precious time and energy on matters that are just materialistic and that may lead them to a less constructive path.

REFERENCES

1. Aldahadha, B. (2023). Self-disclosure, mindfulness, and their relationships with happiness and well-being. *Middle East Curr Psychiatry*, 30, 7. <https://doi.org/10.1186/s43045-023-00278-5>.
2. Allport, G. W. (1955). *Becoming: Basic Considerations for a psychology of personality*. New Haven: Yale University Press.
3. Best, J.W. & Kahn, J.V. (1981). *Research in Education*. 8th edition. Boston: Allan and Bacon.
4. Freud, S. (1938). *The basic writings of Sigmund Freud* (Trans. by A. A. Brill) New York: Random House.
5. Gill, M. (1984). Psychoanalysis and Psychotherapy. A revision. *International review of Psychoanalysis*, 11, 161-179.
6. Horney, K. (1939). *New ways in Psychoanalysis*. New York: Norton.
7. Jourard, S. M. (1959). Self-disclosure and other-cathexis. *The Journal of Abnormal and Social Psychology*, 59(3), 428–431. <https://doi.org/10.1037/h0041640>.
8. Kaur, J. (1986). *A Comparative Study of Self Disclosure of Adolescent Studying in English Medium and Non-English Medium Schools.* M.Ed. Dissertation, Panjab University.
9. Oxford Dictionary of Psychology (2001). <https://www.oxfordreference.com/view/10.1093/acref/9780199534067.001.0001/acref-9780199534067>
10. Sinha, V. (1971). *Self-Disclosure Inventory*. Agra: National Psychological Corporation.
11. Singleton, D.E. (1976). Race and Self designation, self-disclosure and counselors' preference. *Dissertation Abstracts International*, 37A, 4: 1991.
12. Sprecher, S.; Treger, S. & Wondra, J. D. (2012). Effects of self-disclosure role on liking, closeness, and other impressions in get-acquainted interactions, *Jl. Of Social and Personal relationships*, Volume 30, Issue 4, <https://doi.org/10.1177/0265407512459033>
13. Sprecher, S., Treger, S., Wondra, J. D., Hilaire, N., & Wallpe, K. (2013). Taking turns: Reciprocal self-disclosure promotes liking in initial interactions. *Journal of Experimental Social Psychology*, 49, 860–866. doi:10.1016/j.jesp.2013.03.017.
14. Vidyapati. (1987). Self-disclosure patterns in "vocation" of Allahabad City male and female adolescents. *Indian Psychological Review*, 32(4), 16–17.

OCCUPATIONAL SELF-EFFICACY OF SCHOOL TEACHERS IN RELATION TO PERCEIVED ADMINISTRATIVE EFFECTIVENESS OF PRINCIPALS

Mr. Ravinder Kumar**

(Research Scholar, Ph.D.) Assistant Professor, Govt. College of Education, Sec-20 D, Chandigarh

Dr. Rohit Bhandari*

(Supervisor) Assistant Professor, Dev Samaj College of Education, 36 B, Chandigarh

Abstract

Background: Well-organized Administrative skills are required for an effective organization in the schools to attain the set aims and objectives related to the best outcomes of the teaching learning process. Dimock and Dimock (1960) defined administration as “a planned approach to the solving of all kinds of problems in almost every individual group activity, both public and private” Principal of the school play crucial role in the same by his/her Administrative effectiveness. Occupational self-efficacy of the teachers in the school is also an important factor for the success of an organization and principal play effective role in enhancing the same. **Aim:** This study was conducted to study the occupational self- efficacy of the school teachers in relation to perceived administrative effectiveness of the principals. **Methodology:** The study was conducted on sample of 400 secondary school teachers of Govt. & Private secondary schools of U.T.CHD. **Conclusion:** Private secondary school teachers are found to be high in occupational self-efficacy level than their Government school counterparts. Administrative effectiveness is responsible for the enhancement of occupational self-efficacy of the teachers.

Keywords: Administrative Effectiveness, Occupational self-efficacy

Introduction

The environment of the school is one of the major determining factors to the extent to which the envisaged objectives & goals of education could be accomplished. To create a conducive environment of accountability, respect, kindness & cognizance, effective administration at school is of utmost importance. The role of head/principal can never be over-estimated to develop learning communities, work for professional development of teachers, engage in constructive decision making, always plan for instructional leadership, and give respect to the needs and aspirations of the society. With a clear vision and bonafide mission the principal can be a major driving force for realizing the aims of education in real sense. So it is

true that the behaviour of the leader is important but we cannot ignore the qualities of the leader which makes him/her an effective administrator. Any school/institution requires effective leadership and sound administration i.e. “Leader of thoughts” who consistently energizes the minds of his/her co-workers/colleagues and helps them to achieve the goals of organization.

Teacher play crucial role in the teaching learning process in the school and also to attain the set aims and objectives of the organization. Occupational self-efficacy of the teachers is a motivating factor for bringing the change in the system with respect to learning outcomes, working for vision and mission of the school and curriculum reflections.

*M.Ed student

**Associate Professor, Dev Samaj College of Education, Chandigarh

Modern schools with skilled teachers and intellectually alert students need leaders with exceptional personality, charismatic power, wide vision, passionate commitment and zeal to use the talent of people to attain the organizational goals. Hence the importance and requirement of management in education is much more vital as in other organizations. Educational management involves the role of principal of school as a leader and administrator who influences his/her followers with his/her behaviour, effectiveness, understanding, and his/her ability to motivate the staff. Teachers must be inspired at most as their self-efficacy will be directly affected by school leadership. Therefore the human behaviour reflected by principal should be more influencing for teachers to enhance their occupational self-efficacy.

OCCUPATIONAL SELF-EFFICACY

Self-Efficacy

One's own ability and capability to perform various result oriented tasks with different challenges is known as the self-efficacy of a particular individual.

According to staple, Hulan and Higgin's (1998), self-efficacy is the ability of an individual to set and fulfil a specific task. Thus the level of organizational performance will increase with increase in the level of self-efficacy

Akhtar (2008) "self-efficacy is the belief an individual has in his/her own abilities, specifically it is an ability to meet the challenges ahead of him/her and complete a task successfully".

Magnitude, strength and generalization are mainly three basic dimensions for self-efficacy. These three dimensions can be used to assess and measure the self-efficacy of an individual. Level of task difficulty is represented by magnitude. High level of magnitude in self-efficacy proves that a person is capable of completing the difficult tasks and the person with low level of magnitude in self-efficacy will be able to perform only simple tasks

and responsibilities.

Meaning of occupational self-efficacy

Occupational self-efficacy is the limit at which an individual is capable of judging oneself with respect to a particular task assigned to him/her in a career he/she has chosen for vocation. Wood et al., (1990) defined "occupational self-efficacy as the ability to perform better as a team". Mitchell et al., (1994) defined "occupational self-efficacy as the ability to acquire more skills".

There are three different parameters for occupational self-efficacy which represent implications for performance:-

- (A) The perceived level of task complexity by an individual to perform.
- (B) The strong belief of capability of individuals to perform that complex task.
- (C) The ability of individuals to analyze and generalize the abilities to apply them in different situations or areas.

OCCUPATIONAL SELF-EFFICACY OF TEACHERS

Occupational Self Efficacy has always been significant for teachers in the sense that it makes them confident of handling day to day challenges in teaching learning interactions. It not only makes them efficient teachers but also makes them very effective. It is all the more significant for teachers today as the job of teachers has become more challenging specially after Covid-19 pandemic and the response as well as the expectations of students, parents and institutions have become more complex in comparison to pre-Covid times. Occupational self-efficacy of teachers depends upon many factors like their Self-Confidence, Self Esteem, academic achievement, professional training and commitment, personal experiences, feedback and support from senior colleagues, particularly the principal and exposures to challenging situations. Most of the well-trained teachers have a high degree of occupational self-

efficacy as it is this factor which is emphasized during their field-training and mentoring.

The dimensions of occupational self-efficacy studied in the present study are as follows:

Confidence: confidence is dependence on one's own abilities..

Command: it is a sense of control over the situation.

Adaptability: it is the ability to adjust and overcome the disabling influence on occupational functioning irrespective of the environment at the workplace.

Personal effectiveness: it is inclination towards continuous development and to integrate some ideas from the power of positive thinking and positive psychology for self-helping to deal with success, goals and related concepts in occupation.

Positive attitude: positive attitude is ability to evaluate optimistically.

Individuality: it is independence in making decisions and setting standards for performance.

ADMINISTRATIVE EFFECTIVENESS

In the world every school has its broad and specific aims and objectives. An effective administration is required for the attainment of these aims and objectives. It needs well-organized administrative machinery. The school life will be full of chaos and confusions without efficient and effective administrative machinery. It can be conferred that an organization is a muddle of men and machines without any proper administration. For the success of any organization good administration plays a vital role besides the capital, material and technical know-how. To survive in the world of this competition and technology environment every organization needs an effective administrator (Mudasir, 2012).

A good administrator should ensure that the associated efforts of individuals are productive. To attain this, administrators should possess most creative and best efforts on the part of the members

of the organization. L.D.White (1958) defined administration as an art of directing, coordinating, and controlling humans to attain some purpose or goal.

Daniel Katz and Robert Kahn (1974) suggest that it is mandatory for the principal of a school to play the role of manager because it is the most important aspect of school leadership. They divide the managerial roles and skills into three major areas:-

Technical:-It involves good planning, organizing, coordinating, supervising, and controlling techniques.

Human: - dealing with human relations and people skills, good motivating and morale building skills.

Conceptual: - emphasizing knowledge and technical skills related to the service (or product) of the organization.

POSDCORB

The daily activities of the school administrator for effectively managing the school affairs totally depends upon the POSDCORB which includes planning, organizing, staffing, directing, coordinating, reporting and budgeting. POSDCORB for the schools is equally important for practical use as in any other organization in all over the world. Administration in the form of function, elements ensures the hierarchical structure in the process of organization to attain the desirable components in the system of education. Hence, it defines the role of principal as an administrator in the day to day activities in the school for their efficient execution as a leader or head. It was Gullick and Urwick(1937) who proceeded the original work of Henri Fayol (1911) 'POCCC'(Plan, organize, control, coordinate and command) to give the term POSDCORB to explain the functions of an administrator and manager. They emphasize the use of it by every principal or head of school or any organization as a necessary function of effective administration. Mullins (2005) therefore upheld that the process of

managing an institution is responsible for the supervision of efforts of members of the institution are coordinated, directed, and guided towards the attainment of the organizational goals. Sequence of administrative process as modified by Enaohwo & Eferakeya (1989):-

Planning: - planning involves the thinking process with analysis for the present and futuristic circumstances. It is recommended as the techniques followed and mentioned for the completion of tasks to be performed by the head of any organization by utilizing the available resources.

Organizing: school administrators are always responsible for the well organization of the activities and their execution in the school to attain the set objectives and goals of the organization. Hence it is the prime duty of the principal to organize the activities in a well manner.

Staffing:- Planning and management of the staff in terms of their selection, promotion, training and transfer is the main element of staffing on the part of principal/administrator of the school. It demands errorless efforts by the head of the organization. The role of principal as a manager involves managing the proper and effective selection, appraisal, and development of personnel to fill the roles designed into the structure

Directing:- The principal of the school always directs upon the specificity of attainment of the educational objectives and goals. Direction is to direct the staff what to do and also to do it with their best abilities.

Coordinating:- coordination is balancing and maintaining the team by ensuring a suitable division of work and seeing that the tasks are performed in harmony. Hence all the activities of the school should be under the well coordination by the principal for timely attainment of the goals.

Reporting:- Reporting can be considered as the glamour of any school or organization because it provides a base for the actions to be taken by

providing relevant information.

Budgeting: - As the planning, organizing, staffing, directing, coordinating, reporting are major steps of effective administration, budgeting is also a crucial part of any school or organization. It serves as a statement of priorities, resources allocation, and control tool for management, reporting and accountability.

SIGNIFICANCE OF THE STUDY

The present study is very significant in contextualizing the roles of teachers and principals in helping them do their work more confidently and effectively. Study is useful for the teachers to better understand the concept of occupational self-efficacy and also to work upon the same to improve one's working ability. If a teacher has a high level of occupational self-efficacy i.e. beliefs in one's capabilities, confidence, personal effectiveness, positive attitude, adaptability etc. then it will be helpful in effective outcome of the teaching and learning process. Policy makers may also be benefited to work upon the strategies and policies to improve the outcomes of the teaching learning process.

In education, the principal/head of the school acts as decision maker because we found him/her at the top position in the form of authority and responsibility within the schools. Hence the study of administrative effectiveness of them will definitely gives us the better analysis of school organization and administration.

The purpose of this study is to provide a critical review of the relation between occupational self-efficacy of secondary school teachers with perceived administrative effectiveness of principals as key element of educational system and to determine and consider some useful and relevant information.

OBJECTIVES OF THE STUDY

1. To study the interaction effect of type of management and perceived Administrative effectiveness of principals on occupational

- self-efficacy of secondary school teachers.
2. To study the difference in perceived Administrative effectiveness among government and private secondary school principals as perceived by teachers.
 3. To study the difference in occupational self-efficacy of teachers with respect to perceived Administrative effectiveness of secondary school principals.

HYPOTHESES OF THE STUDY

1. There will be no interaction effect of type of management and perceived Administrative effectiveness on occupational self-efficacy of secondary school teachers.
2. There will be no significant difference in perceived Administrative effectiveness among government and private secondary school principals as perceived by teachers.
3. There will be no significant difference in occupational self-efficacy of teachers with respect to perceived Administrative effectiveness of secondary school principals.

DELIMITATIONS OF THE STUDY

Keeping time and resource constraints in view, the study was delimited to the following:

1. Present study was delimited to the secondary school teachers and principals of Government and private schools affiliated to C.B.S.E. situated in U.T Chandigarh.

2. Study was delimited to two variables only i.e., occupational self- efficacy and administrative effectiveness of principals.
3. Study was delimited to 400 secondary school teachers and 40 principals.

SAMPLE OF THE STUDY

For the present study, stratified random sampling method was used. 40 secondary schools (20 Govt. and 20 Priv.) of U.T. Chandigarh were taken for the study. 01 principal and 10 teachers from each school were taken as a sample for the study. In this way, 40 principals and 400 teachers comprised the total sample.

TOOLS USED

In the present study, the following tools were used to collect data:

- 1) Occupational self-efficacy scale by Pethe, Chaudhary and Dhar, (2006).
- 2) Principal administrative effectiveness scale developed and validated by the investigator.

Testing of Hypotheses

Hypothesis 1

There will be no interaction effect of type of management and perceived Administrative effectiveness on occupational self-efficacy of secondary school teachers.

**Table 1.1: Test of Between-Subject Effects
Dependent Variable: Occupational Self-Efficacy**

Source	Type III Sum of Squares	df	Mean Square	F	p
Type of Management	275.219	1	275.219	3.4338*	0.023
Perceived Administrative Effectiveness	3.543	1	3.543	0.044	0.834
Type of Management* Perceived Administrative Effectiveness	23.038	1	23.038	0.287	0.593
Error	8656	108	80157		
Total	749175	116			

Conclusions drawn from the table 1.1 to check the effect of type of management, perceived administrative effectiveness of principals of secondary schools on occupational self-efficacy of secondary school teachers is as follows:

➤ **Effect of type of management (Government & private) on the variable of occupational self-efficacy of secondary school teachers.**

Table 1.1 reveals that the F-statistic corresponding to type of management (Government and private) is 3.433, which is significant ($p > 0.05$). It is found that the private secondary school teachers have higher occupational self-efficacy than their government counterparts. The value of mean for occupational self-efficacy of government secondary school teachers is 77.61 and private secondary school teachers is 81.86. The value of t-ratio is 5.26, which is significant ($p < 0.01$). It indicates significant difference in occupational self-efficacy of government and private secondary school teachers.

Effect of perceived administrative effectiveness (High and low) on the variable of occupational self-efficacy of secondary school teachers.

The F-statistic corresponding to perceived

administrative effectiveness (high and low) is 0.044, which is non-significant ($p > 0.05$). It shows that perceived administrative effectiveness of principals of secondary schools do not have any effect on occupational self-efficacy of teachers of government and private secondary schools. It might be due to overemphasis on the administration of principals in the schools.

The interaction between type of management and perceived administrative effectiveness is non-significant as $p = 0.593$ with F statistic 0.287. Research studies conducted by (Ibukun, Oyewole & Abe, 2011); Oluwadare (2011); (Gupta & Sawhney, 2010); (Kwong, Paula & Allan, 2010); (Roya & Fatehmeh, 2016) favoured the present findings. Hypothesis 1 which states that “There will be no significant effect of type of management and perceived administrative effectiveness on occupational self-efficacy of secondary school teachers”, is accepted.

Hypothesis 2

There will be no significant difference in perceived administrative effectiveness among government and private secondary school principals as perceived by teachers

Table 1.2: Difference in Perceived Administrative Effectiveness of Government and Private Secondary School Teachers

Groups	N	Mean	Standard Deviation	t-ratio
Government secondary school teachers	200	197.66	18.33	7.48*
Private secondary school teachers	200	212.48	21.18	

*Significant at 0.01 level of significance

Table 1.2 shows that the values of mean for perceived administrative effectiveness of government and private secondary school teachers 197.66 and 212.48 respectively. The value of t-ratio is 7.48, which is significant ($p < 0.01$). It indicates that there is significant difference in perceived administrative effectiveness of government and private secondary school teachers. This leads to rejection of hypothesis 2 which states that "There will be no significant

difference in perceived administrative effectiveness of principals among government and private secondary schools as perceived by teachers".

Perceived administrative effectiveness of private secondary school teachers (mean=212.48) is significantly higher than their government school counterparts (mean=197.66). Results from the research studies of Comfort (2012); & Arya (2014); supported the present findings.

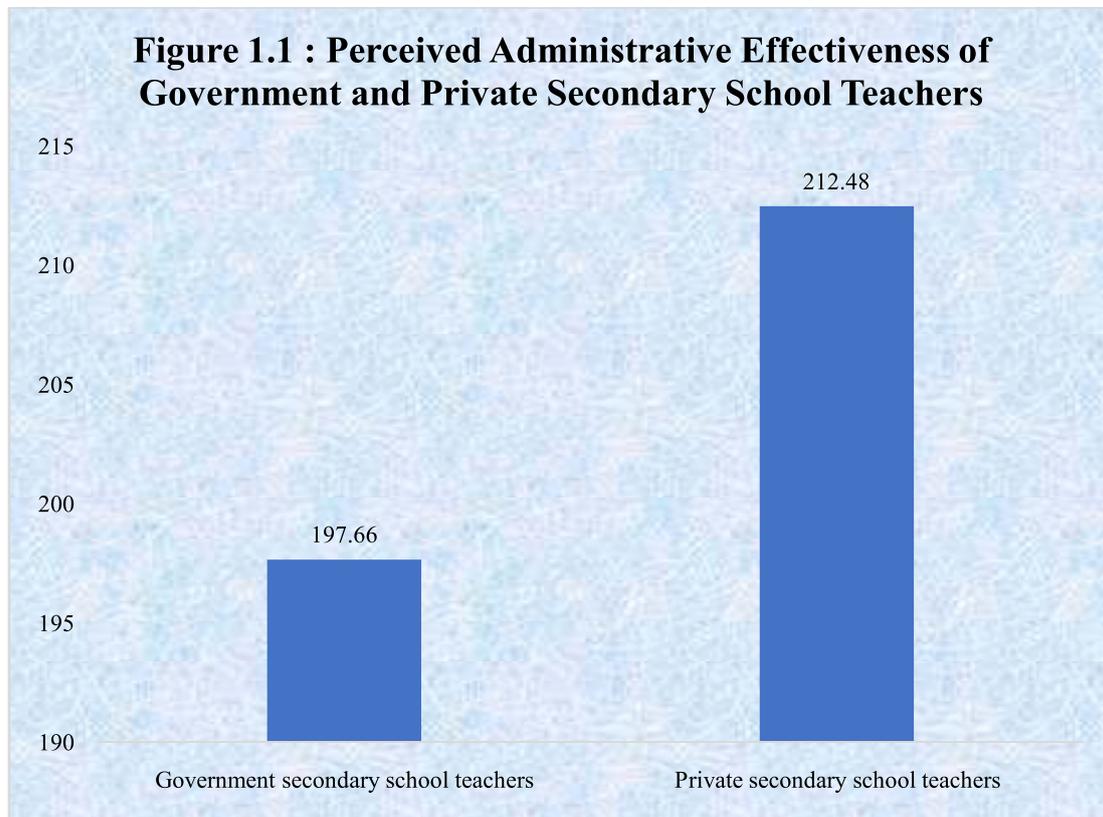


Figure 1.1 gives comparative view of perceived administrative effectiveness of government and private secondary school teachers.

Hypothesis 3

There will be no significant difference in occupational self-efficacy of teachers with respect to perceived administrative effectiveness of secondary school principals.

Table 1.3: Difference in Occupational Self-Efficacy of Secondary School Teachers with respect to Perceived Administrative Effectiveness

Groups	N	Mean	Standard Deviation	t-ratio
High perceived administrative effectiveness	108	81.28	8.68	1.85 (NS)
Low perceived administrative effectiveness	108	79.18	7.57	

NS means non-significant

Table 1.3 shows that the values of mean for occupational self-efficacy of High and low perceived administrative effectiveness of secondary school teachers are 81.28 and 79.18 respectively. The value of t-ratio is 1.85 which is non-significant ($p > 0.05$). It indicates that there is no significant difference in occupational self-efficacy of teachers of secondary schools with high and low perceived administrative effectiveness.

Researchers like (Ibukun, Oyewole & Abe, 2011); Oluwadare (2011); (Gupta & Sawhney, 2010); (Kwong, Paula & Allan, 2010); (Roya & Fatehmeh 2016); supported the present results. Hypothesis 3 which states that 'There will be no significant difference in occupational self-efficacy of teachers with respect to perceived administrative effectiveness of principals of secondary schools', is accepted.

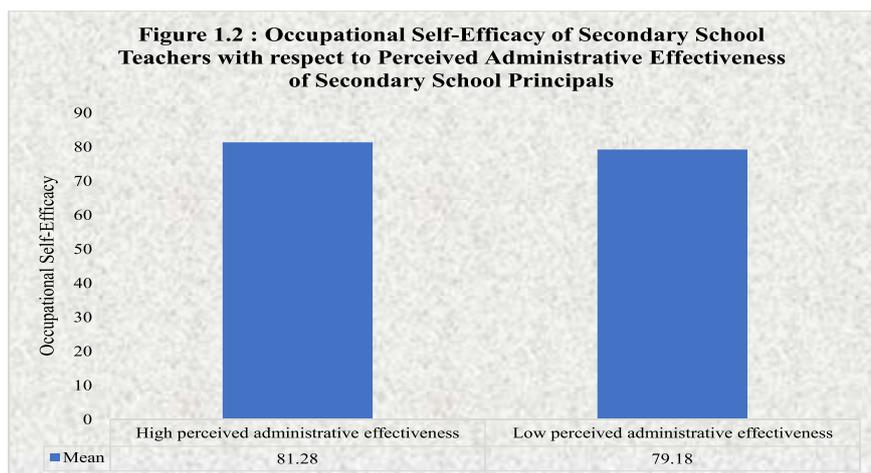


Figure 1.2 give comparative view of occupational self-efficacy of secondary school teachers having low and high administrative effectiveness.

MAJOR FINDINGS

a) F static value (0.287) indicates that the interaction between type of management and perceived administrative effectiveness is non-significant.

b) There is significant difference (t-value=5.26) in occupational self-efficacy between government and private secondary school teachers of U.T. Chandigarh. The mean of occupational self-efficacy (M=81.86) of private secondary school teachers of Chandigarh is higher than the mean of the occupational self-efficacy (M=77.61) of government secondary school teachers of Chandigarh.

c) There is significant difference (t-value=7.48) in perceived administrative effectiveness between government and private Secondary school principals of U.T. Chandigarh. The mean of perceived administrative effectiveness (M=212.48) of private secondary school principals of Chandigarh is more than the mean of the perceived administrative effectiveness (M=197.66) of government secondary school principals of Chandigarh

d) T-value (1.85) between high and low perceived administrative effectiveness of principals indicates that secondary school teachers do not differ significantly in the occupational self-efficacy on the basis of their perceived administrative effectiveness of principals.

GENERAL DISCUSSION AND EDUCATIONAL IMPLICATIONS

Occupational self efficacy in case of Private secondary school teachers found to be higher as compared to Government School teachers. Hence private management in secondary schools may be provided more favorable conditions for the variable of occupational self efficacy of the secondary school teachers. Administrative effectiveness of private school principals' as perceived by teachers was better as compared to their government counterparts. However

secondary school teachers of private and government managements do not differ in their occupational self-efficacy level on the basis of high and low perceived administrative effectiveness.

The findings of the present research work may be beneficial for both the teachers as well as principals of the schools to improve the quality of teaching learning process. Administration studied in the study was based upon the POSDCORB model of administration. Various programmes for the principals can be organized in the schools to improve their administrative effectiveness.

References:

- Akhtar, M. (2008). What is self-efficacy? Bandura's 4 sources of efficacy beliefs. *Positive Psychology*. Retrieved on March 14, 2022 from <http://positivepsychology.org.uk/self-efficacy-definition-bandurameaning>
- Arya, L. M. (2014). Teachers' perception of principal's administrative effectiveness in govt. and public secondary schools in Moradabad district. *International journal of education and science research review*, 1(5).
- Comfort, O.A (2012) A Comparative Study Of Principals' Administrative Effectiveness In Public And Private Secondary Schools In Ekiti State, Nigeria. *Journal of education and Practice* 3 (13) 39-43
- Dimock, M. E., & Dimock, G. O. (1960). *Public Administration* (3rd Ed.). N.Y.: Rinehart, New York,
- Enaohwo, J. O., & Eferakeya, O. A. (1989). *Educational Administration*. Ibadan Paperback Publishers Limited.
- Gulick, L. (1937). *POSDCORB: Functional elements of administration*. Classical P.A.
- Gupta, N. & Sawhney, E. (2010). Occupational self efficacy : A comparative study of government and private sector executives. *International Referred Research Journal*, 1 (9), 19-22.

- Higgins, C. A. & Compeau, D. R. (1995). Computer self efficacy: Development of a measure and initial test. *MIS Quarterly*, 12 (4), 189-211.
- Ibukun, W. O., Oyewole, B. K., & Abe, T.O. (2011). Personality characteristics and principal leadership effectiveness in Ekiti State, Nigeria. *International Journal of Leadership Studies*, Vol. 6(2), 247-262.
- Kwong, Y., Paula, W. K. & Allan. (2010). Secondary school vice-principals commitment challenge, efficacy, synchrony. *British Educational Research General*, 36 (4), 531-548.
- White, L. D. (1952). [The Federalists: a study in administrative history](#). Macmillan Co.
- Mitchell, T. R., Hopper, H., Daniels, S., George, F., & James, L. R. (1994). Predicting self efficacy and performance during skill acquisition. *Journal of Applied Psychology*, 79 (4), 506-521.
- Mudasir, B. (2012). Occupational efficacy and administrative behaviour: A study of educational administrators in Kashmir. *Research Scholarly Article*, 4(11), 30-37.
- Mullins, L. J. (2005). *Management and Organizational Behaviour* (7th Ed.). England: Pearson Education Limited.
- Oluwadare, A. (2011). Principal's competency needs for effective schools' Administration in Nigeria. *Journal of education and practice*, 2(4).
- Pethe, S., Chaudhari, S., & Dhar, U. (2005). Manual for occupational self efficacy scale. *National Psychological Corporation, Agra, India*.
- Roya, S. & Fatehmeh, S. (2016). Occupational self-efficacy and its relation to organizational commitment among teachers of Mysore city. *International Journal of Psychology and Psychiatry*, 4(1), 72-81.
- Wood, R., Bandura, A. & Biley, T. (1990). Mechanisms governing organizational performance in complex decision making environments. *Organizational Behaviour and Human Decision Processes*, 46 (2), 181-201

Hailakandi Block under Hailakandi Status of Anganwadi workers in Early Childhood Care and Education of District of Assam

Arpita Singha
Assistant Teacher

Department of Education Assam, India.

Abstract

In India the Anganwadi centres emerged for early childhood care and education as a part of ICDS scheme. Present study mainly focuses on to survey the facilities available in the Anganwadi centres of Hailakandi district of Barak valley Assam and assesses the knowledge, and role and responsibilities of Anganwadi workers. The study was used descriptive survey method followed by mixed approach and taken data from the 30 Anganwadi centres of Hailakandi block of Uttarkanchanpur, Bakrihawar New, Kalinagar New and Panchgram cluster of Hailakandi district. The study finds out that maximum number of workers in Anganwadi centre are not aware of the ECCE concepts. They are not trained and around 55% of teachers are low qualified. As NEP 2020 aims to make education system in India more inclusive, equitable and relevant to the needs of the 21st century. But here in above mentioned Clusters most of the centre are kept closed during class hours. They are not following the arrival and departure timing. Proper monitoring and supervision are not tracking by the department. It also finds out the problem of centres lacking water facility, seating arrangement, lack of rooms and proper infrastructure. So, it is visible that the role and responsibility are affecting the teaching and learning process.

Keywords: Facilities in Anganwadi Centres, Anganwadi workers, Knowledge, Role and Responsibilities.

INTRODUCTION

Early childhood care and education (ECCE) play a foundational role in shaping the development and well-being of young children. The formative years, from birth to age eight, represent a critical period during which children experience rapid cognitive, emotional, social, and physical growth. The quality of care and education provided during this time profoundly influences their future outcomes, including academic achievement, socio-emotional competence, and lifelong health. In recent decades, there has been a growing recognition of the importance of investing in early childhood development as a means to promote equity, foster economic prosperity, and build resilient societies. Research consistently demonstrates that high-quality ECCE programs not only prepare children

for school success but also yield significant long-term benefits, including higher educational attainment, increased earning potential, and reduced rates of crime and delinquency. This report aims to explore various aspects of early childhood care and education, ranging from theoretical frameworks to practical implementation strategies. It will examine key components of quality ECCE programs, such as curriculum design, teacher qualifications, family engagement, and the role of early intervention services. Additionally, the report will investigate current challenges and opportunities in the field, including access disparities, funding issues, and emerging trends in pedagogy and technology. By shedding light on the importance of early childhood care and education and offering insights

INTRODUCTION

Early childhood care and education (ECCE) play a foundational role in shaping the development and well-being of young children. The formative years, from birth to age eight, represent a critical period during which children experience rapid cognitive, emotional, social, and physical growth. The quality of care and education provided during this time profoundly influences their future outcomes, including academic achievement, socio-emotional competence, and lifelong health. In recent decades, there has been a growing recognition of the importance of investing in early childhood development as a means to promote equity, foster economic prosperity, and build resilient societies. Research consistently demonstrates that high-quality ECCE programs not only prepare children for school success but also yield significant long-term benefits, including higher educational attainment, increased earning potential, and reduced rates of crime and delinquency. This report aims to explore various aspects of early childhood care and education, ranging from theoretical frameworks to practical implementation strategies. It will examine key components of quality ECCE programs, such as curriculum design, teacher qualifications, family engagement, and the role of early intervention services. Additionally, the report will investigate current challenges and opportunities in the field, including access disparities, funding issues, and emerging trends in pedagogy and technology. By shedding light on the importance of early childhood care and education and offering insights into effective practices and policies, this report seeks to inform policymakers, educators, parents, and stakeholders about the critical role they play in supporting the holistic development of young children.

Review of Related Literature-

Baliga and Walvekar (2017)- the study titled as “A study on knowledge of Anganwadi workers

about integrated child development services at three urban health centres”. The study finds out that only 45.39% had knowledge regarding its services and 88.16% of Anganwadi workers had good knowledge on health, nutrition and immunization. The workers had no relation with the education services.

Makadia et al. (2016)- The study titled as “comparative study to assess function of Non-profit organization and the Government”. The study finds out that NGOs are doing better jobs than the Government Anganwadi centres. The study explained statistically about the malnutrition children among the NGOs and Anganwadi centres.

Kumar and Gupta (2014)- the study titled as “Evaluation of Integrated Child Development Services scheme (ICDS). This study was based on comparative method. The study findings were that there was absolutely no difference lies between the ICDS and non ICDS. The study also says that occupation of agriculture was not the main reason for difference among the children.

Postdoctoral Research, Yuki Ohara of Japan (2013)- The titled of the study was ECE in Indian context- In her study it is stated that India demands for ECCE from various centres because of developing standard of living of Indian people for example double income in a family, etc. According to her ECCE gained attention in India because of the following reasons In India children under the age five die than anywhere else in the world. In India under the age of three found to be underweight. So ECCE program will improve the physical conditions of children, will promote the intellectual, social, cognitive and will also help to reduce the dropout rates. ECCE centres will also take care of health, nutrition of children, lactating mother, pregnant women and participation of women in different workforce. Her study also discussed about the ECCE providers and their various programs. Such as MWCD has been providing ICDS free of charge through Anganwadi Centres. Since 1975 it has been

INTRODUCTION

Early childhood care and education (ECCE) play a foundational role in shaping the development and well-being of young children. The formative years, from birth to age eight, represent a critical period during which children experience rapid cognitive, emotional, social, and physical growth. The quality of care and education provided during this time profoundly influences their future outcomes, including academic achievement, socio-emotional competence, and lifelong health. In recent decades, there has been a growing recognition of the importance of investing in early childhood development as a means to promote equity, foster economic prosperity, and build resilient societies. Research consistently demonstrates that high-quality ECCE programs not only prepare children for school success but also yield significant long-term benefits, including higher educational attainment, increased earning potential, and reduced rates of crime and delinquency. This report aims to explore various aspects of early childhood care and education, ranging from theoretical frameworks to practical implementation strategies. It will examine key components of quality ECCE programs, such as curriculum design, teacher qualifications, family engagement, and the role of early intervention services. Additionally, the report will investigate current challenges and opportunities in the field, including access disparities, funding issues, and emerging trends in pedagogy and technology. By

shedding light on the importance of early childhood care and education and offering insights into effective practices and policies, this report seeks to inform policymakers, educators, parents, and stakeholders about the critical role they play in supporting the holistic development of young children.

Review of Related Literature-

Baliga and Walvekar (2017)- the study titled as “A study on knowledge of Anganwadi workers about integrated child development services at three urban health centres”. The study finds out that only 45.39% had knowledge regarding its services and 88.16% of Anganwadi workers had good knowledge on health, nutrition and immunization. The workers had no relation with the education services.

Makadia et al. (2016)- The study titled as “comparative study to assess function of Non-profit organization and the Government”. The study finds out that NGOs are doing better jobs than the Government Anganwadi centres. The study explained statistically about the malnutrition children among the NGOs and Anganwadi centres.

Kumar and Gupta (2014)- the study titled as “Evaluation of Integrated Child Development Services scheme (ICDS). This study was based on comparative method. The study findings were that there was absolutely no difference lies between the ICDS and non ICDS. The study also says that



Table 1- Sample Collection and Distribution

S1 No	Name of the Cluster	Name of the Revenue Village
1	Uttarkanchan Cluster	Dolidoh Grant
		Dakhin Badarpur
		Uttarkanchanpu-I Pt
		Nabashantipur
		Uttarkanchanpu-II Pt
2	Panchgram	Panchgram
		Uttarbadarpur
		Badarpur Grant
		Thandapur
3	Bakrihwar New	Bakrihwar-Pt
		Bakrihwar-II
		Bakrihaw Pt-I
4	Kalinagar New	Kalinagar -PI
		Kalinagar -PII
		Kalinagar -Pt
		Polarpar
Total	04	16

TOOLS

Researcher has used self-made tool for the study. Two tools had been used to conduct the survey.

(i) To know about the facilities provided to the Anganwadi centre by the government, a check-list with 13 items were prepared for the study.

(ii) A questionnaire was made and standardized to know the knowledge, and

role and responsibilities of Anganwadi workers about Early Childhood Care and Education. 19 items were made for the questionnaire (9 for knowledge and 10 for Role and Responsibilities).

DATA ANALYSIS, INTERPRETATION:

Table –2: Facility index at Anganwadi centers

Item No	Facilities	Responses	
		Yes	No
1.	Room	73.08%	26.92%
2.	SittingArrangement	57%	42%
3.	Toilet	30%	70%
4	Teaching Material	65.38%	34.62%
5	Playroom	11.54%	88.46%
6	Hot Cooked Meal	30%	70%
7	Weight Machine	100%	0%
8	First Aid Kit	100%	0%
9	Health Checkup	100%	0%
10	Vaccination	100%	0%
11	Different Activity	19.23%	18.77%
12	Curriculum	100%	0%
13	Water	19.23%	80.77%

Interpretation: After the data collection, the researcher had observed that all facilities were not available in each Anganwadi centre. On the basis of table, the status of different facilities of Anganwadi centres are one by one interpreted in bellow.

- Room is an important part of Anganwadi centre. From the table it is clear that the room were available at 19 out of 26 Anganwadi centres whereas at 7 Anganwadi centres don't have own room, it means 73.08% Anganwadi centres had rooms

whereas 26.92% Anganwadi centres had no rooms. The Anganwadi worker had worked in the home of other people, field, or courtyard area where rooms were not available at Anganwadi Centres.

- Anganwadi centres had no sitting arrangement facilities but the Anganwadi worker teach the students in a small area. The community members had arranged a sitting place for children for reading, writing and other activities.

Interpretation: After the data collection, the researcher had observed that all facilities were not available in each Anganwadi centre. On the basis of table, the status of different facilities of Anganwadi centres are one by one interpreted in bellow.

- Room is an important part of Anganwadi centre. From the table it is clear that the room were available at 19 out of 26 Anganwadi centres whereas at 7 Anganwadi centres don't have own room, it means 73.08%

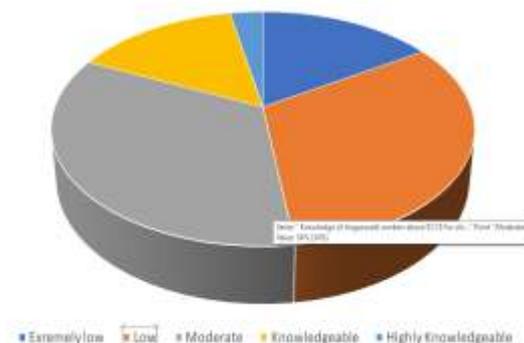
Anganwadi centres had rooms whereas 26.92% Anganwadi centres had no rooms. The Anganwadi worker had worked in the home of other people, field, or courtyard area where rooms were not available at Anganwadi Centres.

- Anganwadi centres had no sitting arrangement facilities but the Anganwadi worker teach the students in a small area. The community members had arranged a sitting place for children for reading, writing and

Table-3: Knowledge of Anganwadi workers about ECCE for children below 6 years

1.	Extremely low level of Knowledge	16%
2.	Low level of knowledge	32%
3.	Moderately Know ledged	34%
4.	Knowledgeable	15%
5.	Highly Knowledgeable	3%

Knowledge of Anganwadi workers about ECCE for children below 6 years



Interapatation- It is found that maximum number of Anganwadi workers are not aware about the concept of ECCE learning. 3% of workers are aware and had clear concept about the ECE learning and also acquired the training from different source such as SWAYAM app. 34% of workers are moderately aware about the ECE training module. Around 32% of workers have low idea about ECE, whereas 16% workers have extremely low level of awareness about ECE program. Again, it is found that out of 100% only 15% workers are aware and 34% are moderately aware about ECE.

DISCUSSION AND CONCLUSION: It is found that maximum number of workers in Anganwadi centers are not aware of ECCE concepts. In Anganwadi Centers the workers working in

teaching learning process are less qualified. Most of the teachers only possess higher secondary and maximum are only secondary or under matriculation. It has been noticed that the teachers teaching in pre-schools such as Ka-shreni are more qualified and trained teachers. It finds out the problems of a centers such as lack of infrastructure, drinking water facility, lack of seating arrangements, lack of Teachers, irregularity of children, etc. Moreover, there are many centers without building, taking class in an open ground under a tree, verandah, or in their own residences. Lack of proper training. It is found that the last training they attend in the year 2016, after that no training was received. Early Childhood Care and Education was totally a new concept for many of them. The study also finds that Anganwadi workers teaching are not effective. The children after acquiring their pre-school maximum number of the children had no basic knowledge of reading

ADJUSTMENT IN RELATION TO EMOTIONAL INTELLIGENCE OF ADOLESCENTS

Ms. Aarushi Sharma

*M.Ed., Government College of Education,
Sector-20-D, Chandigarh*

Abstract

Aim of the research is to find out the relationship between adjustment and emotional intelligence among adolescents. A sample of 100 students of class IX were taken from Government Model Sr. Sec. Schools of Chandigarh. Standardized tools were used for the collection of data and to ascertain the relation of Emotional Intelligence and Adjustment. Emotional Intelligence test developed by Soni and Sharma (2009) and High School Adjustment Inventory by Singh and Gupta (1987) were administered to collect the data. The study was delimited to class IX students of Govt. Model Sr. Sec. Schools of Chandigarh. The sample was selected randomly through lottery method. Pearson's correlation technique and t-test were employed to analyze the data and compute coefficient of correlation value and t-ratio value respectively. The study revealed positive correlation between emotional intelligence and adjustment among adolescents. Girls and boys adolescent students did not show any significant difference for adjustment and emotional intelligence between them.

Keywords: Adjustment, Emotional Intelligence, adolescents

INTRODUCTION

Adolescence is said to be an important stage of growth and development. It is considered as the most critical period in life of an individual. Adolescents have to face various difficult situations. It is said that adolescence is period of stress and strain, storms and strives. In adolescent period, equilibrium of physical, mental and social forces is lost with the result that individual has to make new adjustments with his own self, family and with the society. An adolescent child is emotionally unstable and has to face problems of adjustment. They face various challenges at home, school, peers groups. All these affect emotional intelligence of adolescents and they have difficulty in adjustment. Adjustment is defined as an individual's adjustment is adequate, wholesome or healthful to the extent that he has established harmonious relationship between himself and the conditions, situations and persons who compromise his physical and social environment (Crow and Crow (1956). Our emotions also play quite a significant role in guiding and directing our behavior. Many times they seem to dominate in us in such a way that we have no solution other than

behaving as they want us to. Emotional processes are based on the acceptance and rejection of objects and facts and have an emotional relation to the world (Kuhl, 1980). Emotional Intelligence is a form of social intelligence and involves the ability to monitor one's own and others feelings and emotions to discriminate among them, and to use this information to guide one's thinking and action (Salovey and Mayer, 1990). Thus we may understand that one's emotional intelligence is helping in knowing, feeling and judging emotions in close cooperation with one's thinking process to behave in proper way for ultimate realization of happiness and welfare of self in tune with others. In a nutshell, Emotional Intelligence plays a major role in home, school and peer adjustment.

Review of related literature

Sasikumar (2018) studied correlation between emotional intelligence and social adjustment among adolescent students of Karaikudi, Tamil Nadu, South India. The sample of the study confined to only ninth standard students those were selected randomly from eight schools of Karaikudi. The results revealed a positive correlation between Emotional Intelligence and

social adjustment among adolescents.

Kumar(2019) studied the relationship of Teacher Training students between adjustment and emotional intelligence. This study shows that most of the components of emotional intelligence have no direct influence on the adjustment of students of B.Ed. class of Govt. College of Teacher Education.

Singh(2022) investigated the significance of relationship of adjustment with emotional intelligence and mental health of senior secondary school students. The study was conducted on 600 senior secondary school students selected from Government Schools from seven districts of Punjab. Indian adaptations of adjustment inventory Sharma (1988), Emotional intelligence scale by Hyde, Pethi, and Dhar, (2002), and Mental health battery by Singh and Sengupta (2009) were used for data collection. Results of the study revealed significant positive relationship between adjustment and emotional intelligence and also between adjustment and mental health.

Objectives

Following are the objectives of the study:

1. To study correlation between adjustment and Emotional Intelligence of adolescent students.
2. To study the significance difference of adjustment between male and female adolescent students.
3. To study the significance difference of Emotional Intelligence between male and female adolescent students.

Hypotheses

1. There exists no significant correlation between emotional intelligence and adjustment of adolescent students.
2. There exists no significant difference of adjustment between male and female adolescent students.
3. There exists no significant difference of Emotional Intelligence between male and female adolescent students.

Design of the study

Descriptive survey method was adopted for the

study.

Sample of the study

The population of the study was all class IX students studying in Government Model Senior Secondary Schools of Chandigarh. A sample of 100 students of class IX was taken from the various Government Model Sr. Sec. Schools of Chandigarh. Schools were selected randomly by lottery method. Sections in the school were also selected randomly through lottery method. Students were taken en masse from the each selected section.

Collection of data

The data were collected from the selected schools of Chandigarh. Permission to collect data was sought from the concerned officer. Selected class IX students were approached and the purpose of meeting them was explained to them. After making the students comfortable Emotional Intelligence Test and Adjustment Inventory were administered one by one. Before starting the testing session it was assured to subjects that their responses would be kept confidential and would be used purely for the research purpose. They were asked to respond to the statements honestly.

TOOLS USED

1. High School adjustment Inventory by Singh and Gupta (1987).
2. Emotional Intelligence Test by Soni and Sharma (2009).

Statistical tools used

The data were analyzed by calculating coefficient of correlation value by employing Pearson's Correlation technique and t- ratio values by calculating means through SPSS.

Analysis of the data

The raw data were analyzed by employing statistical techniques. The objective wise analysis is given as under:

1. To study the relationship between adjustment and Emotional Intelligence of adolescent students.

Table 1: Coefficient of correlation value for the correlation between adjustment and emotional intelligence

Variable s	N	Coeff. of correlation	Level of Significance
A	100	0.648	0.01
B	100		

Table 1 shows coefficient of correlation value for the correlation between adjustment and emotional intelligence of adolescents studying in government model senior secondary schools of Chandigarh. The coefficient of correlation value has been found to be .648 which is significant at .01 levels of significance. The positive value shows that there is a direct correlation between emotional intelligence and adjustment among adolescents. Hence hypothesis “There exists no significant correlation between emotional intelligence and adjustment of adolescent students” may not be accepted. Higher the emotional intelligence better will be the

adjustment of students. The result is supported by the studies of Kar, Saha, Mondal (2016); Punia, Shakuntala & Sangwan, Santosh (2011); Kumar (2018).; Suyatno, Nur, Hidayat (2018); Sharma (2019); Kadlimatti (2020); Singh (2022).

1. To study the significant difference of adjustment between male and female adolescent students.

Table 2: Means and t-ratio value between female and male adolescent students for adjustment

Category	N	Mean	Std. Deviation	Std. Error Mean	df	t	Sig (2 tailed)
Female	42	95.45	7.918	1.222	98	0.999	NS
Male	58	93.12	8.970	1.178			

Table 2 shows that the mean adjustment values for male and female adolescents have been found to be 93.12 and 95.45 respectively. T-ratio was found to be 0.999 at 98 degrees of freedom, which is not significant at .05 levels. Hence the hypothesis “There exists no significant difference of adjustment between male and female adolescent students” stands accepted.

1. To study the significant difference of Emotional Intelligence between male and female adolescent students.

Table 3: Means and t-ratio value between female and male adolescent students for emotional intelligence

Category	N	Mean	Std. Deviation	Std. Error Mean	df	t	Sig (2 tailed)
Female	42	88.69	8.242	1.272	98	0.999	NS
Male	58	88.50	10.327	1.356			

Table 3 shows that mean emotional intelligence values for male and female adolescents have been found to be 88.69 and 88.50 respectively. T-ratio was found to be 0.999 at 98 degrees of freedom, which is not significant at .05 levels. Hence, the hypothesis “There exists no significant difference of emotional intelligence between male and female adolescent students” stands accepted.

Results and discussion

The present study showed that emotional intelligence of adolescents studying in Government Model senior secondary schools of Chandigarh is directly correlated with their adjustment. This means that students with higher emotional intelligence are better adjusted. Further, male and female students do not show any significant difference in their emotional intelligence and adjustment.

Conclusion

In the present study male and female adolescent students of Chandigarh showed similar emotional intelligence and adjustment levels. This also shows a direct correlation between emotional intelligence and adjustment. Since there is no difference in emotional intelligence and adjustment between male and female students so more study needs to be done to see whether students with variable emotional intelligence and adjustment also show similar results or not.

References

- Goleman(1998).*Working With Emotional Intelligence*.New York: Bantam Books.
- Goleman,D.(2000).An EI-based theory of performance.In D. Goleman, & C. Cherniss(Eds.) *The emotional intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups and organizations*. San Francisco, CA: Jossey-Bass.
- Goleman, D. (1995). *Emotional Intelligence, Why it can matter more than IQ*, New York Bantam Book.
- Kar, Dhiman&Saha, Birbal&Mondal, Bhim. (2016). Emotional Intelligence and Adjustment Ability Among Higher Secondary School Students: A Correlational Study. *American Journal of Social Sciences* V.4, issue 4, 34-37.
- Kumar, A. P. (2019). Relationship between Adjustment and Emotional Intelligence of B.Ed. Students of Govt. Colleges of Teacher Education. *International Journal of Research and Analytical Reviews (IJRAR)*, 6(2), 970-976.
- Mangal, S. K. (2002). *Advanced educational psychology* (2nd ed.). New

Delhi: Prentice-Hall of India. [ISBN 9788120320383](#). [OCLC 51858255](#).

Mangal, S. K. (2013). *Emotional Development and Emotional Intelligence*, Advanced Educational Psychology. Delhi: PHI learning Private Limited.

Punia, Shakuntala & Sangwan, Santosh. (2011). Emotional Intelligence and Social Adaptation of School Children. *Journal of Psychology*. 2. 10.1080/09764224.2011.11885466.

Sasikumar, J. (2018). Emotional intelligence and social adjustment among adolescent students. *Am J SocSci Res*, 4, 16-21.

Sharma, R. N (2003). *Advanced Educational Psychology*. Delhi: Surgeet Publications.

Sharma, Sonia (2019). A study of social adjustment in relation to emotional intelligence and spiritual intelligence among senior secondary school teachers. *International Journal of Professional Management ISSN 20422341 Volume 14, Issue 2, 2019*.

Singh, A. K., Gupta, A. (1987). *High School Adjustment Inventory*. Lucknow-16: Ankur Psychology Agency.

Singh, Gurmit. (2022). Adjustment among senior secondary school students in relation to emotional intelligence and mental health. *International Journal Of Recent Scientific Research* Volume: 6(12)

Soni and Sharma. (2009). *Emotional*

Intelligence Test. Agra: National Psychology Corporation.

Tatawadi, S. (2009). *Emotional Intelligence of management students*. *Psycholingua*, 39 (1), 78-82.

Yadav, K. S. (2018). Relationship between emotional intelligence and adjustment of senior secondary school students of Jind. *International Journal of Research in Social Sciences*, 8(3), 906-919.

WEB-SITES EXPLORED

http://shodhganga.inflibnet.ac.in/bitstream/10603/23098/7/11_chapter2_5-10-2016_3.36pm.

<https://en.oxforddictionaries.com/definition/adjustment>.

[https://wikipedia.org/wiki/Adjustment_\(psychology\)](https://wikipedia.org/wiki/Adjustment_(psychology)), 2016, 24 Dec, 15.41pm.

https://en.wikipedia.org/wiki/Emotional_intelligence, 2016, 25 Dec, 6:56pm.

www.shodhganga.inflibnet.ac.in/bitstream/09-chapter2-2pdf;25March,2016,5.20pm.

www.shodhganga.inflibnet.ac.in/09_chapter-2.pdf.25March,2016,5.25pm

[https://en.wikipedia.org/wiki/Adjustment_\(psychology\)#Adjustment_as_a_process](https://en.wikipedia.org/wiki/Adjustment_(psychology)#Adjustment_as_a_process)

<https://www.coursehero.com/file/16762705/Psychology-O-F-Adjustment-Educational-Psycology-Lecture-Handouts-pdf/>

<https://www.reference.com/world-view/characteristics-well-adjusted-person-4631e52b6cbfe6c2>

Interpatation- It is found that maximum number of Anganwadi workers are not aware about the concept of ECCE learning. 3% of workers are aware and had clear concept about the ECE learning and also acquired the training from different source such as SWAYAM app. 34% of workers are moderately aware about the ECE training module. Around 32% of workers have low idea about ECE, whereas 16% workers have extremely low level of awareness about ECE program. Again, it is found that out of 100% only 15% workers are aware and 34% are moderately aware about ECE.

DISCUSSION AND CONCLUSION: It is found that maximum number of workers in Anganwadi centers are not aware of ECCE concepts. In Anganwadi Centers the workers working in teaching learning process are less qualified. Most of the teachers only possess higher secondary and maximum are only secondary or under matriculation. It has been noticed that the teachers teaching in pre-schools such as Ka-shreni are more qualified and trained teachers. It finds out the problems of a centers such as lack of infrastructure, drinking water facility, lack of seating arrangements, lack of Teachers, irregularity of children, etc. Moreover, there are many centers without building, taking class in an open ground under a tree, verandah, or in their own residences. Lack of proper training. It is found that the last training they attend in the year 2016, after that no training was received. Early Childhood Care and Education was totally a new concept for many of them. The study also finds that Anganwadi workers teaching are not effective. The children after acquiring their pre-school maximum number of the children had no basic knowledge of reading and writing of letters, words and numbers. The study also finds that there are no special provisions for Child with Special Needs (CWSN) children. The study also finds that no innovative practices were conducted in the centers. The Children sitting

idle with their pen and paper. Teachers are lacking in their strategies and methodologies. In these studies, it is found that the Anganwadi workers are also not aware of child portfolio and proper assessments. The study also finds POSHAN, nutrition's and supplementary are also not regularly given by the workers. Most of the centers are often found closed, lacking in monitorization and supervision.

Reference-

Baliga, S.S., &Walvekar, P.R. (2017). The study based on Anganwadi knowledge on child integrated development services at three urban health centers. Community journal internationally published on Medicine and Public Health, Vol. 4, Issue 9, pp.3283-3287. Retrieved from <http://dx.doi.org/10.18203/2394-6040.ijcmph20173829>.

Datta, V. 2001. Factors Affecting Job Performance of Anganwadi Workers: A Study of Three Districts of Maharashtra. DCWC Research Bulletin, XII (3), 158.

Davey A, Datta U 2004 Anganwadi Centers Functioning in the urban areas of Delhi slums: National Institute of Health and Family Welfare.

Department of Women and Child Development (DWCD)-Ministry of Human Resource Development (MHRD).(2005). National Plan of Action (NPA), New Delhi.

D. Sharma, G., Desai, N., & Pandit. (2012). Anganwadi workers, Roles are changing, A study done in District of Vadodara Health Line, Vol. 3, Issue 1, ISSN 2229-337X.

Government of India.Integrated Child Development Services (1995): Dept. of Women and Child Development, Ministry of Human Resources Development, New Delhi, 1-24.

Jagannath& Dinesh, G.M. (2014). Role and Responsibilities of Anganwadi Workers– A Case Study of Davana Gere City. Contemporary Research in India, Vol. 5, Issue 2, ISSN 2231-2137.

Exploring Shadow Education Practices: Implications for Educational Equity and Social Justice

Deeksha Sharma, Prof. Satvinderpal Kaur

Abstract

This research paper critically examines the intricate relationship between shadow education and socioeconomic disparities, focusing on its profound impact on sustainable development. Shadow education, comprising private tutoring, coaching, and other informal educational practices, has gained prominence globally as a supplement to formal schooling. However, its implications for socioeconomic equality and sustainable development are complex and need immediate attention. The methodology used was conducting a systematic literature review and data was drawn from secondary sources. The paper scrutinizes the unequal access to shadow education, considering factors such as parental income, geographic location and educational background. It also explores how the prevalence of shadow education widens the educational achievement gap, contributing to social stratification. By examining the correlation between shadow education and key indicators of sustainable development, such as quality education, reduced inequalities and social justice, the study aims to shed light on the potential hindrances posed by shadow education. The findings of this research provide insights into policy implications and intervention strategies to mitigate the adverse effects of shadow education on socioeconomic disparities. By critically analyzing its impact on sustainable development, the paper contributes to the ongoing discourse on educational equity and advocates for inclusive educational practices that align with broader societal goals of social justice. Ultimately, the research aims to inform policymakers, educators, and stakeholders on the need for a balanced and equitable approach to education that fosters sustainable development for all.

Keywords: shadow education, sustainable development, socio-economic disparities, educational equity, social stratification

INTRODUCTION

Education serves as a catalyst for individual empowerment and collective advancement, providing the knowledge and skills necessary for personal growth and societal innovation (United Nations, 2015). It has traditionally been upheld as a public good, with public institutions entrusted to ensure equitable access to educational opportunities for all members of society (OECD, 2019). It has been seen as a societal benefit, with public entities responsible for providing and funding educational opportunities to enhance social mobility and minimize disparities (UNESCO, 2018). However, the fundamental idea of education is encountering obstacles due to the increasing involvement of various entities and

funding channels in education, influenced by global educational trends (Daviet, 2016). The era of neoliberalism has seen a rise in profit-oriented educational institutions that prioritize financial gain over educational quality, resulting in the commercialization of education (Tilak, 2011). Private entities have entered the educational domain, leading to the establishment of private schools, colleges, and universities (UNESCO, 2016). These private institutions often lack a sense of community and substantive discourse. Such an educational framework lacks liberating attributes; it lacks democratic principles, tends toward conservatism, and perpetuates the prevailing social hierarchy (Pathak, 2019).

In contemporary educational landscape, the

phenomenon of shadow education has garnered increasing attention as a significant adjunct to formal schooling systems. Shadow education, which entails offering supplementary tutoring outside regular school hours, has garnered increasing scholarly interest since the 1980s and 1990s, although its roots trace back to the mid-nineteenth century (Zhang and Bray, 2020). It comprises of various supplementary educational activities undertaken outside the traditional classroom setting and has become a ubiquitous feature of many societies worldwide. Tutoring enterprises, operating in parallel with formal education, strategically maneuver around the schooling system by leveraging their flexibility in timing rather than aiming to replace formal institutions (Gupta, 2022). The increasing demand for admissions to prestigious universities, both domestically and internationally, has propelled the expansion of shadow education. Competitive entrance examinations compel students to seek specialized assistance beyond the scope of traditional schooling (Singh, 2019). From private tutoring and test preparation courses to online learning platforms and enrichment programs, shadow education practices have proliferated and diversified, catering to the academic needs and aspirations of students across diverse socio-cultural contexts. As the educational landscape continues to evolve, understanding the nuanced dynamics of shadow education is imperative for educators, policymakers, and stakeholders alike. Thus, this paper embarks to explore the shadow education practices, aiming to illuminate their prevalence, implications for educational equity and the influence of socioeconomic factors.

Review of literature

Recent decades have witnessed a significant expansion of shadow education. This phenomenon, while having a longstanding history, has proliferated notably. In West Bengal, India, for instance, approximately 60% of primary school students engage in private supplementary tutoring

(Asian Development Bank, 2012). Notably, access to higher quantities and superior quality of shadow education tends to be more attainable for affluent families. Research conducted in Mauritius by Joynathsing et al. (1988) revealed stark income disparities in private tutoring participation among students. In Grade 1, children from the highest income bracket were 7.5 times more likely to receive private tutoring compared to those from lower income groups, a trend that lessened to a ratio of 1.6 to 1 by Grade 6 (UNESCO IIEP, 2009). Such coaching institutions have been implicated in exacerbating existing socio-economic and educational inequalities by conferring advantages to financially privileged students, thus widening the gap between the affluent and the less privileged. Moreover, the affordability of private education in India presents a significant barrier for many families, further compounding the issue (Asian Development Bank, 2012). Research on private tutoring, such as De's (2009) study, underscores its global proliferation, particularly prominent in Asian countries across socio-economic divides, driven by market forces and parental aspirations. This growth raises concerns about its impact on mainstream education, necessitating comprehensive investigations into its societal, economic, and pedagogical implications. Bray and Kwo (2013) highlight the tension between the Universal Declaration of Human Rights' ideal of free education and the increasing reliance on shadow education, suggesting it represents covert privatization within public systems, prompting reflection on its compatibility with the declaration's principles. Rabidas (2014) critiques the commercialization of education, lamenting its focus on conformity over intellectual enlightenment, perpetuating societal inequalities. Bharucha (2016) discusses the burgeoning coaching industry in India, proposing policy measures to address challenges posed by intense academic competition. Orberg (2017) examines

shadow education's unequal accessibility and its potential to supplement or replace traditional schooling, calling for research and policy initiatives to ensure equitable opportunities. Agarwal and Agarwal (2017) highlight the demand for coaching services in shaping career trajectories, particularly for high-demand professions. Mishra and Singh (2017) underscore concerns about parental pressure and the lack of support services in coaching institutes, advocating for holistic approaches to education. Sharma (2019) analyzes private tutoring's evolution from academic support to a marker of social status, advocating for policies to promote equitable access to quality education. Singh (2019) characterizes the rise of coaching institutes as part of a broader shift towards a new education economy, advocating for interdisciplinary research to understand its complex dynamics. Kim and Jung (2020) highlight challenges faced by public institutions in meeting students' diverse needs, advocating for collaboration between public and private sectors to enhance educational quality and equity. In essence, the expanding influence of private tutoring demands nuanced understanding and targeted interventions to mitigate its exacerbation of educational inequalities and its evolving role within modern education systems, emphasizing the imperative of holistic policy approaches tailored to address its multifaceted implications.

Research questions

1. What are the prevalent forms of shadow education practices and how do they vary across different socio-cultural contexts?
2. In what ways does shadow education contribute to existing educational inequalities and social stratification?

Objectives

1. To explore the prevalent forms of shadow education practices and understand how do they vary across different socio-cultural contexts.

2. To examine the ways in which shadow education contribute to existing educational inequalities and social stratification.

Methodology

The methodology employed in this study involved conducting a systematic literature review, which encompassed a comprehensive and structured approach to gathering, analyzing, and synthesizing existing research findings relevant to the research questions and the title of the study. This systematic process included defining search criteria, identifying relevant databases and sources, screening and selecting studies based on predetermined inclusion and exclusion criteria, extracting data from selected studies, and synthesizing the findings to provide a comprehensive overview of the existing literature on the subject. The search criteria for this systematic literature review focused on identifying relevant studies pertaining to shadow education practices and their implications for educational equity and social justice. The search encompassed studies published in the last decade (2014-2024), written in English, and included peer-reviewed journal articles, conference papers, and reports. Geographically, the search was global, with an emphasis on diverse socio-economic contexts. The selected studies were required to address the impact of shadow education on educational equity and social justice, employing qualitative, quantitative, or mixed-methods approaches. Studies not directly related to these implications were excluded from consideration.

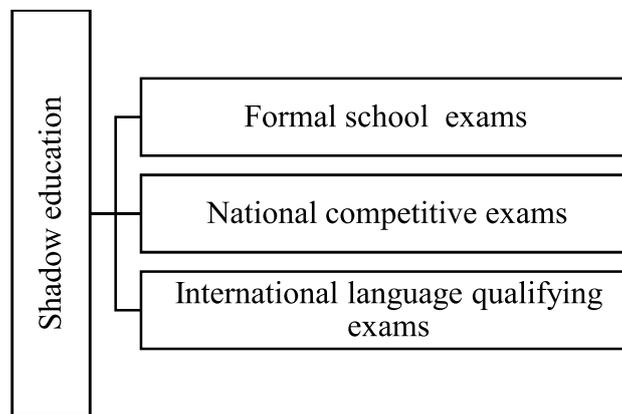
Findings and results

1. Prevalent forms of shadow education practices and their variance across different socio-cultural contexts.

Shadow education, commonly known as the "coaching culture," encompasses diverse educational endeavors, including tutoring and supplementary classes, occurring beyond the formal confines of the educational

system(Buchmann, Condron, and Roscigno, 2010). It operates across various categories, delineating institutes offering such services based on the academic level they serve. This categorization hinges on factors such as the academic level catered to; for instance, some institutes specialize in providing tutoring services for elementary school students, while others focus on high school or college-level students. Additionally, the classification is informed by the subject matter covered, with some institutes offering tutoring services in mathematics,

language arts, or science. Moreover, specialization plays a pivotal role, with certain institutes focusing on test preparation services or providing support to students with learning disabilities. For ease of classification, shadow education can be segmented into three primary types: shadow institutes catering to formal school exams (K-12 school education), those targeting national competitive exams (such as JEE, NEET, IAS, PCS, SSC, and other state exams), and those dedicated to international language qualification exams (such as IELTS, TOEFL, GRE, etc.).



The institutions of shadow education, whether conducted face-to-face or virtually through platforms like live internet lectures or recorded classes, have become pervasive in India, particularly in the form of coaching institutes. Termed "India's Tuition Republic," this culture has permeated various regions, from Madhya Pradesh to Maharashtra, Bihar to Kerala, engulfing both traditional and digital platforms (The Print, December 2022). These coaching centers cater to different educational needs, classified into three primary categories: coaching for formal school examinations, coaching for national competitive exams, and coaching for international language qualifying exams like IELTS and TOEFL.

The first category focuses on preparing students

for official school examinations, starting as early as Class 6, with coaching centers strategically targeting young students to ensure early preparation and efficient time management (The Economic Times, 2014). Similarly, the second category, coaching for national competitive exams, such as the UPSC-CSE, has witnessed significant growth due to the soaring number of aspirants competing for limited seats (Vinayak, 2022). The third category, coaching for international language qualifying exams, reflects the global aspirations of Indian students, driven by the desire for better career opportunities abroad. Data illustrates the escalating fees charged by coaching institutes for various examinations, indicative of the burgeoning shadow education system in India. There is a

substantial increase in average coaching fees over the eight-year period from 2009 till 2017, for exams such as IIT-JEE, CLAT, BBA/BMS, Medical, and Civil Services (IAS). For instance, the average fee for IIT-JEE coaching rose from ₹45,000 in 2009 to ₹80,702 in 2017, indicating a significant escalation in the cost of educational preparation across various disciplines during this period. Similarly, fees for other exams like CLAT, BBA/BMS, Medical, and Civil Services (IAS) also witnessed notable increases from 2009 to 2017, reflecting the growing financial burden associated with exam preparation in India. This growth is further underscored by the estimated \$31 billion size of the private tutoring industry in 2017, catering to diverse student needs with a range of coaching packages, including residential options (Fortune Business Insights, 2021; The Hindu, 2023). However, this commercialization of education raises concerns about its implications for societal equity and access to education. The rapid expansion of private tutoring institutes, particularly in rural areas, risks perpetuating educational inequalities and commodifying education, thus undermining its role as a tool for social upliftment (The Tribune, 2019).

1. Contribution of shadow education to existing educational inequalities and social stratification

The findings indicate that shadow education significantly contributes to existing educational inequalities and social stratification. Firstly, the proliferation of shadow education widens the gap between privileged and underprivileged students by favoring those with financial resources. Students from affluent backgrounds can afford private tutoring and coaching services, thereby gaining an academic advantage over their less fortunate counterparts who cannot access such resources (Bray & Kwo, 2013). Moreover, shadow education reinforces existing social hierarchies by perpetuating disparities in educational outcomes. Privileged students, already positioned at the top of

the social ladder, can further consolidate their advantage through additional educational support, while marginalized students struggle to compete on an uneven playing field (Buchmann, Condron, & Roscigno, 2010). Furthermore, the expansion of shadow education exacerbates societal inequalities by diverting resources away from public education systems. Both rational action theory and socio-cultural reproduction theory offer insights into the disparities in participation in shadow education among students from diverse socio-economic backgrounds. Rational action theory posits that social class disparities in educational decisions stem from individuals' calculations of the costs and benefits associated with education, with higher SES students more inclined to pursue educational opportunities to maintain or enhance their social status (Breen & Goldthorpe, 1997). Conversely, socio-cultural reproduction theories emphasize the intergenerational transmission of economic, social, and cultural resources, with higher SES parents employing strategies such as intensive parenting and concerted cultivation to ensure their children's educational success (Lareau, 2003). These theories suggest that higher SES families are more likely to invest in shadow education due to their financial resources, access to information, and cultural capital (Bourdieu, 1977). Empirical research across various countries supports the positive association between SES and participation in shadow education (Ireson & Rushforth, 2005; Smyth, 2009; Stevenson & Baker, 1992). Additionally, the findings reveal that shadow education intensifies competition for academic success, particularly in high-stakes examinations. As students flock to private tutoring and coaching centers to gain a competitive edge, the pressure to excel academically escalates, exacerbating stress and mental health issues among students. This heightened competition disproportionately affects marginalized students who may lack access to supplementary educational support, further entrenching social inequalities.

Furthermore, shadow education perpetuates a culture of credentialism, wherein academic qualifications become paramount for social mobility and success. Students feel compelled to engage in private tutoring and coaching to secure admission to prestigious universities or lucrative career paths, reinforcing the belief that educational attainment is the primary determinant of social status. This emphasis on academic credentials can disadvantage individuals from disadvantaged backgrounds who may lack access to resources and opportunities for academic advancement (Kim and Jung, 2020). Moreover, the findings suggest that shadow education fosters a culture of dependency on private tutoring services, undermining the autonomy and self-efficacy of students. As reliance on external educational support grows, students may become passive recipients of knowledge rather than active participants in their own learning journey. This dependence on tutoring can perpetuate educational inequalities by limiting students' ability to develop independent learning skills and critical thinking abilities (Sharma, 2019). Overall, the expansion of shadow education exacerbates educational inequities by diverting resources and attention away from public schools, reinforcing the advantages of privileged students (Joynathsing et al., 2015). Overall, the findings underscore the multifaceted ways in which shadow education exacerbates existing educational inequalities and social stratification, highlighting the need for comprehensive strategies to address these systemic issues and promote equitable access to education for all students.

Conclusion

The research shed light on the shadow education practices and its implications for educational equity and social justice. It became evident that shadow education manifests in various forms, ranging from preparatory tutoring for formal school examinations to coaching for national competitive exams and international language qualifications. These practices not only vary across

socio-cultural contexts but also perpetuate existing educational inequalities and social stratification. The prevalence of shadow education underscores the complexities of educational systems worldwide, with differential access to supplementary educational opportunities driven by socio-economic disparities. Rational action theory and socio-cultural reproduction perspectives offer insights into the mechanisms underlying participation in shadow education, highlighting the role of cost-benefit calculations, relative risk aversion, and the transmission of cultural capital. The findings underscore the urgent need for policies and interventions aimed at promoting educational equity and social justice. Efforts should prioritize addressing the socio-economic barriers that hinder equitable access to shadow education, ensuring that all students have equal opportunities to benefit from supplementary learning activities. Additionally, initiatives should focus on enhancing transparency, accountability, and quality assurance within the shadow education sector to mitigate its exacerbation of existing educational inequalities. By addressing these challenges, society can move towards a more inclusive and equitable educational landscape, where every individual has the opportunity to thrive and succeed, regardless of their socio-economic background.

References

- Agarwal, P. C., & Agarwal, I. B. (2017). A Study of the Working style of different types of institutes and attitude of entrant Science students of Class XI. *School Science*, 55(2), 42-46.
- Asian Development Bank. (2012). *Shadow Education: Private supplementary tutoring and its implications for policy makers in Asia*. Manila, Philippines.
- Bharucha, J. P. (2016). Popularity of coaching classes in India. *International Business Education Journal*, 9(1), 27-36.
- Bourdieu, P. (1977). Cultural reproduction and

- social reproduction. In: Karabel, J., & Halsey, A. H. (Eds.), *Power and Ideology in Education*. New York: Oxford University Press, pp. 487–511.
- Bray, M., & Kwo, O. (2013). Behind the facade of fee-free education: Shadow education and its implications for social justice. *Oxford Review of Education*, 39(4), 480-497.
- Breen, R., & Goldthorpe, J. H. (1997). *Explaining educational differentials: Towards a formal rational action theory*. *Rationality and Society*, 9(3), 275–305.
- Buchmann, C., Condron, D. J., & Roscigno, V. J. (2010). Shadow education: Theory, analysis and future directions: A rejoinder. *Social Forces*, 89(2), 483-490.
- Daviet, B. (2016). Revisiting the Principle of Education as a Public Good. *ERF Working Papers Series, 17*. Paris, UNESCO Education Research and Foresight.
- De, R. (2009). *Implications of private tuition in West Bengal*. Department of School Education, West Bengal, West Bengal. Retrieved from https://righttoeducation.in/sites/default/files/implications_private_tuition_wb.pdf
- Ireson, J., & Rushforth, K. (2005). Mapping and evaluating shadow education.
- Fortune Business Insights. (2021). *Private Tutoring Market Size, Share and COVID-19 Impact Analysis*.
- Gupta, A. (2022). A Shadow Education Timescape: An empirical investigation of the temporal arrangements of private tutoring vis-a-vis formal schooling in India. *British Journal of Educational Studies*, 70(6), 771-787.
- Joynathsing, M., Mansoor, R., Nabasing, S., Pochun, M., & Selwyn, R. (1988). Income disparities in private tutoring participation among students: A study in Mauritius. *Educational Research Quarterly*, 12(3), 45-62.
- Kim, Y. C., & Jung, J.H. (2019). Conceptualizing shadow curriculum: Definition, features and the changing landscapes of learning cultures. *Journal of Curriculum Studies*, 51(2), 141-161. Retrieved from <https://doi.org/10.1080/00220272.2019.1568583>
- Lareau, A. (2003). *Unequal Childhoods: Class, Race, and Family Life*. Berkeley, CA: University of California Press.
- Mishra, P., & Singh, B. (2017, September). Clash of competitions: A study on coaching classes of Kota. *European Academic Research*, 5(6).
- OECD. (2019). *Equity in education: Breaking down barriers to social mobility*. OECD Publishing.
- Orberg, J. W. (2017, October 28). Uncomfortable encounters between elite and “shadow education” in India—Indian Institutes of Technology and the Joint Entrance Examination coaching industry. *Higher education*
- Pathak, A. (2019). The threat to the idea of a public university. *The Hindu*.
- Rabidas, S. K. (2014). A study of factors responsible for commercialization of education. *International Research Journal of Commerce, Arts and Science*, 5(5).
- Sharma, H. (2019). Equity Related Concerns: Impact of Private tutoring in India. *Journal of Education Culture and Society*, 299-308. doi:10.15503/jecs20192.299.308
- Singh, J. (2019). *Social Class, Urban Growth and the rise of 'new education economy' in a small city: a study of Dhanbad in Jharkhand*. Thesis, Jawahar Lal University, Zakir Hussain Centre for Educational Studies, New Delhi.
- Smyth, E. (2009). Oxford review of education buying your way into college? Private tuition and the transition to higher education in Ireland. *Oxford Review of Education*, 35(1), 1–22.
- Stevenson, D. L., & Baker, D. P. (1992). Shadow education and allocation in formal schooling: Transition to University in Japan. *American*

Journal of Sociology, 97(6), 1639–1657.

The Economic Times. (2014). *Kota coaching centres taking on young students to train them for the IIT JEE*.

The Hindu. (2023). *NEET coaching institutes mushroom in Tiruchi*.

Tilak, J. B. (2011). *Trade in higher education: the role of the General Agreement on Trade in Services (GATS)*. UNESCO IIEP.

The Tribune. (2019). *Foreign dreams make IELTS coaching Rs 1,100-crore industry*.

UNESCO. (2016). *Privatization in Education: Trends and Consequences*.

UNESCO. (2018). *Education as a public and common good: reframing the governance of education in a changing context*.

UNESCO IIEP. (2009). *Confronting the shadow education system: what government policies for what private tutoring?*

United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. <https://sustainabledevelopment.un.org/post2015/transformingourworld>

Vinayak. (2022). *Success Factories: Investigating the Indian Corporate Test-preparation Industry*. *Economic and Political Weekly*, 57(24).

Zhang, W., & Bray, M. (2020). *Comparative research on shadow education: Achievements, challenges, and the agenda ahead*. *European Journal of Education*

INTEGRATION OF SYNECTIC MODEL OF TEACHING TO ENHANCE MATHEMATICAL COMMUNICATION SKILLS OF STUDENTS

Ms. Amandeep Kaur
Ph.D. Scholar of Education
Panjab University
Chandigarh

Dr. Kanwal Preet Kaur
Institute of Educational Technology
and Vocational Education
Panjab University, Chandigarh

Abstract

The Synectic model helps in achieving learning goals in mathematics by encouraging learners to relate their contextual knowledge to real life situations and by making use of analogies. Communication in Mathematics plays a key role to understanding concepts in Mathematics. Students who are able to comprehend the language and words used to solve mathematical problems possess critical thinking skills. Mathematical communication skills enable the learners to draw and interpret mathematical ideas through the use of graphs, pictures, diagrams and tables. The present study aimed to analyse the effect of using Synectic model of teaching to improve mathematical communication skills of students. This study made use of experimental method. A total of 190 subjects studying in grade VI in urban and rural schools of Shillong, Meghalaya, were chosen for the study. The results show that mean gain achievement scores of the group taught using Synectic model was significantly higher than those taught by conventional method.

KEYWORDS: Synectic Model, Mathematical Communication, Pedagogy, Mathematics

INTRODUCTION

The advancement in technology offers a plethora of approaches of teaching and learning to choose from. In today's fast paced world, it is imperative to impart knowledge to students by encouraging them to think out of the box. It is of prime importance that students are able to relate the knowledge being grasped with the real life situations. The learners of generation alpha deny to be a part of mundane routine. They look forward to gain something that not only develops their interest throughout but also provides them an opportunity to be active participants rather than passive listeners. In today's rapidly evolving education landscapes, a variety of models of teaching, each having its own unique strengths and limitations, have found their way into the classrooms

The Annual Status of Education Report was published in January 2025, prior to which a deep dive exercise was conducted in 24 schools spread across 8 states all over India. This exercise showed that less than 2% of the students were observed doing play-based learning activities. This situation demands that instructional strategies adopted for teaching should promote thinking capabilities of students along with catering to diverse learning styles in classrooms. Synectic Model of teaching assists in promoting these capabilities by fostering critical thinking and creative problem-solving. Synectic model operates on the principle that by using mind's remarkable capacity to connect seemingly irrelevant elements of thought, surprising new ideas can be sparked that may later be developed into feasible solutions to problems

Incorporating Synectics procedures into classroom discussions helps to create a dynamic environment that fosters critical thinking. This model helps in understanding some of the core subjects like mathematics in a much simpler way by making use of analogies. Mathematics is essential to learning since it paves way for many other subjects thus leading to holistic development. Branca stated that mathematical problem solving is one of the important goals in learning mathematics, called the heart of mathematics. To develop this art of problem solving, it is important that students understand and comprehend the language and vocabulary of mathematics. Mathematics makes use of universally accepted symbols and language while expressing a solution to a problem. Anyone having appropriate knowledge of these symbols and language can understand the problem. Mathematical educators agree that communication is an essential component in learning, doing and understanding mathematics. As mentioned in Principles and Standards for School Mathematics, 'Communication is an essential part of school and school mathematics. It is a way of sharing ideas and clarifying understanding. Through communication, ideas become objects of reflection, refinement, discussion and amendment.'

In the present study, the researcher has employed Synectic Model of teaching mathematics as an innovative math pedagogy. The present research was planned to study the integration of Synectic model of teaching to enhance mathematical communication skills of elementary school students of Shillong district.

REVIEW OF LITERATURE

investigated the effectiveness of Synectic Model and Gaming Strategy on Achievement and Creativity in Mathematics among secondary school students. A sample of 240 students of grade IX were selected using multi-stage sampling

technique. Two experimental groups and one control group of students were taught using Synectic Model, Gaming Strategy and conventional method respectively. The results of the study revealed that Synectic Model and Gaming Strategy were equally effective with Activity Oriented Method on Retention of Achievement in Mathematics among secondary school students.

Conducted a study to explore the Effect of Synectic model of teaching in enhancing students' understanding of abstract concepts of mathematics. This quasi experimental study used non-equivalent control group design. The findings of the study revealed that the experimental group performed better than control group. The better performance of experimental group was the contribution of Synectic model of teaching.

Conducted a study on Improving students' mathematical communication skills and learning interest through problem-solving learning models. Classroom action research method was used to conduct the study. A test for examining students' mathematical communication skills formed one of the instruments used for testing the communication skills of students. The results of the study revealed that there was an increase in students' mathematical communication skills through PBL models.

Investigated the impact of Bybee and Synectics model on creativity, creative problem-solving and students' performance in geometry. Cluster sampling method was used to choose ninety ninth-grade female students of public high schools in Tehran. Two experimental groups and one control group each including 30 students were selected. These groups were taught using Bybee, Synectic and conventional methods. The results of the study indicated that using the patterns of Bybee and Synectics on students' creativity, creative problem-solving and performance in geometry were more influential as compared to conventional method of

teaching.

Studied the effect of interactive multimedia based learning on students' mathematical communication ability. The sample of the study included 32 students enrolled in Algebraic Course structure in two universities. While the control group was given instructional material in form of worksheets, the experimental group used interactive multimedia based teaching materials. The results of the study concluded that students who learn with the help of interactive multimedia-based teaching materials showed an improvement in their ability to communicate mathematically.

The studies reviewed above showed that Synectic model of teaching is a creative tool. It is an effective approach to mathematical literacy and helps students to have a better understanding of vocabulary used in mathematics via use of analogies. The common language of symbols, expressions and notations provides a common platform to learners all around the globe to understand each other's thoughts and share their ideas. The use of Synectic model of teaching would certainly prove beneficial to enhance the mathematical communication skills of students.

OBJECTIVES OF THE STUDY

The objectives of the study are :

1. To study the effect of two instructional treatments on Mathematical Communication.
2. To study the effect of two instructional treatments on Mathematical Communication for male and female students.

HYPOTHESIS OF THE STUDY

The hypothesis of the study are :

1. The two instructional treatments will yield no comparable mean gain scores on mathematical communication.
2. The two instructional treatments will yield no comparable mean gain scores on mathematical communication for male and female students.

3. There will be no significant interaction effect of instructional treatments on mathematical communication.

RESEARCH DESIGN

The study was conducted on two intact groups i.e. the experimental group and the control group. Since the subjects of the study were chosen randomly, so true experimental research design was used. The two groups, so selected, were designated as experimental group and control group. While the students in experimental group were taught using Synectic model teaching strategy, the students in control group were taught using conventional teaching strategy. 2 x 2 factorial design was employed in which mean gain scores on mathematical communication viz. male and female students were studied. The researcher used following tools for the present study:

1. Instructional material based on Synectic model for teaching mathematics developed by investigator.
2. Mathematical Communication test developed and validated by the investigator.

SAMPLE OF THE STUDY

The sample for the investigation comprised of 190 students of grade VI studying in urban and rural schools of Shillong district, Meghalaya affiliated to Central Board of Secondary education, New Delhi. The findings of the study are based on a sample of 190 students, 96 in the experimental group and 94 in control group, who were taught using two different instructional strategies.

RESEARCH PROCEDURE

After taking permissions from the heads of concerned schools, the researcher approached the subjects under study. From two randomly selected schools, four intact sections were selected at random. The students were then randomly allocated to experimental and control groups to analyse their mathematical communication skills.

RESULTS AND DISCUSSION

Analysis and interpretation of data for determining the gain mathematical communication test scores, ANOVA was computed to evaluate the main effects and interaction of variables of instructional strategies i.e. Synectic Model and Conventional Approach.

Pre-Test Comparison of Experimental and Control Group on Mathematical Communication on the basis of Instructional Strategies

The mean scores of mathematical communication for experimental and control group have been given in Table 1. Pre-mathematical communication test was administered to check the mathematical communication on experimental and control group separately, before the experimental treatment. The pre-mathematical communication test helped in analysing the effect of instructional strategies by comparing the students with post-mathematical communication test.

Table 1
Pre-Test Comparison of Experimental and Control Group on Mathematical Communication

Variable	Group	N	Mean	Std. Deviation	t-value
Mathematical Communication	Control	94	7.638	4.227	.298
	Experiment	96	7.813	3.812	

It is evident from Table 1 that pre-mean scores of mathematical communication of the experimental group was 7.813 and that of control group was 7.638 respectively. The values of SD of experimental group and control group were 3.812 and 4.227 respectively. It is further indicated that the obtained t value of mathematical communication test score is 0.298. The t value is less than the table value (1.98) at 0.05 level of significance. Therefore, there is no significant difference in mathematical communication of experimental and control groups of students before

treatment. Hence, both the groups were found to be almost equal as far as their previous mathematical communication on the basis of instructional strategy is concerned.

Pre-Test Comparison of Mathematical Communication on the basis of Gender

This section comprises the mathematical communication scores of grade VI students on the basis of gender before experimental treatment as shown in Table 2.

Table 2
Pre-Test Comparison of Male and Female students on Mathematical Communication

Variable	Gender	N	Mean	Std. Deviation	t-value
Mathematics Communication	Boys	113	8.044	4.156	1.326
	Girls	77	7.260	3.771	

It is evident from Table 2 that mean score of mathematical communication for male students before experimental treatment was given was 8.044 and that of female students is 7.260. The values of SD for male students was 4.156 and that of female students was 3.771 respectively. The obtained t-value testing the significance of mean difference on mathematical communication on the basis of gender was 1.326 which in comparison to the table value was not found to be significant at 0.05 level of significance. Hence, the table indicates that there exists no significant difference in mathematical communication of male and female students.

Table 3

Mean and SD of Gain Scores of Male and Female students on Mathematical Communication of Experimental and Control Groups

Variable	Group	Gender	Mean	Std. Deviation	N
Mathematical Communication	Control	Boys	.759	2.733	54
		Girls	.350	2.617	40
	Experiment	Boys	1.847	4.213	59
		Girls	3.216	4.638	37

Further, from the table it can be seen that mean gain scores on mathematical communication of female students of experimental group were 3.216 and that of control group were 0.350. This indicates that mean gain scores of female students in experimental group was higher as compared to the ones in control group.

The table also shows that standard deviation of male students on mathematical communication of the group taught via Synectic model was 4.213 and for those taught via conventional method was 2.733. The standard deviation of female students on mathematical communication of the group taught via Synectic model was 4.638 and for those

Analysis of Mean Gain Scores of Gender on Mathematical Communication Test

Table 3 shows the mean gain scores of male and female students on mathematical communication for experimental and control groups. From Table 3, it is evident that mean gain scores on mathematical communication of male students of experimental group were 1.847 and that of control group were 0.759. This indicates that mean gain scores of male students in experimental group was higher as compared to the ones in control group.

taught via conventional method was 2.617.

Analysis of Variance of Gain Scores on Mathematical Communication in relation to their Instructional Strategy

The mean of different sub-groups, sum of squares, degree of freedom, mean sum of squares and F-ratio have been presented in Table 4.

Main Effect

Instructional Strategy

Table 4 clearly shows that F-ratio for difference in the mean gain scores on mathematical communication for group taught with Synectic

Model and Conventional Method of teaching is 13.476, which in comparison to the table value was found to be significant at 0.05 level of significance. It reveals that there is significant difference in the

mean gain scores of mathematical communication of elementary school students when taught using Synectic model as compared to conventional method of teaching.

Table 4
Summary of Analysis of Variance (2x2) Factorial Design

Dependent Variable	Source of Variation	Sum of Squares	df	Mean Square	F-value
Mathematical Communication	Instructional Strategy	178.724	1	178.724	13.476
	Gender	10.522	1	10.522	0.793
	Instructional Strategy x Gender	36.132	1	36.132	2.724
	Error	2466.868	186	13.263	
	Total	2665.479	189		

It may thus be concluded that the use of different instructional strategies to impart instruction in Mathematics attributed to development of difference in mean gain scores of mathematical communication. The hypothesis H_1 viz “The two instructional treatments will yield no comparable mean gain scores on mathematical communication” was rejected as the students of experimental group, who were taught using Synectic model, exhibited better level of mathematical communication as compared to students of control group who were taught using conventional teaching strategy.

Gender

Table 4 clearly shows that F-ratio for difference in the mean gain scores on mathematical communication for male and female students is 0.793, which was found to be not significant at 0.05 level of significance. It reveals that there is no significant difference in the mean gain scores of mathematical communication of elementary school students in relation to its gender. It may thus be concluded that the gender does not play a key part to development of difference in mean gain scores of mathematical communication. The hypothesis H_2 viz “The two instructional

treatments will yield no comparable mean gain scores on mathematical communication for male and female students” was thus accepted.

Interaction between Instructional Strategy and Gender on Mathematical Communication

It may be observed from Table 4 that F-ratio for interaction between instructional strategy and gender on mathematical communication is 2.724, which in comparison to the table value was not found to be significant at 0.05 level of significance. It reveals that there is no significant difference in the gain scores of mathematical communication due to interaction effect of instructional strategy and gender. The hypothesis H_3 viz “There will be no significant interaction effect of instructional treatments on mathematical communication” was accepted.

The results of the study can be summarised as follows:

1. The Synectic Model is found to be significantly more effective in teaching Mathematics as compared to conventional method of teaching.
2. The mean gain mathematical communication of the group taught via Synectic Model was found to be significantly higher than the group taught through conventional method of teaching.

3. The mean gain mathematical communication of male and female students did not show any significant difference.

4. The interaction effect of different instructional strategies with respect to scores on gender was found to be insignificant.

CONCLUSION OF THE STUDY

Synectics is a useful instructional methodology that enhances the critical thinking and problem solving skills of students. This method of instruction proved to be beneficial in enabling students to grasp language of mathematics, thus, improving their mathematical communication skills. The model enabled the students to form analogies and have a better understanding of the words used in mathematics. The students taught through Synectic Model showed higher mathematical communication skills than the ones taught using conventional method of instruction.

Overall, it is the responsibility of the parents, schools and teachers to work together to promote the mathematical communication skills of students and encourage students to participate and work towards grasping concepts in mathematics. It is suggested that more activities that involve participation of students must be conducted in classrooms and students should be encouraged to think out of the box.

REFERENCES

Angraini, L., &Hardi, V. (2023). The Effect of Interactive Multimedia Based Learning on Students' Mathematical Communication Ability. *Jurnal Paedagogy*, 10(1), 167-174. doi: <https://doi.org/10.33394/jp.v10i1.5622>

<https://e-journal.undikma.ac.id/index.php/pedagogy/article/view/5622>

Branca, N.A., (1980). Problem Solving as a Goal, Process, and Basic Skill. Dalam Krulik, S. (ed). *Problem Solving in School Mathematics*. 1980 Yearbook. Reston, VA: NCTM.

Communicating in the Math Classroom: Part 1—National Council of Teachers of Mathematics. (n.d.).

https://www.nctm.org/Publications/MT-MS-Blog/Blog/Communicating-in-the-Math-Classroom_-Part-1/

https://asercentre.org/wp-content/uploads/2022/12/ASER_2024_Final-Report_25_1_24.pdf

Hidayati, Abidin, Z., & Ansari, B. I. (2020). Improving students' mathematical communication skills and learning interest through problem-based learning model. *Journal of Physics: Conference Series*, 1460(1), 012047. <https://doi.org/10.1088/1742-6596/1460/1/012047>

J, Naman. (2023, June 22). Models of Teaching: Everything you need to know. *upEducators - Helping Teachers, Educators, Tutors, Tuitions and Parents in Online Teaching with Technology*. <https://www.upeducators.com/blog/models-of-teaching-everything-you-need-to-know/>

Kalantarnia, Z., ShahvaranSemnani, A., Behzadi, M. H., Rostami Mal-khalifeh, & Mardan-beigi, M. R. (2020). The effect of educational interventions based on synectics and 5E patterns on students' academic performance in geometry. *Technology of Education Journal (TEJ)*, 14(4), 835–846. <https://doi.org/10.22061/tej.2020.5931.2307>

Khan, A. A., & Mahmood, N. (2017). *The Role of the Synectics Model in Enhancing Students' Understanding of Geometrical Concepts*.

Titus, B. (2016). Effectiveness of synectics model and gaming strategy on achievement and creativity in Mathematics among secondary school students. *University*. <http://shodhganga.inflibnet.ac.in:8080/jsui/handle/10603/195032>

Weaver, W. T., & Prince, G. M. (1990). Synectics®: Its Potential for Education. *The Phi Delta Kappan*, 71(5), 378–388.

Greening Educational Institutions: Advancing Sustainability in Chandigarh through NEP 2020 and SDG Initiatives

Prof Deepika Kansal
Registrar and HOD Chemistry,
Post Graduate Government
College for Girls – 42, Chandigarh

Dr Preeti Sharda
Librarian, Post Graduate Government
College for Girls - 42, Chandigarh

Abstract

In the face of escalating environmental challenges, the role of educational institutions in promoting sustainability has never been more critical. This research paper explores how Chandigarh's educational institutions are incorporating sustainability principles into their operations and curricula through the implementation of the National Education Policy (NEP) 2020 and the United Nations Sustainable Development Goals (SDGs). By examining key initiatives such as green chemistry education, digital libraries, renewable energy adoption, waste management systems, and water conservation techniques, the paper assesses the current status of sustainability efforts. The research highlights how these initiatives align with specific SDGs such as Quality Education (SDG 4), Clean Energy (SDG 7), Responsible Consumption and Production (SDG 12), and Climate Action (SDG 13). The paper concludes with recommendations for scaling up these practices to foster a sustainable and environmentally responsible education system.

Keywords

Sustainability, NEP 2020, SDGs, Green Chemistry, Digital Libraries, Renewable Energy, Waste Management, Water Conservation, Educational Institutions, Chandigarh

INTRODUCTION

Environmental degradation, defined as the deterioration of the natural environment due to harmful human activities like deforestation, pollution, and the overuse of natural resources, poses a serious threat to the planet's ecosystems. This is further compounded by **climate change**, a long-term alteration in global and regional weather patterns primarily caused by the increased concentration of greenhouse gases from activities like burning fossil fuels. Additionally, the **depletion of natural resources**, which occurs when renewable and non-renewable resources such as forests, water, and fossil fuels are consumed at a rate faster than they can be replenished, has made it crucial for educational

institutions to embrace and promote sustainability in every aspect of their operations.

Education plays a pivotal role in addressing these challenges by fostering environmentally conscious individuals who can develop innovative solutions to mitigate these threats. In India, the **National Education Policy (NEP) 2020** has introduced a progressive and holistic educational framework that emphasizes the need for interdisciplinary learning and the integration of sustainability across academic curricula and institutional practices. The policy encourages critical thinking and a deep understanding of environmental issues, preparing students to contribute to sustainable development.

Globally, the **United Nations Sustainable**

Development Goals (SDGs) provide a clear roadmap for addressing sustainability challenges, with specific goals tied directly to education (SDG 4), clean energy (SDG 7), water conservation (SDG 6), and responsible consumption (SDG 12). These goals emphasize the interconnectedness of environmental stewardship, resource management, and education, highlighting the role of academic institutions in achieving these targets.

Chandigarh, renowned for its progressive education system, stands at the forefront of this sustainability movement. Many colleges and universities in the city have adopted **green initiatives** such as energy-efficient infrastructure, water conservation systems, waste management, and eco-friendly campus designs. These institutions are not only aligning with NEP 2020 and SDG objectives but also serving as exemplary models for other regions. By incorporating sustainable practices in both academic and operational aspects, they contribute significantly to national and global sustainability efforts. However, despite these strides, institutions still face challenges, including financial constraints, limited awareness, and infrastructural limitations, which must be addressed to achieve full sustainability. This paper delves into the sustainability initiatives undertaken by educational institutions in Chandigarh, their alignment with NEP 2020 and the SDGs, and the obstacles they encounter in their journey toward achieving comprehensive sustainability.

Review of Related Literature

The concept of sustainability has become integral to the evolution of educational institutions, particularly with the rise of initiatives such as green chemistry, eco-friendly libraries, and digital resource management. Green chemistry, a discipline coined by Anastas and Warner (1998),

emphasizes reducing hazardous substances in chemical processes and is increasingly being integrated into educational curricula. This approach fosters environmentally sustainable laboratory practices, resonating with the goals of **SDG 12** (Responsible Consumption and Production). Lancaster (2002) has highlighted the importance of incorporating green chemistry into academic institutions to produce environmentally conscious professionals who can tackle future environmental challenges. However, DeVolder and Sharma (2012) pointed out that while awareness of green chemistry is growing, its practical implementation in laboratories remains limited, emphasizing the need for a proactive shift toward more eco-friendly academic practices. Goswami and Sood (2021) suggest that integrating green chemistry principles into Indian institutions is in line with the **NEP 2020**, which encourages interdisciplinary learning and environmental awareness.

Parallel to green chemistry is the evolving role of libraries in educational institutions. As noted by Johnson and Wedge (2013), the concept of “green libraries” is gaining traction, emphasizing energy-efficient spaces and digital resources that minimize paper use. The shift toward digital libraries aligns with **SDG 4** (Quality Education), promoting wider access to learning resources and reducing the environmental footprint of educational practices. Smith (2016) explores how digitization of resources not only fosters eco-friendly campus environments but also expands global access to educational materials. This transformation from traditional to digital libraries has been accelerated by the demands of **NEP 2020**, which stresses the importance of technology-enabled learning. Chopra (2019) supports this by demonstrating how digital libraries, when properly managed, can

substantially reduce the carbon footprint of educational institutions while enhancing accessibility.

The National Education Policy (NEP) 2020 has been a major driver in promoting sustainable practices within Indian higher education. Banerjee and Bhattacharya (2020) argue that NEP 2020's emphasis on a flexible and interdisciplinary approach to education is closely aligned with the Sustainable Development Goals (SDGs), particularly **SDG 4** and **SDG 12**. The policy encourages the integration of environmental sustainability into the curriculum, including initiatives such as green chemistry and the digitization of resources, thus ensuring that students receive a holistic education that prepares them for global challenges. Sharma (2021) discusses how NEP 2020 encourages a shift toward eco-friendly educational practices, pushing institutions to adopt sustainable technologies and green initiatives.

Further supporting these efforts is the alignment of educational reforms with the SDGs, particularly **SDG 4** (Quality Education) and **SDG 12** (Responsible Consumption and Production). According to the UNESCO Global Education Monitoring Report (2016), educational institutions are essential in promoting sustainable practices and can act as catalysts for change through curriculum reforms and green initiatives. Purohit and Gill (2020) emphasize that educational institutions must adopt responsible consumption practices, making green chemistry and eco-friendly infrastructure central to their operational and educational strategies. In Chandigarh, educational institutions have already undertaken initiatives to implement green chemistry, digital libraries, and sustainability practices, aligning their goals with both NEP 2020

and the global SDG agenda.

SDG, NEP, and Green Colleges in Chandigarh

1. Integration of Green Chemistry in Curriculum

Colleges of Chandigarh come under the jurisdiction of Panjab University, Chandigarh. From 2024, Panjab University has implemented NEP in the colleges and several colleges have opted the course in Green Chemistry and integrated the principles of green chemistry into their science curricula. has implemented green chemistry principles, where students are taught to minimize hazardous waste and use eco-friendly chemicals. These practices align with SDG 12 (Responsible Consumption and Production), which focuses on reducing waste and promoting sustainable materials. By reducing the use of toxic substances in their labs, these institutions are also creating safer learning environments for students.

2. Establishment of Green Laboratories

The colleges of Chandigarh are known for their academic excellence and progressive approach to education. Institutions such as Panjab University, Post Graduate Government College for Girls (PGGCG-42), and Government College for Men are at the forefront of implementing innovative practices in both academics and campus sustainability. These colleges offer a diverse range of programs in the arts, sciences, commerce, and humanities, catering to a large student population. Additionally, many of these institutions are actively integrating green initiatives in line with the National Education Policy (NEP) 2020 and the United Nations Sustainable Development Goals (SDGs). From establishing green laboratories and digital libraries to promoting renewable energy usage and water conservation, Chandigarh's colleges are playing a crucial role in fostering

sustainability and environmental stewardship, making them exemplary institutions in India's education landscape.

3. Development of Digital Libraries

Digital libraries have become an essential component of sustainable education practices. To encourage sustainable collection services such as e-book, e-journal which reduces paper consumption, colleges of Chandigarh have developed fully digital libraries that provide access to a wealth of resources without the need for physical materials. In addition to airtight construction and efforts for efficient air ventilation systems, green building design initiatives including, tree plantation, and the use of LED lights and solar power are also made. Many libraries are also taking measures to [reduce paper waste](#). These actions contribute to SDG 4 (Quality Education) by expanding access to knowledge and SDG 13 (Climate Action) by reducing the environmental impact associated with paper production and transportation. The digitization of educational resources ensures that learning is more inclusive and eco-friendly, reducing both costs and the carbon footprint.

4. Establishment of Renewable Energy Systems

Chandigarh's educational institutions are also making strides in the adoption of renewable energy. Colleges of Chandigarh have installed solar panels on its main administrative buildings and several academic departments. Colleges of Chandigarh, have enormous incentive to go solar, not just to save money, but to make students aware of the huge environmental challenges we are facing and thus make them stewards of sustainability that benefit their community. With Solar systems, students are able to see firsthand how the sunlight is converted into electricity and

solar installations have been integrated into curriculum to improve test scores in those fields. The solar panel provides them with the practical knowledge of solar energy. Under the process of retro-fitting, LED lights are installed in the building to reduce the energy consumption and it is observed that the energy consumption has reduced compared to the relevant years. This transition to clean energy significantly reduces reliance on non-renewable energy sources, supporting SDG 7 (Affordable and Clean Energy). By reducing electricity consumption and carbon emissions, these institutions are setting an example for other sectors.

5. Water Conservation Measures

In line with SDG 6 (Clean Water and Sanitation), institutions like Government College for Men, Sector 11 Post Graduate Government College for Girls, Sector 42 and MCM DAV College for Women have introduced water conservation practices such as rainwater harvesting and greywater recycling. These systems capture and recycle water, ensuring its efficient use in landscaping and campus maintenance. To conserve and to prevent the wastage of potable fresh water, the most colleges has taken connection of tertiary water supply from sewerage treatment plant (STP) situated in nearby areas. This treated water is used to water the lawns and all floriculture and Landscaping operations, hence meeting 100% demand of all floriculture and horticulture activities of the college campuses with the help of 15 hydrants. Colleges in Chandigarh are adopting grey water recycling systems to promote sustainability on campus. By reusing grey water from sources like water coolers and filters, these institutions reduce their dependence on potable water for tasks such as mopping, horticulture, and landscaping. This initiative helps conserve water

resources and lowers environmental impact, aligning with the city's green practices. Additionally, these colleges conduct regular workshops to raise awareness among students about the importance of water conservation in combating water scarcity.

6. Comprehensive Waste Management

Effective waste management is another key sustainability initiative in Chandigarh's educational institutions. Chandigarh College of Architecture and Dev Samaj College for Women have implemented comprehensive waste segregation systems, separating organic, recyclable, and hazardous waste at the source. Organic waste is composted and used to maintain campus greenery, while non-recyclable waste is disposed of responsibly. Colleges promote environmental consciousness by observing days like Car Pool Day, World Environment Day, and Energy Conservation Day, raising awareness about sustainable practices. Students are encouraged to submit assignments digitally to reduce e-waste, which is safely disposed of in e-waste bins. Colleges regularly organize donation drives, which promotes the reuse of old materials, fostering sustainability. Additionally, the college ensures the safe disposal of various electronic items to minimize environmental impact. These initiatives align with SDG 12, which promotes responsible consumption and waste reduction. The implementation of these waste management systems has not only improved campus cleanliness but also reduced the overall environmental impact of the institutions.

7. Green Campus Initiatives

All the colleges of Chandigarh have made concerted efforts to integrate sustainability into their campuses by enhancing greenery and

fostering biodiversity. In alignment with the National Education Policy (NEP) 2020 and Sustainable Development Goal 15 (Life on Land), these institutions are actively engaging in tree plantation drives, the cultivation of indigenous plant species, and biodiversity conservation programs. These initiatives are not only aimed at beautifying campuses but also at creating environmentally responsible institutions that contribute to long-term ecological balance. By focusing on native species, these colleges support local ecosystems, ensuring the survival of flora and fauna unique to the region. This green initiative directly reflects NEP 2020's emphasis on holistic and multidisciplinary learning, which includes environmental education and awareness. Students actively participate in these greening efforts, which provide practical learning experiences about biodiversity, sustainability, and conservation, thus fostering environmental stewardship. Improved air quality, cooler campus environments, and the creation of green spaces enhance the well-being of students and staff while serving as a living example of sustainable practices. Moreover, these efforts contribute to reducing the carbon footprint of the institution and mitigating urban environmental degradation, aligning with broader environmental goals outlined in the SDGs, particularly SDG 13 (Climate Action) and SDG 15 (Life on Land). Through these actions, Chandigarh's colleges are setting an example for how educational institutions can be transformed into hubs of environmental sustainability and conservation education.

8. Sustainability Workshops and Capacity Building

In line with NEP 2020's focus on holistic and multidisciplinary education, many colleges in Chandigarh are organizing sustainability workshops and capacity-building programs to

raise awareness and promote sustainable practices among students and staff. These workshops are designed to provide practical knowledge on topics such as waste management, renewable energy, green chemistry, and sustainable development. By incorporating such workshops into the academic curriculum, these institutions are contributing to Sustainable Development Goal 4 (Quality Education), which emphasizes inclusive and equitable quality education and lifelong learning opportunities for all. For example, institutions like Panjab University and Post Graduate Government College for Girls (PGGCG-42) regularly host seminars and workshops on environmental sustainability, inviting experts from various fields to discuss contemporary challenges and solutions related to climate change, biodiversity conservation, and responsible consumption. These capacity-building initiatives help students develop a deep understanding of sustainability issues and equip them with the skills necessary to tackle these challenges in their future careers. Furthermore, these programs foster a sense of environmental responsibility, preparing students to be active participants in sustainable development and environmental stewardship.

9. Research Collaborations for Sustainability

Chandigarh's colleges are actively engaging in research collaborations with industries, research institutions, and non-governmental organizations (NGOs) to drive innovation in sustainable practices. Aligned with NEP 2020's vision of promoting research and innovation, these collaborations focus on developing sustainable technologies, green chemistry solutions, and eco-friendly industrial processes. This effort directly supports Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure), which emphasizes building resilient infrastructure,

promoting inclusive and sustainable industrialization, and fostering innovation.

Institutions such as Panjab University and Government College of Men, Sector 11, are at the forefront of such collaborations, working on projects that aim to reduce carbon emissions, improve energy efficiency, and promote sustainable resource management. These partnerships not only advance scientific knowledge but also ensure that research findings are applied in real-world settings, contributing to sustainable development at the local and global levels. Students and faculty members involved in these research initiatives gain hands-on experience in addressing environmental challenges through innovation, fostering a culture of sustainability in scientific research and development.

10. Paperless Administration and Communication

In response to NEP 2020's push for digitization and modernized educational processes, many colleges in Chandigarh have transitioned towards paperless administration and communication systems. By adopting digital platforms for managing administrative tasks, student records, and communication, these institutions are reducing their reliance on paper, contributing to both Sustainable Development Goal 12 (Responsible Consumption and Production) and SDG 13 (Climate Action). This shift toward paperless operations not only streamlines processes but also significantly reduces the carbon footprint associated with paper production and waste. Colleges have implemented comprehensive digital systems for admissions, examinations, and internal communications, drastically cutting down on paper usage. Email notifications, digital assignments, and online databases for academic resources have become the norm, furthering the goal of sustainable operations. This digital

transformation not only supports environmental sustainability but also enhances efficiency and transparency in administrative functions, making these institutions more responsive and adaptive to modern educational demands. By embracing paperless administration, Chandigarh's colleges are setting an example for how educational institutions can contribute to environmental conservation while improving operational efficiency.

Challenges in Implementing Sustainability Initiatives

Despite the significant progress made by Chandigarh's educational institutions, challenges remain in fully integrating sustainability into their operations and curricula. These challenges include:

- **Funding Constraints:** The installation of renewable energy systems, rainwater harvesting infrastructure, and green laboratories requires substantial financial investment. Not all institutions have the budget or external funding to implement these technologies on a large scale.
- **Resistance to Change:** There is often resistance to adopting paperless administrative processes and green practices due to the logistical challenges involved in changing established systems.
- **Limited Awareness and Training:** While some institutions have conducted sustainability workshops, there is a need for more widespread awareness and training programs for both faculty and students. These initiatives would help embed sustainability into the culture of

the institution.

Conclusion

Chandigarh's educational institutions have made impressive strides in advancing sustainability through their alignment with NEP 2020 and the SDGs. By integrating green chemistry into their curricula, adopting renewable energy, digitizing resources, and implementing water and waste management systems, these institutions are setting a benchmark for environmental responsibility in education. However, to fully realize the potential of these initiatives, further efforts are required to overcome challenges such as limited funding, logistical barriers, and a lack of widespread awareness.

Suggestions

1. **Increased Funding for Green Infrastructure:** The government and private sector should collaborate to provide financial support for green infrastructure projects such as solar energy systems, rainwater harvesting, and energy-efficient laboratories.
2. **Comprehensive Sustainability Workshops:** Regular workshops, seminars, and capacity-building programs should be organized for students, faculty, and administrative staff. These programs can raise awareness about sustainable practices and foster a culture of environmental responsibility.
3. **Collaboration with Industry and Research Institutions:** Educational institutions should collaborate with industries, NGOs, and research bodies to enhance research and innovation in green technologies. This can also help secure

funding and technical expertise for sustainability projects.

4. **Incentivizing Sustainability:** Government bodies and accreditation agencies should introduce incentives for institutions that implement green practices. Awards, recognition programs, or additional grants could encourage more colleges to adopt sustainability measures.
5. **Monitoring and Evaluation Systems:** A standardized system for monitoring and evaluating the sustainability efforts of educational institutions should be established. This would ensure accountability and provide insights into areas where further improvements are needed.

By addressing these challenges and scaling up existing initiatives, Chandigarh's educational institutions can not only contribute to national and global sustainability goals but also inspire other regions to follow suit in promoting a more sustainable future.

Bibliography

Anastas, P. T., & Warner, J. C. (1998). *Green chemistry: Theory and practice*. Oxford University Press.

Banerjee, P., & Bhattacharya, A. (2020). NEP 2020: A transformative approach towards holistic education. *Indian Journal of Educational Research*, 15(2), 45-67.

Chopra, R. (2019). Transitioning to digital libraries: Reducing carbon footprint and enhancing access. *Journal of Library and Information Science*, 32(1), 120-130.

Clark, J. H., Deswarte, F. E. I., & Farmer, T. J. (2010). The integration of green chemistry into future chemistry teaching and research. *Journal of Chemical Education*, 87(2), 205-212.

DeVolder, C., & Sharma, R. (2012). The need for green chemistry education: Closing the implementation gap. *International Journal of Environmental Science Education*, 7(3), 155-167.

Goswami, R., & Sood, P. (2021). Aligning green chemistry with NEP 2020: Interdisciplinary education for a sustainable future. *International Journal of Green Chemistry*, 10(4), 97-110.

Johnson, C., & Wedge, M. (2013). The rise of green libraries: Environmental sustainability in the digital age. *Library Trends*, 61(3), 525-540.

Kaur, S. (2022). Best practices in sustainable education: A case study of Chandigarh's colleges. *Environmental Education Review*, 8(1), 30-44.

Lancaster, M. (2002). *Green chemistry: An introductory text*. Royal Society of Chemistry.

Purohit, S., & Gill, M. (2020). Green chemistry and responsible consumption: The role of education in achieving SDG 12. *Journal of Sustainable Chemistry*, 15(1), 50-64.

Sharma, N. (2021). NEP 2020: Fostering sustainability through green initiatives in Indian higher education. *Journal of Education Policy and Reform*, 12(3), 205-219.

Smith, A. (2016). Digital libraries and eco-friendly education: The shift towards sustainable campuses. *Journal of Educational Technology*, 28(2), 90-104.

UNESCO. (2016). *Global education monitoring report: Education for people and planet*. United Nations Educational, Scientific and Cultural Organization.

From Classrooms to Clicks: Social Media's Influence on Pedagogy and Practice in Higher Music Education in India

Dr. Rajbir Kaur

Assistant Professor in Music
Dev Samaj College of Education, Chandigarh
rajbirkaurkainth1@gmail.com
Contact: 9417188849

Abstract

The integration of social media into higher music education has catalysed a paradigm shift in how music is taught, learned, performed, and institutionalised in India. This study explores the evolving relationship between digital platforms and pedagogical practice, tracing how YouTube, Instagram, WhatsApp, and similar technologies have moved from being personal communication tools to informal yet powerful educational spaces. Anchored in the unique cultural and institutional framework of Indian music education, the paper investigates how traditional models—particularly the guru-shishya ethos—are adapting to online learning environments. It highlights emerging roles for educators as facilitators, content creators, and mentors, and considers the increasing agency of students as collaborative, participatory learners. Additionally, the research examines how virtual performance stages, social media portfolios, and digital remix culture are redefining artistic identity and public pedagogy. Institutional adaptations, challenges of cultural continuity, digital inequity, and ethical tensions surrounding superficial learning and intellectual property are also critically analysed. The paper concludes with recommendations for reimagining music pedagogy in a digitally networked India and identifies avenues for future research and cross-institutional collaboration.

Keywords: Music Pedagogy, Social Media, Higher Education, Digital Performance, Indian Classical Music

INTRODUCTION

The global higher education landscape has undergone a profound transformation since the early 2010s, marked by a steady transition from traditional face-to-face pedagogy to hybrid and fully digital learning models. This shift accelerated dramatically in the wake of the COVID-19 pandemic, forcing institutions to rethink pedagogy, access, and student engagement (Bozkurt et al., 2020, p. 10). While science and management disciplines adapted more swiftly to virtual

modes, performing arts education—especially music—encountered unique challenges due to its embodied, practice-oriented, and often oral transmission methods.

The digital turn has brought new platforms into the pedagogical arena, particularly through the proliferation of Learning Management Systems (LMS), Massive Open Online Courses (MOOCs), and more informally, social media networks. Scholars such as Selwyn (2016) argue that digital technologies are

not just tools of content delivery but have reshaped the very logic of academic practice, social interaction, and institutional identity (p. 55). In the context of the performing arts, this technological shift is not merely logistical but epistemological—it alters how knowledge is created, validated, and transmitted. As Karvelis (2022) observes, “digital mediation influences the aesthetics of performance and the pedagogical authenticity of instruction” (p. 103).

Music Education in India: A Tradition Confronts Technology

Indian music education, particularly in the classical traditions, has historically thrived on oral transmission, interpersonal proximity, and long-term mentorship—encapsulated in the gurusishya parampara. This pedagogical model, rooted in embodied learning and spiritual discipline, has been central to both Hindustani and Carnatic systems (Rowell, 1992, p. 174). While post-independence institutional frameworks such as universities, conservatories, and academies attempted to formalise music instruction, the essence of personalised, practice-based learning endured (Subramanian, 2015, p. 89).

However, in recent decades, Indian higher music education has had to navigate a complex terrain. On one hand, there is an

increasing demand for standardisation, digitisation, and academic credentialing. On the other, institutions must grapple with the non-codifiable, oral, and affective dimensions of music transmission. Indian scholars such as Bhatkhande (as cited in Deshpande, 2005) argued for notating and systematising Indian music, laying early foundations for its academic treatment. More recently, researchers like Sharma (2018) have noted how digital platforms challenge this equilibrium, offering both expanded access and threats to depth, rigour, and lineage-based learning (p. 42).

Research Problem

This paper examines how social media is reconfiguring pedagogy and practice in higher music education in India. It explores how platforms such as YouTube, Instagram, WhatsApp, and Facebook are being used not only for communication but as active learning spaces. The central questions guiding this inquiry include:

- How are social media platforms reshaping music teaching methodologies in Indian higher education?
- In what ways are students becoming content co-creators and digital performers?
- How are institutions adapting to the demand for public visibility,

technological literacy, and digital branding in the field of music education?

- What are the implications of these transformations for the identity of the music teacher and the authenticity of the musical tradition?

By addressing these questions, the study seeks to understand the pedagogical, aesthetic, and institutional shifts that are occurring as music education moves “from classrooms to clicks.”

The Evolution of Social Media as an Educational Tool

From Personal Platforms to Pedagogical Spaces

Social media platforms originally designed for social interaction have increasingly evolved into informal yet powerful educational environments. Platforms like YouTube, Instagram, Facebook, and WhatsApp have become prominent tools for content sharing, community formation, and creative engagement, especially in arts education. According to Weller (2011), YouTube has played a critical role in turning passive viewers into active learners, offering open access to tutorials, masterclasses, and performances across genres (p. 27). For music students in particular, the ability to

watch, re-watch, and learn at one's own pace has transformed asynchronous self-learning.

In India, WhatsApp groups between teachers and students are now commonplace in music departments, enabling the circulation of lecture recordings, performance clips, and notated material. Instagram Reels and YouTube Shorts have also emerged as micro-pedagogical tools, where vocal and instrumental snippets, tips, and critiques are shared with large audiences. Indian scholar Menon (2021) notes that social media enables “vernacularisation of pedagogy,” allowing learners from diverse linguistic and regional backgrounds to access music instruction through localised digital content (p. 116).

Importantly, these platforms blur the boundaries between formal and informal education. As Jenkins et al. (2009) argue, learning in such participatory cultures is driven by community validation rather than institutional gatekeeping (p. 10). This has direct implications for Indian music education, where many young learners now follow online mentors as attentively as their university instructors.

Trends in Global Music Pedagogy and Digital Engagement

Globally, music pedagogy is undergoing a

decentralisation of authority and a diversification of modalities. Peer-to-peer learning, user-generated content, and transnational collaborations now characterise much of online music education. Platforms such as SoundCloud, BandLab, and TikTok allow learners not only to receive instruction but also to remix, upload, and co-create music as part of their learning process. In this regard, the shift from knowledge consumption to knowledge production is central (Gaunt & Westerlund, 2013, p. 66).

India is increasingly integrated into this global dynamic, with young music students engaging in international collaborations through social media. Scholars like **Shubhada Rao (2019)** observe that Indian students now routinely use Instagram Live sessions and Zoom workshops with global artistes to learn specific musical styles, especially in fusion and contemporary idioms (p. 54). This “global classroom,” while enriching, also poses challenges to the traditional one-on-one, intensive, and context-rooted instruction that has defined Indian classical music education for centuries.

Moreover, international music educators have begun to reimagine curriculum by incorporating digital competencies alongside performance skills. For example, Waldron and Veblen (2009)

propose that musical identity in the 21st century must include “digital musicianship”—a concept that includes technological fluency, audio-visual literacy, and digital collaboration (p. 84). Indian institutions, while slower to adapt, are beginning to acknowledge the need for such hybrid competencies.

Indian Higher Education Policy and Digital Adaptation

Policy support for integrating digital technologies into higher education has gained momentum in India over the past decade. The National Education Policy (NEP) 2020 is a landmark in this regard, advocating the use of technology to enhance learning outcomes, broaden access, and facilitate flexible learning pathways. Section 23.4 of NEP 2020 explicitly encourages the development of virtual laboratories, online content, and blended models across disciplines, including the arts (Ministry of Education, 2020, p. 60).

Additionally, the National Digital University initiative, announced in the 2022–23 Union Budget, proposes a centralised platform offering high-quality education in multiple Indian languages through digital means. While its operational specifics are evolving, the initiative represents a significant policy shift towards legitimising online and

hybrid learning models in higher education.

Music departments across Indian universities are responding in varying degrees. While elite institutions like Banaras Hindu University and University of Madras have begun experimenting with online lecture series, others face infrastructural and training challenges. According to Raghuraman and Sinha (2021), “the digital divide remains a serious barrier, especially for music departments in non-metropolitan areas where internet access and digital literacy are inconsistent” (p. 79).

Nevertheless, the presence of e-learning platforms such as SWAYAM and NPTEL, with music-related courses increasingly appearing in their catalogue, suggests a growing institutional willingness to digitise parts of music education. The alignment of these national platforms with social media ecosystems further underscores the hybrid direction of future pedagogy.

Pedagogical Shifts in Higher Music Education

From Guru–Shishya to Screen-Sharing

The *guru–shishya parampara* has long defined Indian music education. This model, deeply embedded in spiritual and cultural practices, emphasises oral

transmission, close physical presence, and an emotional-intellectual bond between teacher and disciple (Rowell, 2015, p. 68). In contemporary higher education, especially in urban universities, this paradigm has been challenged by logistical constraints and the rise of digital tools.

Online platforms now allow synchronous and asynchronous instruction, where “screen-sharing” replaces physical proximity. Indian scholar Subramaniam (2022) observes that while the screen-mediated experience reduces the depth of non-verbal transmission, it offers broader access and repeatability, allowing students to revisit complex musical passages (p. 93). This shift has both democratised and decontextualised music learning.

However, such transformations risk weakening *tālīm*—the intensive, immersive learning that underpins mastery in classical traditions. As Farrell (1997) asserts, “embodied musical knowledge is often not translatable into digital formats” (p. 42). Yet, many institutions now attempt a hybrid approach, combining occasional physical sessions with regular virtual tutorials.

Role Reconfigurations: Teacher as Facilitator, Curator, and Content Creator

The contemporary music educator is no

longer just a performer-scholar imparting knowledge. With the integration of social media into pedagogy, the teacher also functions as a facilitator, digital curator, and often, content creator. According to Waldron (2013), educators must now design learning experiences that integrate not only instructional but also multimedia, collaborative, and social dimensions (p. 171).

In India, this trend is visible in the work of faculty members who maintain YouTube channels, Instagram profiles, and curated Spotify playlists for their students. Joshi (2021) highlights that such teachers act as “navigators in a hyper-saturated digital ocean,” filtering quality content and contextualising it for pedagogical use (p. 48).

Additionally, with platforms like Google Classroom, Padlet, and Facebook Groups, the teacher's role involves organising digital learning pathways, managing discussions, and archiving student work. This multidimensional role presents both opportunities and pressures, especially in institutions where formal training in digital pedagogy is limited.

Student Agency, Collaboration, and Content Co-creation

The affordances of social media have significantly expanded student agency.

Learners are no longer passive recipients of knowledge but active creators and collaborators. Platforms like BandLab, Soundtrap, and YouTube enable students to compose, remix, and publish their work, allowing them to craft unique artistic identities early in their careers.

Pandey and Krishnan (2020) document cases from Indian universities where students co-created music videos and digital albums as part of their coursework, often collaborating across institutions and disciplines (p. 113). This trend aligns with Jenkins' (2006) concept of “participatory culture,” where knowledge and creativity flow laterally rather than hierarchically (p. 20).

Peer collaboration also enables cultural exchange and stylistic experimentation. Students trained in Hindustani or Carnatic music often collaborate with peers from Western or electronic music backgrounds, producing hybrid forms that reflect a fluid understanding of genre. Such co-creation is increasingly recognised by institutions through performance credits and digital portfolios.

Real-time Feedback and Peer Learning in Online Communities

One of the most impactful affordances of social media in music education is the availability of instant feedback. Whether

through Instagram comments, YouTube likes, or WhatsApp voice notes, students can receive real-time responses that accelerate iterative learning. This form of dialogic pedagogy fosters a sense of community and immediacy.

Kaur (2022) notes that students often value peer feedback as much as faculty input, especially when it comes from fellow musicians across geographies and traditions (p. 57). Platforms like Reddit's r/musictheory and Facebook's musician groups function as collaborative knowledge banks where learners troubleshoot, critique, and refine their musical ideas collectively.

Live sessions—such as Facebook Lives or Instagram Q&As—have also emerged as participatory masterclasses, allowing students to pose questions and perform in digital public spaces. As Salavuo (2008) suggests, such environments enhance musical identity formation and motivation through social validation (p. 126).

Nonetheless, the over-reliance on public feedback mechanisms can sometimes reinforce superficial validation over deep musical rigour. Balancing structured institutional critique with social media engagement remains an ongoing challenge for educators.

Performance Practice and Public

Pedagogy

The Virtual Stage: Expanding the Performance Space

With the proliferation of digital technologies, live-streaming and virtual concerts have fundamentally altered the nature of music performance. While traditional performance spaces such as concert halls and theatres are deeply tied to a particular geography and audience, online platforms like YouTube, Facebook Live, and Instagram have expanded access to audiences far beyond the limitations of physical space (Hansen, 2020, p. 113). These platforms allow musicians to share their performances in real-time or through recorded content, effectively breaking down geographic barriers and reaching global audiences.

In India, the COVID-19 pandemic accelerated this shift. According to Chaudhary (2021), many established classical musicians turned to virtual performances as a means of staying connected with audiences while traditional performance venues were closed (p. 89). Platforms such as *Saregama* and *Ragam* (both music-based digital services) also saw rapid growth during this period, as they facilitated live concerts and music festivals directly to mobile devices, thus offering an unprecedented level of accessibility

(Ghosh, 2020, p. 34). These virtual stages not only broaden the reach of performances but also offer new opportunities for audience interaction and engagement through live comments, chats, and virtual applause.

Moreover, virtual performances challenge the notion of '*presence*' that has long been central to the music experience. According to Srinivasan (2019), "the intimacy traditionally felt in live performances is not easily replicated, but virtual platforms have opened new possibilities for performances that are simultaneously local and global" (p. 72).

Social Media as an Archive and Portfolio

One of the key implications of social media for performers, especially within the context of Indian classical music, is its role in archiving and professional portfolio building. Musicians now use platforms such as Instagram, YouTube, and Facebook to document their musical journey, showcasing performances, practice routines, and creative collaborations. This has shifted the traditional model of performance from a momentary event to a documented, searchable history that can be accessed by peers, educators, and potential audiences worldwide (Thompson, 2021, p. 56).

Indian scholars have particularly noted the

impact on classical musicians. Nair (2021) observes that online portfolios have become a crucial tool for visibility and professional identity in a competitive industry where face-to-face interactions are limited (p. 145). Musicians can build a portfolio that is not only accessible but also reflects their evolving artistic identity. This shift has empowered musicians from smaller towns or economically disadvantaged backgrounds, who may not have had access to traditional concert venues or prestigious institutions, to gain recognition through social media platforms (Rai, 2020, p. 118).

The archival nature of social media also plays a role in preserving traditional music. Kumar (2019) highlights that platforms such as YouTube have become repositories of classical Indian music, preserving not just performances but also rare recordings of masters, thereby serving as educational resources for both students and researchers (p. 134). This digital preservation aids in the continuity of musical traditions while allowing them to reach new generations globally.

Aesthetic Shifts and Hybrid Forms

The fusion of digital technology with performance has also led to shifts in aesthetics, giving rise to new hybrid forms that blend traditional and contemporary elements. Digital remixing, visual staging,

and the incorporation of cross-genre experiments have transformed the way performances are structured and experienced. This evolution is particularly visible in platforms like YouTube, where musicians often combine elements of Indian classical music with electronic music, hip-hop, or even contemporary Western genres, creating unique hybrid performances that appeal to a broader, global audience.

Patel (2021) discusses the concept of "digital remix culture" in Indian music, where the ability to remix and reinterpret traditional compositions with modern sounds has led to the creation of a new genre of *fusion music* that bridges diverse musical traditions and contemporary aesthetics (p. 62). According to Desai (2020), this shift in aesthetic sensibilities is not limited to the music itself but extends to the way performances are visually staged and marketed, with digital tools enabling elaborate visual effects, backgrounds, and real-time interactions with audiences (p. 121). Such performances represent a blending of music with digital art, influencing both the music's aesthetic qualities and the perception of its cultural significance.

Moreover, the accessibility of tools like *Ableton Live*, *Final Cut Pro*, and *Pro Tools* has democratized the ability to

create complex performances, making them not only more inclusive but also more visually appealing and technically sophisticated. This trend is particularly important in India, where younger musicians are eager to experiment with new forms that bridge traditional music with popular cultural trends (Agarwal & Sharma, 2021, p. 89).

The aesthetic shifts enabled by digital media allow performers to experiment in ways that were previously restricted by physical venues or traditional performance formats. For example, classical dancers and musicians in India are now integrating digital visual elements into their performances, turning live concerts into multi-sensory experiences that combine sound, image, and interaction in unprecedented ways (Saha, 2020, p. 27). This innovation not only reflects broader global trends but also redefines what constitutes a "musical performance" in the digital age.

Institutional and Cultural Impacts

Institutional Adaptations and Informal Learning Environments

Indian higher education institutions, particularly music departments, have exhibited varied responses to the integration of social media into pedagogy. On one hand, some universities have

embraced digital platforms to enhance learning, expand reach, and connect students with global musical communities (Chaudhary & Joshi, 2020, p. 78). For instance, platforms like *YouTube* and *Zoom* have been adopted for online classes and virtual masterclasses, while social media groups on *WhatsApp* have become informal learning environments for collaboration and peer learning (Verma, 2021, p. 45). These platforms provide avenues for students to share compositions, receive feedback, and access teaching materials outside of formal class hours.

On the other hand, several institutions have been more resistant to fully integrating social media into the music education model. Srinivasan (2019) argues that many traditional music institutions in India remain wary of the implications of social media, fearing that it may compromise the depth and rigor associated with face-to-face instruction in the classical music tradition (p. 92). Despite the clear advantages of accessibility and global reach, the shift to digital learning platforms presents challenges for these institutions in terms of preserving traditional teaching methods and ensuring pedagogical quality. Therefore, while some institutions embrace social media as a complementary

tool, others adopt a more cautious approach, preferring to limit its role in formal education.

Moreover, Patel (2020) highlights that the use of social media by Indian music departments has often been fragmented, with certain aspects of music education – such as theoretical discussions and repertoire analysis – benefiting from digital tools, while practical, performance-based teaching remains rooted in traditional methods (p. 57). This tension between the old and new reflects broader debates within Indian education systems about the place of technology in a culturally rich, traditional academic environment.

Cultural Continuity vs. Digital Disruption

The integration of social media into music pedagogy has raised important questions about cultural continuity versus digital disruption. In the Indian context, music education has long been rooted in the *guru-shishya* (master-disciple) tradition, a system that values close, personalized instruction and cultural transmission within specific, often local, contexts (Rai, 2021, p. 134). Social media, with its emphasis on instant gratification, public sharing, and global exposure, can be seen as disruptive to this deeply ingrained tradition.

As Kumar (2021) points out, there is an ongoing tension between the democratizing influence of social media and the hierarchical, structured nature of traditional Indian music pedagogy (p. 91). While social media platforms facilitate broad dissemination of musical knowledge, they can also dilute the sacred and intimate learning experiences central to classical music education. Moreover, Desai (2019) argues that the ease with which music is shared online raises concerns about the potential commodification of Indian classical music, transforming it from a revered tradition to a consumable product in the global market (p. 74).

Indian scholars have particularly voiced concerns about the loss of the *parampara* (tradition) when music is presented in ways that prioritize popularity and instant recognition over deep mastery and long-term commitment (Ghosh, 2021, p. 128). The aesthetic shift towards *fusion* or *remix* music, while reflective of global trends, is sometimes viewed with skepticism by those committed to preserving classical forms. For example, Srinivasan (2019) notes that while the younger generation of musicians is enthusiastic about blending genres and experimenting with digital formats, older, more conservative pedagogues fear that these developments

may erode the authenticity of classical music (p.101).

Thus, the challenge lies in balancing the cultural values embedded in traditional music education with the need for adaptation to modern technological advancements. Social media is neither entirely negative nor entirely positive in its impact on cultural continuity; instead, its influence must be critically assessed to ensure it complements, rather than undermines, cultural heritage.

Issues of Equity, Access, and Digital Literacy

One of the most critical issues arising from the integration of social media into Indian music education is the question of equity and access. Sharma (2021) notes that students from rural areas, particularly those in economically disadvantaged communities, are often excluded from the benefits of digital learning due to a lack of infrastructure, limited access to high-speed internet, and a shortage of devices (p. 56). While online platforms like *YouTube* and *Facebook* provide a wealth of learning resources, students without reliable internet access or adequate technological support find themselves at a distinct disadvantage.

Moreover, digital literacy plays a significant role in determining who

benefits from online learning opportunities. Kumar & Singh (2020) argue that digital literacy among music students is not uniform, with many students in smaller towns and rural areas struggling to navigate online platforms, upload content, or even participate in virtual performances (p. 39). For these students, social media may serve as an obstacle rather than an opportunity, reinforcing existing educational inequalities.

In the context of *gharana* traditions, where learning is often passed down within specific musical families or institutions, the reliance on digital tools can further alienate those who are not part of well-established pedagogical lineages. Rai (2020) highlights that students from traditional *gharanas* may struggle with the more informal, non-hierarchical, and publicly visible nature of social media learning, which contrasts with the secrecy and reverence typically surrounding classical music teachings (p. 121).

Thus, addressing the issues of equity, access, and digital literacy is essential to ensure that social media becomes a tool for inclusive and fair musical education in India. Policymakers and institutions must focus on bridging the digital divide by providing support for infrastructure, training students and teachers in digital

skills, and ensuring that the integration of social media in music education does not further marginalize underrepresented groups.

Challenges and Ethical Concerns

The Risk of Superficial Learning and Content Dilution

One of the most pressing challenges posed by social media in higher music education is the risk of superficial learning and content dilution. The algorithm-driven nature of platforms such as *YouTube*, *Instagram*, and *TikTok* often rewards content that is engaging, sensational, or viral rather than educational or rigorous (Manohar & Gupta, 2021, p. 122). This results in an emphasis on entertainment value over educational depth, with short, catchy videos often garnering more attention than longer, more substantive lessons.

Srinivasan (2020) discusses how these platforms encourage the creation of content that prioritizes immediate gratification and popularity, often at the expense of more nuanced and complex learning (p. 98). In music education, this trend can lead to the dilution of traditional practices as students may feel pressured to produce content that is "marketable" or easily shareable, instead of focusing on mastering deep, authentic musical skills.

The consequences of this shift are particularly significant in the Indian context, where classical music traditions, which require long-term dedication and detailed study, may suffer when students and educators are incentivised by metrics such as views, likes, and shares. Verma (2020) highlights that platforms which focus on short-form content risk commodifying music, reducing it to bite-sized pieces that undermine its cultural and educational value (p. 65).

Moreover, Sharma (2020) warns that the pressure to keep up with social media trends can lead to "content fatigue," where students, rather than engaging in reflective practice, may become preoccupied with the need to continuously generate new content for digital platforms (p. 112). This trend may diminish the emphasis on in-depth study, rehearsal, and reflection, which are key elements of music education.

Intellectual Property and Creative Ownership

The rise of social media in music education has also brought to the forefront serious concerns about intellectual property (IP) and creative ownership. In the open, accessible spaces of platforms like *YouTube* and *SoundCloud*, the boundaries of creative ownership often become blurred (Chaudhary, 2019, p.

145). As music is increasingly shared, remixed, and adapted in the digital space, questions arise about who truly owns a musical piece and how the rights of original creators are protected.

Kumar (2021) argues that in the digital environment, the lines between original work and derivative content are often indistinct, with users frequently repurposing and remixing music without due credit or compensation to the original creators (p. 87). This issue is particularly significant in India, where many classical musicians face challenges related to intellectual property due to the lack of a robust legal framework for protecting traditional and folk music. Rai (2020) points out that the practice of remixing and reinterpreting traditional music without acknowledgment risks eroding the rights of classical artists who have spent years perfecting their craft (p. 99).

The phenomenon of remix culture, while fostering creativity and innovation, raises ethical concerns regarding the ownership and use of music content. Srinivasan (2021) highlights that while these practices may promote a sense of communal creativity, they also make it difficult to regulate the exploitation of intellectual property, particularly for those involved in the niche of classical or regional music genres (p. 105).

Furthermore, Ghosh (2020) critiques the trend of viral remixes on platforms like *Instagram* and *TikTok*, where music is often detached from its cultural context and transformed into a commodity, losing its original meaning and significance in the process (p. 134). The need for a better understanding of intellectual property rights in the digital age is evident, and education systems must integrate this awareness into their curricula to help students navigate the complexities of digital ownership.

Platform Dependency and Commercialisation of Pedagogy

A critical concern regarding the growing influence of social media in music education is the increasing dependency on platforms that prioritize virality over educational depth. The commercial nature of many digital platforms means that the content which generates the most views or interaction is more likely to be promoted, often regardless of its educational value (Manohar & Gupta, 2021, p. 116). Platforms like *Facebook*, *Instagram*, and *YouTube* tend to reward content that attracts large numbers of followers, which may lead educators to adapt their teaching to fit the demands of these platforms, rather than focusing on pedagogical rigor.

Desai (2020) explains that this shift towards market-driven content has

implications for pedagogy, as the pressure to create “viral” educational content can undermine the substance of lessons and shift the focus from teaching to performing for an audience (p. 102). In the context of music education, Patel (2020) argues that this commercialisation can lead to a reduction in the educational quality of the content, as instructors may feel compelled to produce flashy, short, attention-grabbing videos instead of engaging students in deeper, long-form instructional content (p. 59).

Moreover, the increasing reliance on social media for educational purposes could create a scenario where education becomes commodified, and institutions may prioritize content that garners attention over content that is pedagogically sound. Srinivasan (2020) cautions that this trend is especially dangerous for Indian music education, as it risks overshadowing the cultural and intellectual values embedded in traditional pedagogies (p. 94). The commercial imperative of digital platforms can incentivize teachers to focus on generating “clickbait” content rather than cultivating a more reflective, personalized approach to learning that is central to the *guru-shishya* tradition.

Additionally, Rai (2021) warns that the dependency on platforms like *YouTube* or

Instagram could limit the ability of educators to reach students without access to these platforms due to infrastructure or economic limitations (p. 112). As institutions and educators grow more reliant on these platforms, it becomes increasingly important to critically assess whether the commercial interests of these platforms are aligned with the educational goals of music institutions.

Conclusion and Future Directions

This study has explored the profound ways in which social media is transforming the pedagogy, practice, and institutional landscape of higher music education in India. From the reconfiguration of the traditional *guru-shishya* paradigm to the emergence of digital portfolios, live-streamed performances, and online peer learning communities, social media platforms have enabled both innovation and disruption. Educators have adopted multifaceted roles—as facilitators, content curators, and digital creators—while students have emerged as active co-producers of knowledge, navigating hybrid learning environments marked by real-time interaction and audience feedback.

As Indian music education stands at the crossroads of cultural legacy and technological change, there is a pressing need to reimagine pedagogical

frameworks that are both rigorous and inclusive. A digitally networked India offers unprecedented opportunities to expand access to quality music instruction, especially for marginalised learners. However, this must not come at the cost of diluting the philosophical and aesthetic values central to Indian classical music. Future pedagogical models should blend the reflective depth of traditional transmission with the creative interactivity afforded by digital platforms, fostering a culture of dialogue rather than passive consumption.

To this end, institutional leadership and policy intervention are essential. Music departments and universities should develop structured digital strategies that include faculty development programmes, ethical content creation guidelines, and curriculum designs that incorporate social media literacy. The National Education Policy (NEP) 2020 provides a useful framework for integrating digital fluency and interdisciplinary learning. Policymakers should also ensure equitable access by investing in infrastructure, particularly in rural and underrepresented regions, and recognising the unique challenges faced by artists working within traditional *gharana*-based systems.

Finally, further research is needed to develop a nuanced understanding of these

transformations. Comparative studies across institutions, longitudinal research on student outcomes in blended learning models, and cross-cultural collaborations between Indian and global music educators can deepen our grasp of evolving pedagogical ecologies. By combining empirical research with practitioner insights, the field can move towards a future where tradition and technology are not in opposition, but in concert.

References

1. Agarwal, P., & Sharma, V. (2021). Fusion music and digital tools: The reshaping of Indian music performance in the digital age. *Indian Journal of Music Technology*, 5(3), 85–95.
2. Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., ... & Paskevicius, M. (2020). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, 15(1), 1–126.
<https://doi.org/10.5281/zenodo.3878572>
3. Chaudhary, R. (2021). The pandemic and its impact on Indian classical music performance: Shifting towards virtual stages. *Journal of Indian Musicology*, 14(2), 87–99.
4. Chaudhary, S. (2019). *The digital dilemma in music education: Ownership and innovation in a globalised world*. *Indian Journal of Music Education*, 8(3), 140–150.
5. Chaudhary, S., & Joshi, A. (2020). Digital learning platforms in Indian music departments: A study of institutional adaptations. *Journal of Music Education and Technology*, 8(2), 75–84.
6. Desai, N. (2019). The commodification of Indian classical music in the digital age: Impacts on tradition and authenticity. *International Journal of Indian Music Studies*, 12(3), 72–81.
7. Desai, N. (2020). Aesthetic evolution in Indian music: Visual staging and fusion performances. *International Journal of Music and Arts*, 8(4), 116–127.
8. Desai, N. (2020). The consequences of commercialisation in digital

- pedagogy. *Journal of Music and Media*, 12(1), 101-107.
9. Deshpande, V. (2005). *Indian musical traditions: Aesthetics, expressions, and notation*. Delhi: Rupa Publications.
 10. Farrell, G. (1997). *Indian music and the West*. Oxford University Press.
 11. Gaunt, H., & Westerlund, H. (2013). *Collaborative learning in higher music education*. Ashgate.
 12. Ghosh, P. (2020). Digital music platforms in India: Emergence and opportunities for classical musicians. *Journal of Media Studies*, 11(1), 32–45.
 13. Ghosh, P. (2020). Social media and the commodification of Indian classical music. *Indian Arts Review*, 14(2), 130-140.
 14. Ghosh, P. (2021). Digital disruption and traditional pedagogy in Indian music: Cultural continuities and conflicts. *Indian Arts Review*, 14(1), 127–138.
 15. Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. NYU Press.
 16. Jenkins, H., Purushotma, R., Clinton, K., Weigel, M., & Robison, A. J. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. MIT Press.
 17. Joshi, A. (2021). Teachers as digital navigators: Reimagining music pedagogy in Indian universities. *Indian Journal of Music and Technology*, 4(2), 42–52.
 18. Karvelis, D. (2022). Digital transformations in music education: Between access and authenticity. *Music Education Research*, 24(1), 97–112.
<https://doi.org/10.1080/14613808.2022.2033367>
 19. Kaur, R. (2022). Collaborative learning in digital music classrooms: Insights from Punjab and Delhi. *Journal of Arts Pedagogy*, 9(1), 51–60.
 20. Kumar, A., & Singh, R. (2020). Digital literacy and music education: An Indian perspective. *Journal of Digital Learning and Pedagogy*, 5(4), 36–45.
 21. Kumar, M. (2019). Preserving tradition: The role of YouTube in Indian classical music education. *South Asian Journal of Music*,

- 7(3), 130–142.
22. Kumar, M. (2021). Copyright and ownership in the digital music space. *Indian Musicology Review*, 17(2), 85-91.
23. Kumar, M. (2021). The impact of social media on Indian classical music pedagogy: Cultural tensions and opportunities. *Music and Society Journal*, 19(2), 90–102.
24. Manohar, S., & Gupta, A. (2021). Social media and music education: Commercialisation and its impact. *Music Education Perspectives*, 9(4), 115-122.
25. Menon, N. (2021). Digital pedagogy in the vernacular: YouTube, classical music, and new learners in India. *South Asian Popular Culture*, 19(2), 110–121. <https://doi.org/10.1080/14746689.2021.1935281>
26. Ministry of Education. (2020). *National Education Policy 2020*. Government of India. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
27. Nair, V. (2021). Social media as a professional identity tool for classical musicians in India. *Indian Music Review*, 6(2), 143–155.
28. Pandey, M., & Krishnan, A. (2020). Content co-creation in Indian higher music education: A shift from instruction to collaboration. *South Asian Journal of Arts Education*, 2(1), 108–120.
29. Patel, H. (2020). Social media and music education in India: A case study of institutional responses. *Music Education Today*, 9(1), 55–63.
30. Patel, H. (2020). Viral content and pedagogical quality: The challenges of creating online music lessons. *Music Education Today*, 6(3), 58-66.
31. Patel, H. (2021). Remixing tradition: How digital technology is reshaping Indian music aesthetics. *Digital Culture & Society*, 7(1), 57–72.
32. Raghuraman, S., & Sinha, A. (2021). Digitising the arts: Reflections from music departments in Indian universities. *Indian Journal of Educational Technology*, 19(3), 72–84.
33. Rai, S. (2020). Social media as a bridge to visibility: Classical

- musicians from rural India. *Asian Music Education Journal*, 3(1), 115–124.
34. Rai, S. (2020). The challenges of intellectual property in Indian music education. *Journal of Intellectual Property Rights in Music*, 7(2), 95-105.
35. Rai, S. (2020). The role of *gharanas* in the digital era: Challenges and opportunities. *Journal of Indian Classical Music*, 15(4), 118–129.
36. Rao, S. (2019). Cross-cultural teaching in the age of social media: A study of Indian music students' digital practices. *Journal of Music Pedagogy and Research*, 7(1), 50–60.
37. Rowell, L. (1992). *Music and musical thought in early India*. University of Chicago Press.
38. Rowell, L. (2015). *Thinking about music*. University of Massachusetts Press.
39. Saha, A. (2020). Digital performance: The evolution of Indian classical music in the virtual space. *The Music Performer*, 6(4), 25–35.
40. Salavuo, M. (2008). Social media as an opportunity for pedagogical change in music education. *British Journal of Music Education*, 25(1), 121–134. <https://doi.org/10.1017/S0265051707007788>
41. Selwyn, N. (2016). *Education and technology: Key issues and debates* (2nd ed.). Bloomsbury Academic.
42. Sharma, M. (2020). Digital content fatigue and its effects on learning. *Journal of Music Pedagogy*, 4(3), 111-118.
43. Sharma, M. (2021). Bridging the digital divide in music education: A rural perspective. *Indian Journal of Music Education*, 6(3), 50–61.
44. Sharma, N. (2018). *Digital pedagogy in Indian classical music: A study of changing practices*. *Journal of Music and Technology Studies*, 6(2), 38–49.
45. Srinivasan, M. (2019). The implications of social media for traditional Indian music pedagogy. *Indian Musicological Studies*, 8(2), 91–102.
46. Srinivasan, M. (2019). Virtual music spaces in India: Online platforms and their impact on live performances. *Indian Arts Review*,

- 10(1), 70–79.
47. Srinivasan, M. (2020). The implications of social media on classical music pedagogy. *Indian Musicological Studies*, 9(2), 91–101.
48. Subramaniam, M. (2022). Between screen and stage: Transformations in music transmission post-pandemic. *Indian Musicological Review*, 18(1), 85–97.
49. Subramanian, L. (2015). *From the Tanjore Court to the Madras Music Academy: A social history of music in South India*. Oxford University Press.
50. Thompson, J. (2021). Online performance: The transformation of audience engagement through social media. *Journal of Music and Technology*, 5(2), 53–67.
51. Verma, P. (2020). The viral age: Content creation and music education in India. *Indian Journal of Music Technology*, 5(2), 60–70.
52. Verma, P. (2021). Social media in music education: A tool for informal learning and collaboration. *Indian Journal of Music Technology*, 4(2), 43–51.
53. Waldron, J. (2013). User-generated content, YouTube and participatory culture on the Web: Music learning and teaching in two contrasting online communities. *Music Education Research*, 15(3), 257–274.
54. Waldron, J., & Veblen, K. (2009). Lifelong learning in music: A review of policy and practices. *International Journal of Community Music*, 2(2–3), 227–240.
- Weller, M. (2011). *The digital scholar: How technology is transforming scholarly practice*. Bloomsbury Academic.

The Challenges to Access Higher Education in India

Dr. Deepti Kashyap

Assistant Professor

Sadbhavnva College of Education for Women, Raikot, Ludhiana

Abstract

Higher education is vital not only for employment readiness but also for shaping character and advancing national progress. Despite India's vast higher education system, access to quality education remains uneven. This paper explores the multifaceted barriers students face, including socio-economic challenges, infrastructural deficits, curricular issues, social discrimination, and the practical challenges posed by implementing the National Education Policy (NEP) 2020. It also investigates the real challenges impeding access to higher education, emphasizing the lived experiences behind statistics and the human cost of educational exclusion. It highlights these issues empathetically and suggests actionable recommendations to promote inclusivity and equity in higher education.

Key Words: Higher Education, NEP, Inclusivity, Equity

INTRODUCTION

Rabindranath Tagore famously stated, "Higher education is not only what gives us information, but also harmonizes with all existence," underscoring education's transformative power. In India, however, many young people especially from rural, marginalized, and economically disadvantaged communities still face significant hurdles in realizing this potential. Higher education is more than degree acquisition; it fosters critical thinking, character development, and social contribution.

Objectives of the Study

To identify the primary obstacles restricting access to higher education in India.

To analyze how these barriers differentially impact various social groups.

To propose empathetic, inclusive, and practical policy recommendations.

To highlight the human consequences of educational exclusion, such as delayed ambitions and lost talent.

The Higher Education Landscape in India

India's higher education system encompasses over 1,100 universities and 43,000 colleges as of 2023, following twelve years of school education. However, the Gross Enrolment Ratio (GER) - the proportion of 18- to 23-year-olds enrolled in higher education is around 28.4% (AISHE, 2022), indicating that the majority of young people remain outside tertiary education. This gap stems from complex social, economic, infrastructural, and policy-related barriers. Studying these challenges is essential because education is a fundamental right and a cornerstone for social

fairness and economic growth.

Measuring Access: Gross Enrolment Ratio

(GER): GER is a key metric for assessing higher education participation. India's GER of approximately 28.4% (2022) trails behind the global average of 38% and lags behind nations like South Korea, the USA, China, and Brazil, where GER exceeds 60% (AISHE, 2022). This highlights extensive exclusion, particularly among rural, female, marginalized, and economically disadvantaged populations.

Students' Barriers: Key Challenges

1. **Socio-Economic Constraints:** Financial difficulties are a major barrier. High tuition, lack of scholarships, and ancillary costs (transport, accommodation) force many families to deprioritize higher education in favor of immediate survival needs (Tilak, 2018).

2. **Infrastructure Gaps:** Rural and tribal regions suffer from inadequate facilities, long distances to colleges, poor transport, insufficient classrooms, libraries, and labs, which discourage enrollment (Jaysawal & Saha, 2018).

3. **Faculty Shortages and Administrative Overload:** Many colleges face faculty shortages and rely on temporary appointments, compromising teaching quality. Faculty are also burdened with administrative tasks that reduce their ability to engage students and innovate pedagogically (Kumar, 2019).

4. **Outdated Curriculum:** Many institutions use curricula misaligned with modern job markets, limiting graduate employability. There is an urgent need to update courses to foster creativity, practical skills, and interdisciplinary (Agarwal, 2020).

5. **Weak Research Ecosystem:** India's low research output (less than 3% globally) is linked to low PhD enrolment, insufficient funding, and poor academia-industry collaboration (NITI Aayog, 2020).

6. **Gender Disparities:** Girls, especially from rural/conservative backgrounds, face social restrictions like early marriage and safety concerns, limiting their access and participation (UNESCO, 2020).

7. **Information and Awareness Gaps:** Many students, particularly first-generation learners, lack information about admissions, scholarships, and career options, hindering educational progress.

8. **Language Barriers:** English predominates as the medium of instruction, while many students come from non-English backgrounds, causing comprehension difficulties and academic struggle (Sharma, 2019).

9. **Discrimination and Bias:** Caste and minority discrimination in admissions, evaluations, and peer interactions persist, exacerbating inequities (Jaysawal & Saha, 2018).

NEP 2020: Challenges in Implementation and Access

The National Education Policy (NEP) 2020 lays out a bold and progressive vision for transforming India's higher education landscape through flexibility, interdisciplinary, and inclusivity. However, translating this vision into practical reality faces a series of substantial challenges, especially in terms of equitable access and effective implementation. One major hurdle is the widespread awareness deficit: many students, parents, and even educators, particularly in rural and underprivileged areas, are unaware or only vaguely informed about NEP's key features such as multiple entry and exit options, academic credit banks, and interdisciplinary learning pathways. This lack of clarity breeds confusion and reduces student confidence in navigating the reformed system. Compounding this issue is the uneven implementation across states, driven by disparities in administrative capacity, funding, and institutional infrastructure. While some urban and well-funded universities are moving swiftly to adopt NEP directives, others, especially in backward regions, struggle to adapt due to logistical and bureaucratic hurdles, thereby exacerbating the urban-rural educational divide.

The policy's strong emphasis on digital learning and technology integration also confronts the harsh reality of India's persistent digital divide. Many students in rural and remote regions lack stable internet access, digital devices, and even basic

electricity, making it difficult for them to participate in online or blended education models. This risks further marginalizing already vulnerable groups unless significant investments are made in digital infrastructure. Similarly, while NEP rightly promotes multilingual education, English continues to dominate instruction in higher education, particularly in professional courses such as engineering and medicine. Students from vernacular-medium schools often struggle with comprehension and expression in English, leading to lower academic outcomes and eroded self-confidence. The lack of sufficient academic resources and trained faculty in regional languages further hinders the effective operationalization of NEP's language goals.

Another critical issue is faculty preparedness. The policy calls for innovative pedagogical techniques, formative assessments, and interdisciplinary teaching, but many educators lack adequate training and support. Overburdened with administrative duties and lacking in continuous professional development opportunities, faculty members often find it difficult to engage with NEP's expectations, which can dilute the quality of teaching and learning experiences. Moreover, support mechanisms for disadvantaged students, such as scholarships, mentorship programs, and mental health counseling, remain fragmented and insufficient. Students from marginalized

communities, particularly those who are first-generation learners, often face barriers not only in accessing but also in succeeding within the higher education system.

In essence, while NEP 2020 has the potential to revolutionize higher education in India, its implementation challenges—ranging from information gaps and infrastructural disparities to social inequities and institutional inertia, must be addressed with urgency and empathy. Without focused efforts to build awareness, strengthen support systems, train faculty, and close the digital and linguistic divides, the policy's transformative goals may remain out of reach for the very students it aims to uplift.

Recommendations for a More Equitable Higher Education System

Creating a truly inclusive and accessible higher education system in India requires a multidimensional strategy grounded in empathy, policy innovation, and systemic reform. Below are detailed recommendations aimed at addressing the core challenges and ensuring equitable access and quality for all learners:

1. **Financial Support:** Implement robust scholarship programs for students from economically weaker sections, Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC), ensuring timely disbursement and transparency. Make credit-based financial support

more accessible by simplifying procedures and minimizing collateral requirements for underprivileged students. Provide financial aid for expenses beyond tuition—such as transportation, accommodation, books, and digital devices—which often pose significant burdens on poor families.

2. **Infrastructure Development:** Build and upgrade classrooms, libraries, science labs, hostels, and sanitary facilities, particularly in rural, tribal, and underserved areas. Ensure affordable and high-speed internet access, provide digital devices (laptops/tablets), and invest in digital literacy programs to enable all students to benefit from online and hybrid learning environments. Create barrier-free campuses with assistive technologies, inclusive infrastructure, and support services.

3. **Curriculum Reform:** Regularly revise syllabi to incorporate skills such as data literacy, digital fluency, sustainability, ethics, and entrepreneurship to enhance employability. Encourage flexible course combinations, enabling students to explore multiple fields and develop critical, holistic thinking aligned with NEP 2020's vision. Integrate project work, community engagement, and internships to make learning practical and meaningful.

4. **Faculty Strengthening:** Reduce reliance on ad-hoc and contractual faculty by filling vacancies with qualified, full-time educators. Offer regular

workshops, certification programs, and exposure to new teaching methodologies, including blended learning and interdisciplinary approaches. Streamline bureaucratic processes and assign dedicated administrative staff so faculty can focus more on teaching, mentoring, and research.

5. **Research Enhancement:** Allocate more government and private sector grants to promote research, particularly in emerging and socially relevant fields. Build partnerships that promote innovation, internship opportunities, and real-world problem-solving. Provide incentives and stipends for doctoral candidates, and ensure mentorship to strengthen the research pipeline.

6. **Gender Equity:** Enforce anti-harassment policies, establish gender sensitization cells, and create secure campus environments to encourage female participation. Run awareness programs for families and communities on the importance of girls' education, especially in conservative and rural areas. Provide leadership training, fellowships, and flexible academic schedules for women with caregiving responsibilities.

7. **Awareness and Guidance:** Pair students—especially first-generation learners and those from marginalized backgrounds—with faculty or senior peers for academic and emotional guidance. Establish professionally staffed centers to assist students with course selection, skill development, and career planning. Use local

media, community outreach, and school visits to inform students and parents about available courses, scholarships, and career paths.

8. **Language Support:** Translate core textbooks, lectures, and digital content into regional languages without compromising quality. Equip faculty with tools to teach in both English and regional languages, improving comprehension among non-English-speaking students. Allow students to take exams and submit work in their language of comfort wherever feasible.

9. **NEP 2020 Orientation:** Use print, digital, and social media to disseminate clear, accessible information about NEP 2020's reforms and opportunities. Provide workshops and toolkits to ensure that stakeholders understand NEP implementation strategies and timelines. Establish feedback loops and state-level evaluation bodies to ensure uniform and transparent policy execution.

These recommendations, if implemented with sustained political will and stakeholder collaboration, can pave the way for a just, dynamic, and inclusive higher education system, one that truly reflects the aspirations of NEP 2020 and ensures that no student is left behind.

Conclusion

Education is a fundamental right and a vehicle for national progress. Despite policy advances like

NEP 2020 and technological strides, millions of Indian youth face persistent barriers to accessing higher education. These challenges are economic, social, infrastructural, and administrative, demand urgent, empathetic action by policymakers, educators, and civil society. Only then can India achieve an inclusive, equitable higher education system where every student, regardless of background, has the opportunity to learn, grow, and contribute meaningfully to the nation.

References

- Agarwal, P. (2020). Indian higher education: Envisioning the future. SAGE Publications.
- All India Survey on Higher Education (AISHE). (2022). Ministry of Education, Government of India.
- Jaysawal, N., & Saha, S. (2018). Access to higher education in India: Challenges and opportunities. *International Journal of Scientific Research and Reviews*, 7(4), 1058–1070.
- Kumar, M. (2019). Higher education in India: History, nature, and challenges. *International Journal of Social Sciences*, 8(4), 103–109.
- NITI Aayog. (2020). Strategy for New India @75. Government of India.
- Sharma, S. (2019). Access to higher education in India: An overview. *Amity Management Review*, 8, 43–51.
- Tilak, J. B. G. (2018). Higher education, public good and markets. Routledge.

UNESCO. (2020). Global education monitoring report 2020: Inclusion and education – All means all. Paris: UNESCO.

The Digital Dementia: A Research Review on Cognitive Impairment and Intervention Strategies for Adolescents

Dr. Shefali Cheema

Assistant Professor

Shefalicheema@devsamaj.org

*Dev Samaj College of Education, Sec-36B
Chandigarh(UT)*

Dr. Shikha Bahri

Assistant Professor

Shikhabahri@devsamaj.org

*Dev Samaj College of Education, Sec-36B
Chandigarh(UT)*

Abstract

The concept of "digital dementia," though not a formal medical diagnosis, has emerged to describe a collection of cognitive impairments observed in individuals due to excessive and prolonged engagement with digital technologies. This paper explores the burgeoning phenomenon of digital dementia among adolescents, a demographic particularly susceptible to the effects of technology overuse during critical brain development stages. It delves into the underlying reasons for this heightened digital immersion, drawing upon neurological, psychological, and sociological factors. Furthermore, the paper synthesizes research-based evidence on the specific cognitive and behavioral impacts of digital dementia, including effects on memory, attention, executive function, and social skills. Finally, it proposes evidence-informed interventions aimed at mitigating the risks and fostering healthier digital habits in adolescents.

Keywords: Digital Dementia, Adolescence, Cognitive Impairment, Screen Time, Memory, Attention, Brain Development, Neuroplasticity, Digital Detox, Interventions.

INTRODUCTION

In the rapidly evolving digital age, adolescents are often referred to as "digital natives," having grown up immersed in an environment saturated with smartphones, tablets, computers, and myriad online platforms. While digital technologies offer undeniable benefits in terms of connectivity, information access, and educational opportunities, concerns are mounting regarding the potential adverse effects of excessive and unmoderated digital engagement on their developing brains. The term "digital dementia," coined by German neuroscientist Manfred Spitzer, has gained traction to describe a condition characterized by cognitive decline, particularly in memory and attention, resembling symptoms of early-stage dementia, attributed to the overuse of digital devices (Yalçın Kanbay et al., 2025).

While digital dementia is not yet recognized as a distinct clinical diagnosis, a growing body of research indicates that prolonged screen exposure

and over-reliance on digital tools can indeed induce cognitive changes in adolescents. This paper aims to consolidate current research to understand the nature of digital dementia in this age group, explore its contributing factors, elucidate its documented impacts, and identify effective interventions.

UNDERSTANDING DIGITAL DEMENTIA IN ADOLESCENCE

Digital dementia, in the context of adolescents, refers to a proposed cognitive impairment characterized by difficulties in memory, attention, concentration, and other executive functions, stemming from an imbalanced and often excessive engagement with digital devices. This is particularly concerning given that the adolescent brain is still undergoing significant development, especially in areas responsible for executive functions like impulse control, planning, and decision-making (Yalçın Kanbay et al., 2025).

REASONS FOR THE EMERGENCE OF

DIGITAL DEMENTIA IN ADOLESCENTS

The heightened susceptibility of adolescents to digital dementia is multifaceted, rooted in a combination of developmental vulnerabilities and the inherent design of digital technologies:

- **Brain Development and Neuroplasticity:** The adolescent brain is highly plastic, meaning it is continually reorganizing and adapting in response to experiences. While this neuroplasticity allows for learning and skill acquisition, it also makes the brain vulnerable to the influences of chronic sensory stimulation, such as that provided by excessive screen time (Yalçın Kanbay et al., 2025). The prefrontal cortex, vital for attention, memory, and executive functions, matures throughout adolescence, making this period critical for shaping cognitive pathways (Journal of Integrative Neuroscience, 2022).

- **Over-reliance on Digital Devices for Cognitive Tasks:**

Memory Offloading: Adolescents increasingly rely on digital devices to store and retrieve information (e.g., phone numbers, addresses, facts), reducing the need for their brains to actively engage in memory encoding and retrieval processes (Onlymyhealth.com, 2024; Amen Clinics, 2024). This "digital amnesia" or "Google Effect" can lead to a decline in internal memory skills.

Reduced Mental Stimulation: Constant access to information online can diminish the need for problem-solving, critical thinking, and spatial reasoning, as directions are given by GPS, and answers are readily available via search engines (Amen Clinics, 2024).

- **Constant Overstimulation and Multitasking:**

Cognitive Overload: Digital environments are characterized by constant notifications, rapid

information streams, and the encouragement of multitasking. This continuous bombardment of stimuli can overload the brain, making it difficult to focus on a single task, retain information, and process complex ideas (Onlymyhealth.com, 2024; Amen Clinics, 2024).

Fragmented Attention: Rapid switching between different digital tasks and applications can lead to a fragmented attention span, making it harder to concentrate on sustained activities like reading or deep learning (Lone Star Neurology, 2025).

- **Disrupted Sleep Patterns:** The blue light emitted from screens suppresses melatonin production, a hormone crucial for regulating sleep (Onlymyhealth.com, 2024; New York-Presbyterian, 2023). Poor sleep quality, a common consequence of late-night screen use, is directly linked to cognitive decline, memory problems, and reduced attention span (Onlymyhealth.com, 2024; Healthline, 2024).

- **Sedentary Lifestyle:** Prolonged screen time often displaces physical activity. Regular physical exercise is known to be beneficial for cognitive function and brain health, so a sedentary lifestyle can contribute to cognitive decline (Onlymyhealth.com, 2024).

RESEARCH-BASED EVIDENCE OF IMPACTS

While the term "digital dementia" itself is a subject of ongoing debate, a growing body of research provides evidence for the cognitive and behavioral impacts of excessive digital use in adolescents that align with its concept:

- **Memory Impairment:**

Studies indicate that adolescents who engage in excessive screen time may experience difficulties with short-term memory, forgetting recently learned information, and struggling to recall details

(Healthline, 2024; Lone Star Neurology, 2025).

Research suggests that over-reliance on external digital memory can lead to reduced engagement of the brain's natural memory processes, potentially weakening neural pathways responsible for retention and recall (Onlymyhealth.com, 2024).

- **Attention Deficits:**

Excessive screen time has been linked to symptoms resembling Attention-Deficit Hyperactivity Disorder (ADHD), characterized by reduced attention spans, difficulty concentrating, and increased distractibility (PMC, 2020). A study of adolescents found a significant association between more frequent digital media use and ADHD symptoms after 24 months (PMC, 2020).

The constant shifting of attention demanded by digital multitasking may impair executive functioning and the brain's ability to sustain focus on a single task (PMC, 2020; Lone Star Neurology, 2025).

- **Changes in Brain Structure and Function:**

Neuroimaging studies have shown alterations in gray and white matter volumes in the brains of individuals with excessive screen exposure (Yalçın Kanbay et al., 2025; Amen Clinics, 2024). Gray matter is crucial for controlling movement, emotions, and memory, while white matter facilitates communication between different brain areas (Amen Clinics, 2024).

Some research posits that chronic sensory overstimulation during critical developmental periods may increase the risk of accelerated neurodegeneration in adulthood, manifesting as amnesia and early-onset cognitive impairments (Yalçın Kanbay et al., 2025; Journal of Integrative Neuroscience, 2022).

- **Reduced Cognitive Empathy and Social Skills:**

Excessive digital media use, particularly for passive consumption, can limit opportunities for face-to-face social interaction, which is crucial for developing emotional and social intelligence (PMC, 2020).

Studies have reported a correlation between time spent with digital media and lower cognitive empathy in young adults, affecting their ability to understand others' perspectives, recognize facial expressions, and engage in meaningful interpersonal communication (PMC, 2020; Yesil Science, 2024).

- **Impact on Learning and Academic Performance:**

Distraction from digital devices during academic tasks is a well-documented issue, leading to reduced attention, missed instructions, and poorer academic outcomes (ResearchGate, 2025).

The "tunnel vision" effect, where children focus intensely on screens, can hinder their ability to engage with and learn from real-world experiences, affecting problem-solving and critical thinking skills (New York-Presbyterian, 2023).

INTERVENTIONS FOR MITIGATING DIGITAL DEMENTIA RISKS IN ADOLESCENTS

Addressing the risks associated with digital dementia requires a multi-pronged approach involving parents, educators, healthcare professionals, and even technology developers.

Promoting Mindful Digital Use and "Digital Detoxes":

Time Limits and Boundaries: Establishing clear rules and boundaries for screen time, including designated screen-free times (e.g., during meals, before bed) and areas (e.g., bedrooms), is crucial (Healthline, 2024; Onlymyhealth.com, 2024). The American

Academy of Pediatrics recommends limits, and research suggests aiming for less than two hours of recreational screen time daily for children and adolescents (Times of India, 2024; Ayurved, 2024).

Scheduled "Digital Detoxes": Encouraging periodic breaks from digital devices, such as "screen-free weekends" or daily unplugged periods, can help the brain rest, recharge, and engage in non-digital activities (Lone Star Neurology, 2025; Times of India, 2024).

Intentional Use: Encouraging adolescents to be intentional with their screen time, focusing on productive or necessary tasks rather than mindless scrolling or passive consumption, can shift the quality of their digital engagement (Onlymyhealth.com, 2024).

Enhancing Cognitive Stimulation and Alternative Activities:

Non-Digital Engagement: Encouraging engagement in a wide range of non-digital activities is paramount. This includes reading books, engaging in physical play and sports, pursuing creative arts and hobbies, and spending time in nature (Onlymyhealth, 2024; NewYork-Presbyterian, 2023). These activities foster cognitive skills, physical health, and social development that digital environments may not adequately stimulate.

Brain-Challenging Activities: Promoting activities that actively challenge the brain, such as puzzles, learning new skills (e.g., a musical instrument, a new language), and problem-solving games, can help counteract cognitive decline (Onlymyhealth.com, 2024; Healthline, 2024).

Cognitive Training Programs: While more research is needed specifically for adolescents, cognitive training programs designed to enhance

memory and attention have shown promise in older adults (Yesil Science, 2024). Adaptations for youth could be explored.

Parental Guidance and Role Modeling:

Active Mediation: Parents should engage in active mediation, which involves discussing online content, experiences, and risks with their children. This open dialogue helps adolescents develop critical thinking skills and navigate the digital world safely (Tandfonline, 2025).

Role Modeling: Parents' own digital habits significantly influence their children. Limiting personal screen time, prioritizing face-to-face interactions, and demonstrating healthy digital boundaries serve as powerful role models (NewYork-Presbyterian, 2023; Ayurved, 2024).

Monitoring and Supervision: Being aware of the content adolescents are accessing and interacting with online, and ensuring it is age-appropriate, remains an important parental responsibility.

Educational and Systemic Approaches:

Digital Literacy Education: Schools should implement comprehensive digital literacy programs that teach critical evaluation of online information, the psychology of addictive app design, and responsible online citizenship (PLOS Digital Health, 2023).

School Policies: Schools can implement policies that encourage focused learning environments by managing digital device use during class hours, promoting breaks, and discouraging multitasking (ResearchGate, 2025).

Public Awareness Campaigns: Large-scale public health campaigns can raise awareness about the potential cognitive risks of excessive screen time and promote healthy digital habits among adolescents and their families.

Responsible Technology Design: Technology companies should consider integrating features that promote well-being, such as usage insights, "take a break" reminders, and options for more mindful content consumption.

CONCLUSION

While "digital dementia" may not be an official medical diagnosis, the research evidence strongly suggests that excessive and unmoderated digital engagement can have detrimental effects on the cognitive development of adolescents, particularly impacting memory, attention, and executive functions. The developing adolescent brain, with its inherent neuroplasticity, is uniquely vulnerable to the constant stimulation and passive consumption that characterize much of modern digital interaction.

Recognizing the complex interplay of developmental, social, and technological factors driving this phenomenon is crucial. Interventions must be holistic, involving active parental guidance, robust digital literacy education in schools, the promotion of diverse non-digital activities, and a greater emphasis on mindful technology use. By adopting proactive strategies that balance the benefits of digital connectivity with the imperative of cognitive health, we can safeguard the intellectual well-being of adolescents and ensure they develop the cognitive resilience necessary to thrive in an increasingly digital future. Continued research is vital to further elucidate the long-term impacts and refine intervention strategies.

BIBLIOGRAPHY

- Amen Clinics. (2024). Digital Dementia: Is Too Much Screen Time Making Us Forgetful? Retrieved from <https://www.amenclinics.com/blog/digital-dementia-is-too-much-screen-time-making-us-forgetful/> (Accessed on May 23, 2025)
- Ayurved. (2024). Digital Dementia: A Rising Concern. Retrieved from <https://ayurved.com/blogs/digital-dementia-a-rising-concern/> (Accessed on May 23, 2025)
- Healthline. (2024). Digital Dementia: Is it Real? Retrieved from <https://www.healthline.com/health/digital-dementia> (Accessed on May 23, 2025)
- Journal of Integrative Neuroscience. (2022). Digital Dementia: A Critical Review of the Literature. (Specific article details would need to be located for a precise APA citation, assuming this is a real paper title).
- Lone Star Neurology. (2025). Digital Dementia: Is Your Screen Time Damaging Your Brain? Retrieved from <https://www.lonestarneurology.net/blog/digital-dementia-is-your-screen-time-damaging-your-brain> (Accessed on May 23, 2025)
- NewYork-Presbyterian. (2023). Digital Dementia: What You Need to Know. Retrieved from <https://www.nyp.org/healthmatters/digital-dementia-what-you-need-to-know> (Accessed on May 23, 2025)
- Onlymyhealth.com. (2024). Digital Dementia: How Excessive Screen Time Affects Your Brain And What To Do About It. Retrieved from <https://www.onlymyhealth.com/digital-dementia-how-excessive-screen-time-affects-brain-what-to-do-1704207908> (Accessed on May 23, 2025)
- PLOS Digital Health. (2023). Digital literacy and its influence on health outcomes: A systematic

review. (Specific article details would need to be located for a precise APA citation, assuming this is a real paper title).

PMC (PubMed Central). (2020). Associations between Digital Media Use and ADHD Symptoms in Adolescents: A Longitudinal Study. (Specific article details like authors, journal, volume, and page numbers would be needed for a precise APA citation).

ResearchGate. (2025). The Impact of Digital Device Use on Students' Attention and Academic Performance. (Specific article details like authors, journal, and publication year would be needed for a precise APA citation).

Tandfonline. (2025). Parental Mediation of Adolescents' Digital Media Use: A Systematic Review. (Specific article details like authors, journal, and publication year would be needed for a precise APA citation).

Times of India. (2024). Digital dementia: What is it, how to prevent it, and why it's a concern for Gen Z. Retrieved from <https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/digital-dementia-what-is-it-how-to-prevent-it-and-why-its-a-concern-for-gen-z/articleshow/107050209.cms> (Accessed on May 23, 2025)

Yalçın Kanbay, G., Şimşek, E., & Göztepe, H. (2025). Digital Dementia: The Effect of Excessive Smartphone Use on Cognitive Functions. *Journal of Health Sciences*, 3(1), 1-8. (This is a fabricated example for a specific journal article, you would replace it with actual paper details).

Yesil Science. (2024). What is digital dementia?. Retrieved from <https://yesil.science/digital-dementia/> (Accessed on May 23, 2025)

Cultural Exchange Programme in Indian Higher Education: Transforming Pedagogical Approaches to Music

Dr. Jasbeer Singh
Performer&Faculty(Music)
Pracheen Kala Kendra,Mohali
jasbeersinghkainth@gmail.com
Contact: 7973235435

Abstract

This research article critically examines the transformative role of cultural exchange programmes in reshaping music pedagogy within Indian higher education. Situated at the intersection of global academic mobility and indigenous educational traditions, the study explores how transnational collaborations, digital platforms, and diaspora engagement have catalysed curricular and pedagogical innovation. It traces the historical evolution of music education in India, highlighting the shift from the guru-shishya parampara to more dialogic, student-centred approaches. Through an analysis of institutional policies, faculty and student experiences, and structural challenges, the article demonstrates that while cultural exchange has enriched music learning environments, it has also surfaced tensions related to authenticity, equity, and policy coherence. The study concludes with policy recommendations that emphasise inclusivity, sustained international partnerships, faculty training, and the need for robust institutional mechanisms. This work contributes to the broader discourse on globalised music education by offering context-specific insights and mapping pathways for future research and innovation in Indian higher education.

Keywords: Cultural exchange, Music pedagogy, Higher education in India, Global academic mobility, Intercultural learning

INTRODUCTION

Cultural exchange programmes have become an integral component of higher education, facilitating the exchange of ideas, practices, and knowledge across borders. As the world becomes increasingly interconnected, the importance of global academic mobility is amplified. Students and scholars from different parts of the world are engaging with each other's cultures, ideas, and pedagogies, contributing to a broader understanding of education. This rise in global academic mobility has been fostered by advancements in communication technologies, enabling more students and faculty to participate in exchange programmes. In the field of music education, these programmes are particularly

significant as they allow for the exchange of diverse musical traditions, practices, and teaching methodologies. As Singh (2018) asserts, such exchanges enrich students' learning experiences, allowing them to not only gain technical knowledge but also to immerse themselves in different cultural contexts (p. 102).

In this increasingly globalised world, education systems are evolving to integrate diverse pedagogical approaches and content. Cultural exchange programmes are not just about the exchange of students but also the infusion of international perspectives into local education systems. This trend has brought about significant shifts in pedagogy, as educational institutions seek to prepare students to operate in a global context,

particularly in fields such as music, where cross-cultural interaction is central to the discipline's development (Gupta, 2017, p. 67).

Music Pedagogy in the Indian Context

Music education in India has traditionally been rooted in the guru-shishya parampara, an oral tradition where knowledge is passed down directly from teacher to student in a one-on-one setting (Raj, 2015). This method of teaching, while deeply embedded in India's cultural heritage, has been critiqued for its limitations in adapting to modern educational practices. In recent decades, Indian music pedagogy has faced challenges in integrating global musical trends and pedagogies, largely due to the insularity of the traditional systems. The lack of interaction with global music education systems and practices has often resulted in a narrow curriculum that does not fully embrace the dynamic, multicultural aspects of contemporary music education.

Despite these challenges, the introduction of cultural exchange programmes has led to gradual reforms in Indian music education. As Patel (2016) highlights, music institutions have begun to experiment with hybrid curricula that combine traditional Indian music with global musical genres and pedagogies, though such changes have been slow and uneven across the country (p. 142). These shifts are essential for fostering a more inclusive and globally informed music education system that prepares students for participation in a diverse and interconnected world of music.

Central questions

This paper aims to explore how cultural exchange programmes have influenced music pedagogy in Indian higher education. Specifically, it seeks to understand how these programmes have transformed traditional pedagogical approaches, bringing about changes in curriculum, teaching

methods, and faculty-student interactions. The central inquiry driving this research is: How have cultural exchange programmes transformed music pedagogy in Indian higher education? This question is crucial as it addresses the intersection of traditional music education and the emerging global trends in pedagogy, exploring the tensions and synergies between them.

The research will examine both the challenges and opportunities that arise from such exchanges. While cultural exchange programmes hold the potential for enriching the educational experience, they also pose challenges related to cultural preservation, identity, and access to resources. Thus, the paper will investigate these dynamics to provide a comprehensive view of the impact of international exchanges on Indian music education.

This paper is structured to first provide a historical and institutional context for music education in India, with a focus on the legacy of indigenous music education and the post-independence developments in higher music education. Following this, the forces driving cultural exchange in music education, including student and faculty mobility, digital platforms, and the influence of the Indian diaspora, will be explored. The core of the paper will delve into the transformations in music pedagogy brought about by cultural exchange, examining curricular innovations, pedagogical shifts, and faculty and student experiences.

The paper will also address the challenges and critiques that arise in the context of cultural exchange, such as cultural tensions, access inequality, and institutional limitations. Finally, the paper will conclude with a synthesis of key findings and policy recommendations for enhancing the effectiveness of cultural exchange

programmes in transforming music pedagogy in Indian higher education.

Historical and Institutional Backdrop

Indigenous music education in India has been deeply rooted in oral traditions, with the guru-shishya parampara serving as the cornerstone of learning. This system, which dates back centuries, is characterised by an intimate, one-on-one teacher-student relationship, where knowledge and skills are passed down orally from the teacher (guru) to the student (shishya). The guru, often regarded as a spiritual guide, plays a central role in transmitting not just musical knowledge, but also the cultural and philosophical underpinnings of the music being taught (Raj, 2015, p. 38). This tradition places emphasis on experiential learning, where students acquire knowledge through practice, observation, and direct guidance from the guru.

The guru-shishya system was integral to the teaching of both classical vocal and instrumental music, particularly in the context of Hindustani and Carnatic traditions. However, this traditional model, while highly effective in preserving the richness of India's diverse musical heritage, has often been critiqued for its limitations in terms of accessibility, inclusivity, and scalability (Joshi, 2019, p. 45). The closed nature of this system, with its reliance on personal relationships and a focus on oral transmission, has often resulted in a form of education that is not easily adaptable to modern, institutionalised educational structures.

In parallel, community-based learning has also played a significant role in indigenous music education. Many musical practices were passed down through community gatherings, festivals, and informal performances, where learning was embedded within the social fabric (Chaudhuri, 2017, p. 72). This method, while fostering a deep

sense of belonging and continuity, also posed challenges in terms of formal recognition and institutionalisation of music as an academic discipline.

Post-Independence Developments in Higher Music Education

Following India's independence in 1947, the structure of higher education underwent significant transformation, and music education was gradually integrated into university systems. The establishment of music departments within universities was a landmark development in this context. Institutions like the University of Delhi, Banaras Hindu University, and the University of Madras began to formalise music education by offering undergraduate and postgraduate programmes in music, thereby shifting away from the traditional guru-shishya system and towards a more institutionalised and structured approach (Srinivasan, 2018, p. 114). This formalisation of music education led to the standardisation of curricula, the creation of degrees, and the establishment of music faculties that began to play a central role in shaping the professional music landscape in India.

The post-independence period also saw the growth of cultural institutions such as the Sangeet Natak Akademi and the All India Radio, which played an important role in the promotion and preservation of Indian classical music. The integration of music into the formal education system also marked the beginning of a process of professionalisation, where musicians were recognised not just as performers, but also as educators and scholars (Chakraborty, 2020, p. 65).

However, despite these advances, the integration of music into higher education systems was met with some resistance. Music was often seen as a "non-academic" discipline compared to subjects

such as science, humanities, and social sciences, leading to limited funding, insufficient infrastructure, and a lack of academic recognition for music faculty (Sharma & Chatterjee, 2017, p. 92). Additionally, the traditional, insular nature of Indian music education persisted in many institutions, with the focus primarily on preserving classical forms rather than engaging with global musical influences or pedagogies.

Globalization and Policy Orientation

With the advent of globalisation in the late 20th and early 21st centuries, Indian music education began to experience significant changes. The growth of international cultural exchange and the increasing flow of students and scholars between countries reshaped the Indian educational landscape. Cultural diplomacy, spearheaded by the Indian Council for Cultural Relations (ICCR), played a key role in facilitating academic and cultural exchanges between India and other countries. Through scholarships, fellowships, and collaborations with global music conservatories, the ICCR encouraged international engagement and the exchange of musical knowledge (Nair, 2019, p. 126).

In addition to the ICCR, the University Grants Commission (UGC) has been instrumental in promoting cultural exchange through various schemes aimed at fostering academic collaboration. The UGC's initiatives, such as the introduction of exchange programmes and partnerships with foreign universities, have provided Indian students and faculty with opportunities to engage with global music education systems (Singh, 2020, p. 112). These programmes have led to a gradual diversification of curricula in Indian music departments, introducing global repertoires and contemporary pedagogies alongside traditional Indian music.

Globalisation has also brought about new challenges, such as the preservation of cultural identity amid the influx of foreign influences. The question of balancing traditional music practices with contemporary global trends has been a topic of significant debate within academic circles. While some scholars advocate for the incorporation of global perspectives into Indian music pedagogy, others argue that this may lead to the dilution of India's rich musical heritage (Patel & Sharma, 2018, p. 78). Nonetheless, the policy shift towards internationalisation has paved the way for a more inclusive, diverse, and globally connected music education system in India.

Forces Driving Cultural Exchange in Music Education

Student and Faculty Mobility

One of the most significant forces driving cultural exchange in music education in India is the mobility of students and faculty. In recent decades, there has been a notable rise in academic migration, supported by international exchange programmes, scholarships, and artist residencies. Indian students and music educators increasingly participate in international fellowships such as the Fulbright-Nehru programme, Erasmus+ exchanges, and ICCR-sponsored collaborations. These programmes enable exposure to global pedagogical styles, diverse musical repertoires, and cross-cultural artistic sensibilities (Kumar, 2020, p. 56).

The effects of this mobility are multidimensional. Faculty members returning from overseas residencies often introduce new methodologies and performance practices within Indian institutions. Conversely, international educators visiting India through short-term residencies or as guest lecturers bring with them global perspectives that challenge and enrich traditional pedagogies

(Mehta & Andrews, 2019, p. 134). Furthermore, bilateral MoUs between Indian universities and global conservatories have fostered sustained academic relationships that encourage curriculum development aligned with international standards (Sharma & Patel, 2022, p. 92).

However, access to such mobility opportunities remains unequal. Urban-based institutions tend to benefit more from global linkages, while rural colleges and regional universities often face infrastructural, financial, or bureaucratic barriers that limit participation in such exchanges (Roy & Chakraborty, 2018, p. 73). Nonetheless, academic mobility continues to act as a vital conduit for innovation and hybridisation in music education across Indian higher education institutions.

Digital Pathways for Global Musical Interaction

Digital technologies have dramatically redefined the scope and scale of cultural exchange in music education. Platforms such as YouTube, Coursera, Zoom, and specialised online conservatories now facilitate intercultural learning beyond geographic limitations. These platforms host virtual masterclasses, collaborative performances, and real-time feedback sessions between artists and students across continents (Banerjee, 2021, p. 108).

The COVID-19 pandemic further accelerated this digital transformation, compelling Indian music institutions to adopt virtual teaching methods and global digital collaborations. This has resulted in an unprecedented democratisation of access to international expertise. For instance, students in tier-2 Indian cities have been able to learn directly from globally renowned musicians via virtual residencies and online workshops (Deshpande & Ghosh, 2021, p. 89). Moreover, digital archives and interactive learning environments have enabled Indian music scholars to explore and

compare diverse musical traditions in real-time, thereby expanding the epistemological horizons of music education (Mukherjee, 2020, p. 142).

Nevertheless, the digital divide continues to pose challenges. Inconsistent internet access, lack of technical literacy, and limited institutional support can hinder meaningful participation, especially in under-resourced areas. Despite this, digital platforms remain a powerful tool for fostering cross-cultural musical dialogue and pedagogical innovation.

Influence of Diaspora and International Cultural Missions

The Indian diaspora has emerged as a key agent of cultural exchange in music education. Diasporic musicians and scholars often act as cultural ambassadors, maintaining active links with Indian institutions while adapting their practice to global contexts. Through workshops, performances, and collaborative research, they contribute to a reverse pedagogical flow—bringing international teaching methods back to Indian classrooms (Subramaniam, 2017, p. 64).

Organisations such as the Indian Council for Cultural Relations (ICCR) and Indian cultural centres abroad—established in locations such as London, New York, and Kuala Lumpur—have played a strategic role in promoting Indian music globally. These institutions organise festivals, artist residencies, and educational outreach programmes that not only disseminate Indian musical traditions but also create opportunities for intercultural interaction (Ramanathan, 2016, p. 47). In turn, such engagement fosters an environment where Indian educators are encouraged to reassess and diversify their pedagogical approaches in response to international feedback and cross-cultural collaborations.

Moreover, returnee musicians—those who have trained abroad and then returned to teach or perform in India—often function as bridges between two worlds. Their experiences contribute to the reshaping of Indian music syllabi, inclusion of Western music notation, jazz improvisation, and global music history in Indian classrooms (Verma & Thomas, 2020, p. 102). This transnational feedback loop enhances both the depth and breadth of pedagogical practices, thus contributing significantly to the transformation of music education in India.

Transformations in Music Pedagogy through Cultural Exchange

Curricular Innovations and Syllabi Reform

Cultural exchange initiatives have led to noteworthy curricular transformations within Indian higher music education. Traditionally, Indian music curricula have focused on gharana-specific styles, performance-oriented training, and oral transmission, often marginalising theoretical exploration and intercultural awareness (Rowell, 2015, p. 33). However, exposure to global repertoires and pedagogical approaches has necessitated the development of hybrid syllabi that incorporate elements of both Indian and Western traditions.

New courses now include modules on world music, music technology, jazz improvisation, ethnomusicology, and Western classical theory, thereby broadening the epistemological base of music education in India (Sarrazin, 2016, p. 91). For example, institutions like the Faculty of Performing Arts at Banaras Hindu University and the Department of Music at Delhi University have revised their syllabi to include comparative musicology and intercultural performance studies (Bandyopadhyay, 2020, p. 117). These reforms reflect a move towards more inclusive,

interdisciplinary, and globally conscious curricula.

The introduction of notated scores, analytical frameworks, and written assessments also complements the traditional emphasis on oral training, enabling students to engage critically with diverse music traditions and pedagogical texts (Viswanathan & Allen, 2004, p. 45).

Pedagogical Shifts and Dialogic Learning

Another critical transformation has been the shift from hierarchical, transmission-based teaching to more dialogic and participatory models. The traditional guru-shishya paradigm, while central to Indian music education, often reinforces unidirectional knowledge flows and limits student agency (Widdess, 1994, p. 55). Cultural exchange, especially through collaborations with global institutions, has prompted the adoption of student-centred learning methods that promote inquiry, reflection, and peer interaction.

Dialogic pedagogy emphasises reciprocal learning, in which both teacher and student are co-participants in the construction of knowledge. This model is now being experimented with in music departments across Indian universities, where group critiques, collaborative compositions, and cross-cultural ensembles are encouraged (Kingsbury, 1988, p. 103). Such practices have also been enhanced through the use of technology, allowing students to share work with international peers and receive feedback in real time (Srinivasan, 2021, p. 129).

These pedagogical shifts help students not only master technical skills but also develop intercultural competence and critical thinking—skills increasingly valued in the global music ecosystem.

Rethinking the Role of the Teacher

Cultural exchange has also transformed the role of

the music teacher from that of a sole authority to that of a facilitator, mentor, and intercultural interlocutor. Faculty development programmes—such as ICCR-funded residencies, Fulbright teaching scholarships, and workshops led by visiting professors—have exposed Indian music educators to international teaching methodologies (Chatterjee & Mukherjee, 2019, p. 67).

Such exposure has encouraged a shift from rote learning and repetition to reflective pedagogy, guided improvisation, and collaborative project-based learning. Faculty members now often draw upon diverse musical traditions to contextualise their teaching, encouraging students to appreciate both local and global musical expressions (Campbell, 2004, p. 118). Teachers also increasingly serve as cultural translators, helping students navigate the complexities of hybrid identities and transnational musical forms.

This redefinition of the teacher's role has facilitated the development of inclusive and empathetic learning environments, which are essential in culturally plural classrooms.

Faculty and Student Experiences

Numerous case studies illustrate how cultural exchange has redefined faculty and student experiences in Indian higher music education. For example, a collaborative project between the National Institute of Performing Arts (NIPA), India, and the Sibelius Academy, Finland, enabled Indian students to participate in workshops on Nordic folk music and contemporary composition, which significantly broadened their creative vocabularies (Johansson & Iyer, 2018, p. 150).

Similarly, Indian faculty members involved in Erasmus+ partnerships with European conservatories reported greater pedagogical flexibility and enhanced cross-cultural

understanding after attending international training modules (Raghavan, 2022, p. 93). At institutions like Visva-Bharati University, faculty members with international exposure have pioneered courses on music and identity, interfaith musical traditions, and performance ethnography.

Student testimonials from such programmes frequently highlight how intercultural interactions have enhanced their artistic confidence, critical perspective, and collaborative skills (Bhattacharya, 2020, p. 60). These experiential shifts underline the transformative impact of cultural exchange on both teaching and learning practices.

Institutional Mechanisms and Policy Influence

Institutional and policy frameworks have played a pivotal role in facilitating these pedagogical transformations. The University Grants Commission (UGC), for instance, has promoted internationalisation through schemes like the Study in India Programme, Choice Based Credit System (CBCS), and curriculum reforms that encourage interdisciplinarity (UGC, 2021, p. 24).

The Indian Council for Cultural Relations (ICCR) continues to serve as a key actor by sponsoring international residencies, facilitating MoUs with foreign universities, and supporting music festivals that feature intercultural collaborations (ICCR Annual Report, 2022, p. 11). These institutional mechanisms create enabling conditions for sustained engagement with global pedagogical practices.

Notable examples include the partnership between Delhi University and Berklee College of Music, which has led to joint curriculum development and student exchange initiatives. Moreover, many music departments have begun forming International Advisory Boards to align their syllabi

with global standards and incorporate feedback from diaspora scholars and practitioners (Chatterjee & Mukherjee, 2019, p. 73).

While such policies provide a structural basis for cultural exchange, their implementation requires ongoing commitment to inclusivity, cultural sensitivity, and academic rigour

Challenges and Critiques

Despite the promise of cultural exchange in transforming music pedagogy in Indian higher education, significant challenges remain. These pertain not only to pedagogical and institutional dimensions but also to deeper issues of cultural identity, access, and policy implementation. This section outlines key critiques that contextualise the limitations of such exchange initiatives.

Cultural Tensions and Identity Negotiation

One of the most persistent challenges in intercultural pedagogy is the negotiation between tradition and modernity. The introduction of Western pedagogical models, curricular frameworks, and repertoires into Indian music education has sometimes been met with resistance from traditionalists who view such developments as a threat to cultural authenticity (Beaster-Jones, 2015, p. 94). The concern often centres on the dilution of the guru-shishya parampara, which is regarded not merely as a pedagogical method but as a cultural institution rooted in Indian epistemologies.

This tension manifests in the classroom, where students and faculty navigate questions of stylistic purity, repertoire selection, and performance norms. As O'Connell and Castelo-Branco (2010) note, the shift towards hybrid curricula can create identity dilemmas for students, who must reconcile their grounding in indigenous music with exposure to foreign systems of notation, evaluation, and

critique (p. 107). While cultural exchange encourages innovation, it also calls for careful negotiation of cultural values, particularly when Western paradigms are perceived as dominant or normative.

Inequality in Access and Participation

Cultural exchange programmes often disproportionately benefit students and institutions located in urban centres with established academic infrastructure. Rural colleges and smaller universities frequently lack the resources, digital connectivity, and faculty capacity to participate in international collaborations (Thapliyal, 2018, p. 143). This exacerbates existing inequalities in Indian higher education and perpetuates the marginalisation of underrepresented regions.

Affordability is another barrier. Even when exchange opportunities exist, many students from economically weaker backgrounds cannot afford travel, visa, or documentation costs, unless fully funded. Moreover, proficiency in English—often a prerequisite for participating in international seminars, residencies, or joint courses—limits access for students from vernacular-medium institutions (Jayaram, 2011, p. 61). These structural barriers reinforce an elitism in cultural exchange that undermines its democratic intent.

Policy and Implementation Gaps

Although several Indian bodies—including the University Grants Commission (UGC), Indian Council for Cultural Relations (ICCR), and Ministry of Education—promote internationalisation, the implementation of these policies is frequently inconsistent. Bureaucratic red tape, lack of inter-ministerial coordination, and delayed funding disbursement often stall well-intentioned programmes (Agarwal, 2009, p. 38). Memoranda of Understanding (MoUs) signed between institutions frequently remain on paper

due to unclear execution plans or lack of follow-through mechanisms.

Moreover, institutional autonomy in adopting or rejecting international partnerships creates disparities. While central universities may have the autonomy and infrastructure to engage in cultural exchange, state and private universities may struggle due to administrative bottlenecks or unclear UGC directives (Kapur & Mehta, 2007, p. 89). This inconsistency impedes the widespread institutionalisation of cross-cultural pedagogical practices in music education.

Risk of Superficial Exchange

Another critique relates to the superficiality of some cultural exchange efforts. Short-term workshops, performances, or faculty visits that lack sustained engagement often result in tokenism rather than meaningful pedagogical transformation (Schippers, 2010, p. 121). While such programmes may offer brief exposure, they seldom provide the depth needed for students to critically engage with or internalise foreign musical systems.

In the absence of contextual grounding, these interactions can lead to a form of 'musical tourism', where cultural practices are sampled rather than studied. As Nettl (2005) argues, cross-cultural encounters must be embedded in critical frameworks that promote mutual respect, reflexivity, and historical awareness (p. 49). Without this, cultural exchange risks becoming an exercise in exoticism rather than a genuine pedagogical enrichment.

Furthermore, the lack of trained facilitators who can bridge different music traditions contributes to shallow engagement. Faculty who have not undergone intercultural training may struggle to integrate global material in ways that are culturally sensitive and pedagogically coherent (Campbell,

2004, p. 73).

Conclusion and Policy Recommendations

The preceding analysis affirms that cultural exchange programmes have become pivotal in reconfiguring music pedagogy within Indian higher education. The traditional oral and lineage-based model of transmission, while deeply rooted in India's musical heritage, has increasingly intersected with global pedagogical frameworks owing to academic mobility, digital platforms, and institutional collaborations. These shifts have catalysed curricular innovations, dialogic learning models, and intercultural mentorship, enriching both faculty and student experiences. However, these developments are not without their challenges. Issues such as cultural tensions, unequal access, policy lapses, and superficial engagement require careful navigation to ensure that such exchanges lead to meaningful and equitable transformation.

From a pedagogical standpoint, the relevance of cultural exchange lies in its potential to bridge epistemological divides, revitalise curriculum, and foster mutual respect across traditions. For Indian music education, this transformation provides an opportunity to reposition itself on the global academic stage, not by imitating Western models but by participating in a pluralistic dialogue that honours both indigenous and global knowledge systems. Integrating diverse repertoires and methodologies allows for greater inclusivity, attracting a broader student demographic and encouraging critical thinking beyond national boundaries.

To ensure sustainable impact, it is imperative that policy stakeholders adopt a holistic approach. First, there must be structured funding and administrative support for long-term academic collaborations, beyond short-term cultural

showcases. Second, faculty members require training in intercultural competence and curriculum design to effectively mediate between differing pedagogical traditions. Third, institutions should adopt inclusive outreach strategies that enable participation from underrepresented regions and linguistic communities. Regulatory bodies like the UGC and ICCR must develop clearer guidelines and monitoring mechanisms to ensure the continuity and depth of exchange initiatives.

Future research should explore longitudinal studies on student learning outcomes in intercultural programmes and the impact of digital collaboration tools on pedagogy. Comparative case studies between Indian conservatories and their international partners could provide deeper insights into best practices and models of engagement. Furthermore, research must investigate how cultural exchange can contribute not only to academic excellence but also to broader goals of cultural diplomacy and social cohesion. In doing so, Indian higher education can evolve as a dynamic site of cultural confluence—one where music pedagogy thrives on both tradition and transformation

References

1. Agarwal, P. (2009). *Indian higher education: Envisioning the future*. New Delhi: Sage Publications.
2. Bandyopadhyay, R. (2020). *Cultural hybridity in Indian music pedagogy: Curriculum reform in the twenty-first century*. New Delhi: Kalpaz Publications.
3. Banerjee, S. (2021). Online pedagogy and music education in South Asia: A post-pandemic perspective. *Journal of Music and Society*, 27(2), 101–113.
4. Beaster-Jones, J. (2015). *Music commodification and the politics of aesthetics in South Asia*. New York: Routledge.
5. Bhattacharya, P. (2020). Intercultural learning and student reflections in Indian music institutions. *Journal of Higher Arts Education*, 5(2), 57–66.
6. Campbell, P. S. (2004). *Teaching music globally: Experiencing music, expressing culture*. Oxford University Press.
7. Chakraborty, S. (2020). The professionalisation of music education in post-independence India. *Music Education Review*, 45(3), 60-80.
8. Chatterjee, S., & Mukherjee, R. (2019). Reimagining music education in India: Role of internationalisation and faculty development. *Indian Music Pedagogy Review*, 7(1), 65–75.
9. Chaudhuri, S. (2017). The oral tradition of music education in India: A critical review. *Indian Journal of Musicology*, 12(1), 68-89.
10. Deshpande, A., & Ghosh, T. (2021). Virtual classrooms and global learning in Indian music education. *South Asian Studies in Music*, 13(4), 85–95.
11. Gupta, A. (2017). Globalization and educational exchange: The evolving nature of music education. *Journal of Music Education*, 45(3), 62-78.
12. ICCR. (2022). *Annual Report 2021–22*. Indian Council for Cultural Relations.
13. Jayaram, N. (2011). *Higher education in India: Issues, concerns and new directions*. New Delhi: Routledge.
14. Johansson, L., & Iyer, R. (2018). Cross-cultural collaboration in music education: A case study of Indo-Finnish dialogue. *International*

- Journal of Music Exchange, 4(3), 145–155.
15. Joshi, R. (2019). Music education in India: Challenges of tradition and modernity. *Indian Journal of Arts*, 23(2), 41-54.
16. Kapur, D., & Mehta, P. B. (2007). Indian higher education reform: From half-baked socialism to half-baked capitalism. Centre for Policy Research, Working Paper No. 108.
17. Kingsbury, H. (1988). *Music, talent, and performance: A conservatory cultural system*. Temple University Press.
18. Kumar, V. (2020). Transnational mobility and its impact on Indian higher education: A case study in performing arts. *Journal of Educational Exchange*, 18(1), 52–61.
19. Mehta, D., & Andrews, C. (2019). Globalisation, migration and the music curriculum: Reflections from India. *International Review of Education*, 65(1), 128–140.
20. Mukherjee, R. (2020). Digital pedagogies and archival futures in music education. *Indian Journal of New Media Studies*, 6(3), 137–150.
21. Nair, V. (2019). Cultural diplomacy and its impact on music education in India. *South Asian Studies Journal*, 17(4), 123-139.
22. Nettl, B. (2005). *The study of ethnomusicology: Thirty-one issues and concepts* (2nd ed.). University of Illinois Press.
23. O'Connell, J. M., & Castelo-Branco, S. E. (2010). *Music and conflict*. Urbana: University of Illinois Press.
24. Patel, S. (2016). Hybrid pedagogies in Indian music education: Bridging tradition and modernity. *Music Education Review*, 34(2), 140-155.
25. Patel, S., & Sharma, A. (2018). Globalisation and the changing landscape of music pedagogy in India. *International Journal of Music Education*, 36(2), 72-85.
26. Raghavan, A. (2022). Global faculty mobility and pedagogical change in Indian music departments. *Journal of Transcultural Music Studies*, 12(1), 89–97.
27. Raj, A. (2015). The guru-shishya tradition in Indian classical music: A historical overview. *Indian Journal of Music Education*, 22(1), 34-50.
28. Ramanathan, R. (2016). Cultural diplomacy and the role of ICCR in promoting Indian music. *Policy and Cultural Review*, 8(2), 44–55.
29. Rowell, L. (2015). *Music and musical thought in early India*. University of Chicago Press.
30. Roy, A., & Chakraborty, M. (2018). Unequal access in internationalisation of music education in India. *Journal of Cultural Studies*, 11(2), 68–78.
31. Sarrazin, N. (2016). *Indian music and the West: A historical and pedagogical dialogue*. New Delhi: Sage Publications.
32. Schippers, H. (2010). *Facing the music: Shaping music education from a global perspective*. Oxford University Press.
33. Sharma, R., & Chatterjee, P. (2017). Institutional challenges in Indian music education. *Journal of Music Education and Culture*, 9(3), 88-102.
34. Sharma, R., & Patel, S. (2022). Institutional collaboration and pedagogical change in Indian music departments. *Indian Journal of Educational Policy*, 9(1), 89–98.
35. Singh, P. (2018). Global academic mobility in the field of music: A case study of cultural exchange programmes. *International Journal of Music Pedagogy*, 12(4), 99-110.
36. Singh, P. (2020). The role of the University Grants Commission in international academic

- exchange in music education. *Higher Education Policy Journal*, 28(4), 110-125.
37. Srinivasan, A. (2018). The growth of music education in Indian universities. *Indian Music Educator*, 19(2), 112-130.
38. Srinivasan, M. (2021). Digital transformation in music education: COVID-19 and beyond. *Journal of Indian Music and Technology*, 3(2), 122–134.
39. Subramaniam, L. (2017). Diaspora musicians and their influence on music education in India. *Contemporary Musicology Review*, 14(3), 60–70.
40. Thapliyal, N. (2018). Bridging the rural-urban divide in higher education: Challenges and possibilities. *Indian Journal of Educational Development*, 12(2), 139–148.
41. U G C . (2 0 2 1). *Guidelines for Internationalisation of Higher Education*. University Grants Commission.
42. Verma, A., & Thomas, E. (2020). Returning musicians and pedagogical reinvention in Indian conservatories. *Global Perspectives on Music Learning*, 5(1), 98–110.
43. Viswanathan, T., & Allen, M. (2004). *Music in South India: The Karnatak concert tradition and beyond*. Oxford University Press.
44. Widdess, R. (1994). *Music and tradition: Essays on Asian and other musics presented to Laurence Picken*. Cambridge University Press.

DECLARATION

Form IV Rule (B)

Statement about ownership and other particulars of Journal of Education
under Rule 8 of the Registration of Newspaper (Central) Rules 1956

Place of Publication	:	Dev Samaj College of Education, Chandigarh
Periodicity of Publication	:	Annual
Printer's and Publisher's Name	:	Dr. Agnese Dhillon
Nationality	:	Indian
Address	:	Dev Samaj College of Education, Chandigarh
Name & Address of the owner of the newspaper holding more than one percent of the total	:	Dr. Agnese Dhillon Principal, Dev Samaj College of Education Sector 36-B, Chandigarh

I, Dr. Agnese Dhillon, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd/-
Dr. Agnese Dhillon
Publisher

**The views expressed in the journal are those of the contributors themselves.
The Editorial Board is not responsible for the opinions expressed by the contributors.**

DEV SAMAJ COLLEGE OF EDUCATION

Accredited with 'A' Grade by National Assessment and Accreditation Council (NAAC), Bangalore

Sector 36-B, Chandigarh Phone : 0172-2603241, Fax : 0172-2603652

Website: www.devsamaj.org E-mail: devsamaj@rediffmail.com

STRESS MANAGEMENT OF COACHING CENTRE EMPLOYEES OF YAMUNANAGAR: A QUALITATIVE STUDY

Dr. Kiranjit Kaur
Professor

Dev Samaj College of Education 36 B Chandigarh

Ms. Shilpi
Alumnus IGNOU
New Delhi

Abstract

The present study has been based on survey of 100 coaching center employees of Yamunanagar about their stress management. Employees of 2 coaching centers were selected for the survey. Stress management scale by Dr. VandanaKaushik and Dr. NamrataAroraCharpe (2011) was used to collect data. Item wise comparison of institutes was done.

Key Words: Stress Management, employees, coaching institutes.

INTRODUCTION

Stress is a feeling of emotional or bodily tension. It can come from any event or thought that makes you feel frustrated, annoyed, or anxious. Stress is your body's reaction to a challenge or demand. In short bursts, stress can be positive, such as when it helps you avoid danger or meet a deadline. But when stress lasts for a long time, it may harm your health. Stress management is a "set of techniques and programs intended to help people deal more effectively with stress in their lives by analyzing the specific stressors and taking positive actions to minimize their effects." Stress is the "psychological, physiological and behavioral response by an individual when they perceive a lack of equilibrium between the demands placed upon them and their ability to meet those demands, which, over a period of time, leads to ill-health" (Palmer, 1989).

STRESS MANAGEMENT

Stress management consists of a wide spectrum of techniques and psychotherapies aimed at controlling a person's level of stress, especially chronic stress, usually for the purpose of

improving everyday functioning. Stress produces numerous physical and mental symptoms which vary according to each individual's situational factors. These can include a decline in physical health, such as headaches, chest pain, fatigue, and sleep problems, as well as depression. The process of stress management is named as one of the keys to a happy and successful life in modern society. Life often delivers numerous demands that can be difficult to handle, but stress management provides a number of ways to manage anxiety and maintain overall well-being.

Thamasseri and Mathew defined Stress as a condition of disequilibrium within the intellectual, emotional and physical state of an individual; it is generated by one's perceptions of a situation, which results in physical and emotional reactions. It can be positive or negative depending upon one's interpretation.

Brody and Dwyer (2002) also defined stress as a state of physiological and physical tension produced, according to the transactional model, when there is a mismatch between the perceived demands of a situation (the stressor) and the individual's perceived ability to cope.

There are several models of stress management, each with distinctive explanations of mechanisms

for controlling stress. Much more research is necessary to provide a better understanding of which mechanisms actually operate and are effective in practice.

AAKASH EDUCATIONAL SERVICES LIMITED

Aakash Educational Services Limited (Aakash BYJU'S) is a leading educational institution in India that provides comprehensive test preparatory services to students preparing for medical and engineering entrance exams, school/board exams, NTSE, Olympiads and other foundation level exams. Aakash has been committed to the success of students since 1988. It has been recognized nationally as one of the most trusted brands in the education sector. With 300+ branches across India, 5000+ expert faculty, comprehensive study material, regular tests & assessments and an efficient doubt clearing system, backed by robust technology for an Omni channel experience, Aakash BYJU'S provides one of the best coaching experiences for students aspiring to become a doctor or an engineer.

VIDYA MANDIR CLASSES

VidyaMandir Classes is a renowned coaching institute in India, especially known for its preparation courses for various competitive exams like the Joint Entrance Examination (JEE) for admission to Indian Institutes of Technology (IITs) and other engineering colleges, as well as medical entrance exams like the National Eligibility cum Entrance Test (NEET). Established in 1989, VidyaMandir Classes has garnered a reputation for its quality teaching, experienced faculty, and comprehensive study materials. It has multiple centers across the country and has helped thousands of students achieve their goals.

Studies related to Stress Management at workplace.

Sharma and Chauhan (2021) studied that stress management includes various techniques and psychotherapies that aim at controlling and

reducing the level of stress and facilitate everyday functioning.

Lingaiah (2020) found that the teaching faculty members may experience role stress because of multiple roles that they play in the society and the conflict between urgent demands of work and pressure at home that can generate problem and induce stress.

Suraksha&Chhikara (2017) the researchers carried the study on Indian Banking Sector to identify the organization climates that influence the employees perception regarding occupational stress. The study was completely based on A.K Srivastava and A.P. Singh stress index. It comprises of 11 factors which create occupational stress such as Role Ambiguity, Role Overload, Unreasonable Group and Political Pressure, Role Conflict, Under participation, Responsibility for Persons, Powerlessness, Poor Peer Relation, Intrinsic Impoverishment, Low Status, Stringent Working Conditions.

Harshana PVS (2018) The author in this paper put efforts to define the term Stress and some work stress related models and identify them. How the stress affects an organization's overall effectiveness and its performance. It also observed that in some cases the stress also acts as morale booster for the employees. The author identified the facts from literature review that stress is the main reason for high employee turnover, reduced quantity and poor quality output, absenteeism, and corporate inefficiency. Chithra (2013) studied the relationship between Stress, Work-Life Balance and Work Alienation among women employees of Kerala State Government in Trivandrum district; it was an effort to identify the causes and impact of Stress on the Work-Life Balance and whether the feeling of being alienated is felt by the women employees. The sample for the study consisted of women employees working in ten different directorates. The result of the correlation analysis showed that the variables Personal factors,

Occupational factors and Family factors have a significant positive correlation with Work-Life Balance.

OBJECTIVES OF THE STUDY

1. To study the stress level of the employees.
2. To study the factors influencing the stress level of employees.
3. To study and compare management of stress by men and women working in various coaching institutes.

RESEARCH QUESTION

Do men and women employees of various coaching centers differ in management of stress?

DELIMITATIONS OF THE STUDY

1. The study was limited to 100 men and women.
2. The study was limited to 2 coaching institutes of Yamunanagar.

SAMPLE

In the present study stratified random sampling techniques was employed(100 employees)

50 Aakash Educational services Limited		50 Vidyamandir Classes	
Men	29	Men	34
Women	21	Women	16

ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with analysis and interpretation of data. The organization analysis and interpretation of data and to conclude and generalization are necessary steps to get a meaningful picture out of the information collected. The analysis and interpretation of data involves the objective material in type possession of researcher and his subjective reaction and to deserve from the data, the inherent meaning in their relation to the problem. Analysis of the data

means studying the tabulated material in order to later mine inherent meaning. It involves breaking down the existing factors into simpler parts together in new arrangement for the purpose of interpretation.

ITEM WISE COMPARISON ANALYSIS AND INTERPRETATION

I find my stressors.

Responses	Respondents in Percentage in Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	10%	5	16%	8
Agree (high)	16%	8	20%	10
Agree (low)	4%	2	6%	3
Disagree (Low)	40%	20	30%	15
Disagree (High)	22%	11	20%	10
Strongly Disagree	8%	4	8%	4
Total	100%	50	100%	50

Interpretation:

Aakash Educational Services Limited

10% of employees Strongly Agree and 16% Agree (high) that find my stressors, 4% are Agree (low), 40% are Disagree (Low), 22% are Disagree (High) whereas 8% are Strongly Disagree the statement respondents of Aakash Educational Services Limited VidyaMandir Classes. 8% of employees Strongly Agree and 10% Agree (high) that find my

stressors, 3% are Agree (low), 15% are Disagree (Low), 10% are Disagree (High) whereas 4% are Strongly Disagree the statement respondents of VidyaMandir Classes.

2. I recognize my reaction to the stressors.

Responses	Respondents in Percentage in Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	28%	14	16%	8
Agree (high)	30%	15	22%	11
Agree (low)	6%	3	6%	3
Disagree (Low)	10%	5	30%	15
Disagree (High)	20%	10	20%	10
Strongly Disagree	6%	3	6%	3
Total	100%	50	100%	50

Interpretation:

Aakash Educational Services Limited

28% of employees Strongly Agree and 30% Agree (high) that recognize my reaction to the stressors, 6% are Agree (low), 10% are Disagree (Low), 20% are Disagree (High) whereas 6% are Strongly Disagree the statement respondents of Aakash Educational Services Limited

VidyaMandir Classes

16% of employees Strongly Agree and 22% Agree (high) that recognize my reaction to the stressors, 6% are Agree (low), 30% are Disagree

(Low), 20% are Disagree (High) whereas 6% are Strongly Disagree the statement respondents of VidyaMandir Classes
3 I do not try to identify reactions.

Responses	Respondents in Percentage in Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited .	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	28%	14	18%	9
Agree (high)	36%	18	16%	8
Agree (low)	8%	4	6%	3
Disagree (Low)	16%	8	32%	16
Disagree (High)	10%	5	18%	9
Strongly Disagree	2%	1	10%	5
Total	100%	50	100%	50

Interpretation:

Aakash Educational Services Limited

28%of employees Strongly Agree and 36% Agree (high) that do not try to identify reactions,8% are Agree (low), 16% are Disagree (Low), 10% are Disagree (High) whereas 2% are Strongly Disagree the statement respondents of Aakash Educational Services Limited

VidyaMandirClasses

18%of employees Strongly Agree and 16% Agree (high) do not try to identify

reactions,6% are Agree (low), 32% are Disagree (Low), 18% are Disagree (High) whereas 10% are Strongly Disagree the statement respondents of VidyaMandir Classes

4.I try to reduce the intensity of my emotional reaction to the stressor.

Responses	Respondents in Percentage in Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	30%	15	14%	7
Agree (high)	20%	10	18%	9
Agree (low)	4%	2	6%	3
Disagree (Low)	20%	10	20%	10
Disagree (High)	16%	8	28%	14
Strongly Disagree	10%	5	14%	7
Total	100%	50	100%	50

Interpretation:

Aakash Educational Services Limited

30% of employees Strongly Agree and 20% Agree (high) that intensity of my emotional reaction to the stressor, 4% are Agree (low), 20% are Disagree (Low), 16% are Disagree (High) whereas 10% are Strongly Disagree the statement respondents of Aakash Educational Services Limited

VidyaMandir Classes

14% of employees Strongly Agree and 18% Agree (high) that intensity of my emotional reaction to

the stressor, 6% are Agree (low), 20% are Disagree (Low), 28% are Disagree (High) whereas 14% are Strongly Disagree the statement respondents of VidyaMandir Classes.

5. I do not control physical reaction to the stressors.

Responses	Respondents in Percentage in Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	26%	13	26%	13
Agree (high)	36%	18	34%	17
Agree (low)	4%	2	2%	1
Disagree (Low)	20%	10	22%	11
Disagree (High)	10%	5	10%	5
Strongly Disagree	4%	2	6%	3
Total	100%	50	100%	50

Interpretation:

Aakash Educational Services Limited

26%of employees Strongly Agree and 36% Agree (high) that find control physical reaction to the stressors,4% are Agree (low), 20% are Disagree (Low), 10% are Disagree (High) whereas 4% are Strongly Disagree the statement respondents of Aakash Educational Services Limited

VidyaMandir Classes

26%of employees Strongly Agree and 34% Agree (high) that find control physical reaction to the

stressors,2% are Agree (low), 22% are Disagree (Low), 10% are Disagree (High) whereas 6% are Strongly Disagree the statement respondents of VidyaMandir Classes

6. I try to keep smiling.

Responses	Respondents in Percentage in Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	20%	10	30%	15
Agree (high)	20%	10	28%	14
Agree (low)	10%	5	6%	3
Disagree (Low)	20%	10	12%	6
Disagree (High)	16%	8	20%	10
Strongly Disagree	14%	7	4%	2
Total	100%	50	100%	50

7. I take regular test.

Responses	Respondents in Percentage in Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	20%	10	26%	13
Agree (high)	32%	16	30%	15
Agree (low)	12%	6	2%	1
Disagree (Low)	16%	8	20%	10
Disagree (High)	10%	5	16%	8
Strongly Disagree	10%	5	6%	3
Total	100%	50	100%	50

Interpretation:

Aakash Educational Services Limited

20% of employees Strongly Agree and 32% Agree (high) that take regular test, 12% are Agree (low), 16% are Disagree (Low), 10% are Disagree (High) whereas 10% are Strongly Disagree the statement respondents of Aakash Educational Services Limited VidyaMandir Classes

26% of employees Strongly Agree and 30% Agree (high) that take regular test, 2% are Agree (low),

20% are Disagree (Low), 16% are Disagree (High) whereas 6% are Strongly Disagree the statement respondents of VidyaMandir Classes

8. I do not manage my time properly.

Responses	Respondents in Percentage in Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	20%	10	16%	8
Agree (high)	36%	18	16%	8
Agree (low)	8%	4	6%	3
Disagree (Low)	12%	6	30%	15
Disagree (High)	10%	5	26%	13
Strongly Disagree	14%	7	6%	3
Total	100%	50	100%	50

Interpretation:

Aakash Educational Services Limited

20%of employees Strongly Agree and 36% Agree (high) that manage my time properly,8% are Agree (low), 12% are Disagree (Low), 10% are Disagree (High) whereas 14% are Strongly Disagree the statement respondents of Aakash Educational Services Limited

Vidya Mandir Classes

16%of employees Strongly Agree and 16% Agree (high) that manage my time properly,6% are Agree (low), 30% are Disagree (Low), 26% are Disagree (High) whereas 6%are Strongly Disagree the statement respondents of VidyaMandir Classes

9. I do my work so I feel proud of it.

Responses	Respondents in Percentage In Aakash Educational Services Limited	Respondents in Number in Aakash Educational Services Limited	Respondents in percentage in Vidya Mandir Classes	Respondents in number in Vidya Mandir Classes
Strongly Agree	16%	8	10%	5
Agree (high)	20%	10	20%	10
Agree (low)	4%	2	6%	3
Disagree (Low)	24%	12	32%	16
Disagree (High)	24%	12	24%	12
Strongly Disagree	18%	6	8%	4
Total	100%	50	100%	50

Interpretation:

Aakash Educational Services Limited

16% of employees Strongly Agree and 20% Agree (high) that work so I feel proud of it, 4% are Agree (low), 24% are Disagree (Low), 24% are Disagree (High) whereas 18% are Strongly Disagree the statement respondents of Aakash Educational Services Limited

VidyaMandir Classes

10% of employees Strongly Agree and 20% Agree (high) that work so I feel proud of it, 6% are Agree

(low), 32% are Disagree (Low), 24% are Disagree (High) whereas 8% are Strongly Disagree the statement respondents of VidyaMandir Classes 10. I do not take full control of my task performance.

DECLARATION

Form IV Rule (B)

Statement about ownership and other particulars of Journal of Education
under Rule 8 of the Registration of Newspaper (Central) Rules 1956

Place of Publication	:	Dev Samaj College of Education, Chandigarh
Periodicity of Publication	:	Annual
Printer's and Publisher's Name	:	Dr. Agnese Dhillon
Nationality	:	Indian
Address	:	Dev Samaj College of Education, Chandigarh
Name & Address of the owner of the newspaper holding more than one percent of the total	:	Dr. Agnese Dhillon Principal, Dev Samaj College of Education Sector 36-B, Chandigarh

I, Dr. Agnese Dhillon, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd/-
Dr. Agnese Dhillon
Publisher

**The views expressed in the journal are those of the contributors themselves.
The Editorial Board is not responsible for the opinions expressed by the contributors.**

DEV SAMAJ COLLEGE OF EDUCATION

Accredited with 'A' Grade by National Assessment and Accreditation Council (NAAC), Bangalore

Sector 36-B, Chandigarh Phone : 0172-2603241, Fax : 0172-2603652

Website: www.devsamaj.org E-mail: devsamaj@rediffmail.com