Journal of Research in Education and Pedagogy
ISSN 3047-7131 (online) & 3047-6410 (print)
August 2025, Vol. 2, No. 3, pp. 362–368

Research Article

Enhancing School Adjustment in Secondary School Students through Artificial Intelligence

Huma Naz[1]

[1]Department of Education, Integral University, Lucknow, India

Abstract
School Adjustment is a critical factor in the overall development and well-being of secondary school students, influencing their academic performance, social integration, and emotional health. The integration of artificial intelligence in education offers an innovative solution to support students during this transitional phase. This paper explores how artificial intelligence correlates with school adjustment. This study was conducted on secondary school students of CBSE, ICSE, and U.P board students. Here, to examine the school adjustment of secondary school students from CBSE, ICSE, and U.P. boards, and to explore the relationship between the use of artificial intelligence and their school adjustment across these educational boards. In this study, the researcher used self-constructed tools (Artificial Intelligence Scale and School Adjustment Scale). A total of 300 secondary school students' data was collected using the psychological tools. This paper indicates that students have different levels of school adjustment due to boards. In CBSE and ICSE boards students school adjustment is higher than as compared to U.P board students because in U.P board school does not get effective learning resources. This study found a moderate correlation between artificial intelligence and school adjustment. This study highlights the transformative potential of artificial intelligence in fostering a supportive and inclusive school environment for secondary school students.

Keywords: Artificial Intelligence, Boards, School Adjustment, Secondary School Students

Correspondence
Huma Naz
humachemistry786@gmail.com

Received
January 15, 2025
Accepted
May 5, 2025
Published
August 1, 2025

Citation: Naz, H. (2025). Enhancing school adjustment in secondary school students through artificial intelligence. *Journal of Research in Education and Pedagogy, 2*(3), 362–368.

DOI: 10.70232/jrep.v2i3.72

1. INTRODUCTION

School is considered to be the most important developmental system for children after the immediate family. As defined in the Psychology Wiki, school adjustment involves adapting to the student role as well as the diverse elements of the school environment. While scholars may differ in their specific interpretations, most prior researches (Xu et al., 2010; Chen et al., 2011; Wu, 2014) agree, school adjustment involves the dynamic interplay between students and the diverse aspects of the school environment. In recent years, an increasing number of children with cochlear implants have begun attending mainstream schools once they reach school age (Archbold et al., 2002; Taylor et al., 2002; Ladd & Burgess, 2001). Some of these students transitioned from schools for the deaf following their implantation. Furthermore, those enrolled in regular schools tend to demonstrate stronger verbal perception skills compared to those in other educational settings (Aunola et al., 2000).

Despite this shift, children with cochlear implants often still need classroom support services, such as sign language or oral interpreters, assistance from resource rooms, captioned media, personal assistive devices, and note-taking support. In the context of inclusive education, the integration of children with hearing impairments into mainstream schools should not be interpreted merely as their physical placement in such settings (Nansel et al., 2013). Rather, it entails fostering an environment that embraces and values diversity within the school community. For children with cochlear implants, numerous obstacles to effective learning persist, primarily stemming from negative attitudes directed toward them (Yoleri, 2014). These

challenges often arise from misconceptions about active learning processes, insufficient adaptation of instructional strategies, and the application of inappropriate approaches to the educational environment.

School adjustment refers to the way students adapt to the academic, social, and behavioral demands of the school setting. Difficulties in adjustment can contribute to mental health challenges, increase the risk of school dropout, and may necessitate the intervention of school counselling services. In a time when there is broad conversation of school decision, actually choices are restricted. Uncommon arrangements are once in a while without a doubt for going to a state funded school out of one's home region. Tuition based schools are not monetarily accessible to the larger part. In this way, generally, young people should try out their nearby schools. This can be fine when the school is high performing, and the understudy fits in scholastically and socially. It very well may be one more hindrance to realizing when the school is a low entertainer, and the understudy disdains being there.

At the point when families move, the expectation is that another school will be a decent one, perhaps better than the one remaining behind. Tragically, this may not be the situation. Besides, school change may happen whenever during a scholarly year, and this can be troublesome to learning and educating, particularly in schools enlisting numerous understudies from families that move a few times during the year.

1.1. Study Objectives

The objectives are to study the school adjustment among secondary school students of CBSE, ICSE and U.P boards and to study the relationship between the use of artificial intelligence and school adjustment of secondary school student of CBSE, ICSE and U.P board.

1.2. Research Hypotheses

There is no significant difference in school adjustment among secondary school students of CBSE, ICSE, and U.P. boards. Similarly, no significant differences are observed in school adjustment between students of CBSE and ICSE, ICSE and U.P., or CBSE and U.P. boards.

1.3. Literature Review

This study focuses on the topic of school adjustment. Hillekens et al. (2023) explored how both school and home environments affect the school adjustment of adolescents from various ethnic and socio-economic backgrounds during the COVID-19 school closures. Their research analyzed changes in adjustment across three time periods—before, during, and after the closures—emphasizing the disparities among different demographic groups. The study, based on a sample of 124 adolescents, found that school closures and SES-related inequalities significantly influenced students' ability to adjust in school.

Similarly, Schotte et al. (2022) investigated whether teachers' cultural beliefs impact students' school adjustment. Using a multilevel analysis, the study examined the link between teachers' multicultural perspectives and students' academic success and psychological adaptation. A special emphasis was placed on teachers' egalitarian views, which focus on commonalities among students. The research, which included both teachers and students, concluded that there was no significant relationship between teachers' cultural beliefs and any school adjustment indicators in either immigrant or non-immigrant students.

Bhat and Basu (2021) conducted a review study titled *Home Adjustment, School Adjustment and Social Adjustment of Higher Secondary School Students*. This review analyzed research papers published between 2010 and 2020 and suggested that schools should focus not only on academic success but also on helping students adapt to themselves and their environments.

Lastly, Guler (2021) studied *Acculturation, Perceived Discrimination and School Adjustment Among Forcibly Displaced Syrian Youths in Turkey*. This research assessed how acculturation patterns and perceived discrimination predicted school adjustment among 281 displaced Syrian youths. Participants completed surveys on acculturation, perceived discrimination, school adjustment, and demographic data. The findings revealed a significant relationship between acculturation, perceived discrimination, and school adjustment.

2. METHODS

To achieve the objectives of the study, the researcher employed a descriptive research method. The population comprised all secondary school students in Lucknow, from which a sample of 300 students was selected. The male students are 137 and female students are 163 from CBSE, ICSE and U.P Board. For this study, Scholar has been used purposive sampling for data collection. The scholar has developed School Adjustment Scale for data collection. The scale is Likert Scale which consists of five dimensions: - (i). School Resources and infrastructure (ii). Satisfaction with school (iii). Teaching-learning problems (iv) Teacher's concern (v). Psychological problems at school.

2.1. Data Analysis

Hypothesis 1. There is no significant difference in school adjustment among secondary school students of CBSE, ICSE, and U.P. boards.

Table 1. Sum of Square, Mean Square and F-ratio of School Adjustment of secondary school students of CBSE., ICSE and U.P. Boards

Groups	Sum of Squares	Df	Mean Square	F	Significance
Between groups	634.527	2	317.264	3.252	Significant
Within groups	28976.139	297	97.563		at
Total	29610.667	299			0.05 level

Table 1 indicates that the sum of squares between groups is 634.527, with a corresponding mean square of 317.264. The within-groups sum of squares is 28,976.139, and the mean square is 97.563. The calculated F-value is 3.252 with degrees of freedom 2 and 297. Referring to the F-distribution table, the critical value at the 0.05 significance level is 3.03. Since the obtained F-value (3.252) exceeds the critical value, the null hypothesis is rejected. This indicates that there is a statistically significant difference in school adjustment among secondary school students of ICSE, CBSE, and U.P. boards.

Post-hoc Test: - t-test was employed to determine the difference between the two groups.

Hypothesis 1.1. No significant differences were found in school adjustment between secondary school students of ICSE and CBSE boards, ICSE and U.P. boards, and CBSE and U.P. boards.

Table 2. Descriptive Statistics and t-Test Results for School Adjustment among Secondary School Students of ICSE, CBSE, and U.P. Boards.

S. No.	Groups	N	Mean	SD	Df	t-value	Significance
1	CBSE	117	103.47	10.339			Not significant
	ICSE	108	101.57	10.068	223	1.392	at
							0.05 level
2	ICSE	108	101.57	10.068			Significant at
	U.P	75	99.79	8.800	181	3.171	0.05 level
3	CBSE	117	103.49	10.339			Significant at
	U.P	75	99.79	8.800	190	3.766	0.05 level

Table 2 reveals that mean and SD for C.B.S.E. and I.C.S.E. boards secondary school students were found 103.47, 10.339 and 101.57, 10.0681 respectively. The calculated t-value was 1.392, which was found not significant at 0.05 level. So, the null hypothesis is accepted. The t-value of next group I.C.S.E. and U.P. boards is 3.171 is greater than table value 1.96 at 0.05 level of significance. It can be concluded that the secondary school students of I.C.S.E. and U.P. boards significantly differ on School Adjustment. The last group shows that mean and SD for C.B.S.E. and U.P. boards secondary school students were found 103.47, 10.339 and 99.79, 8.800 respectively. The calculated t-value was 3.766, which is significant at 0.05 level. So, the null hypothesis is not accepted.

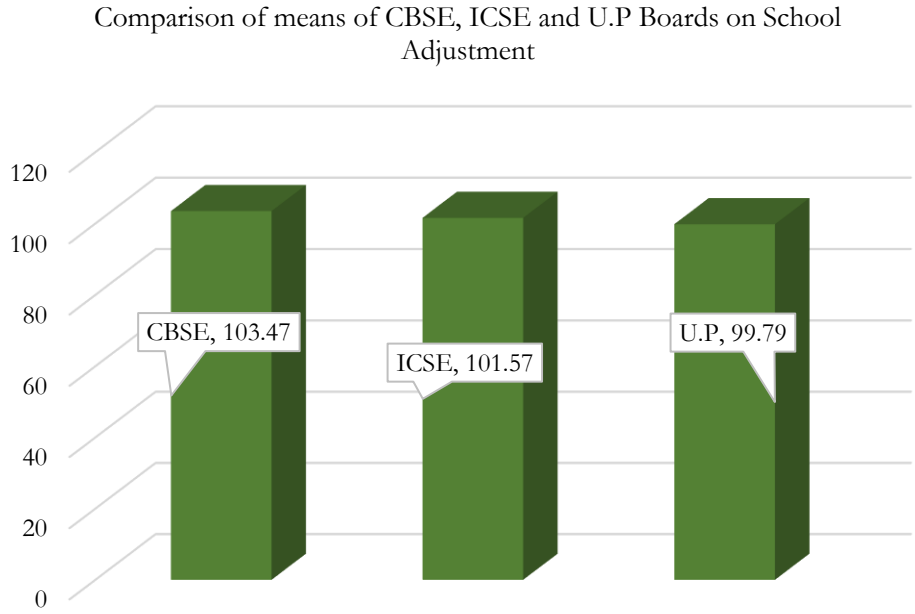

Figure 1. Comparison of Means of CBSE, ICSE and U.P Boards on School Adjustment

Hypothesis 1.2. No significant variation was found in the school adjustment of male secondary school students across ICSE, CBSE, and U.P. boards.

Table 3. Sum of Square, Mean Square and F-ratio of School Adjustment of Secondary School male students of ICSE, CBSE. and U.P Boards

Groups	Sum of Squares	Df	Mean Square	F	Significance
Between groups	206.536	2	103.268	1.030	Not Significant
Within groups	13434.107	134	100.255		at
Total	13640.642	136			0.05 level

Table 3 shows that the sum of squares between groups is 206.536, with a mean square of 103.268. The within-group sum of squares is 13,434.107, and the mean square is 100.255. The calculated F-value is 1.030, with degrees of freedom 2 and 134. Referring to the F-distribution table, the critical F-value at the 0.05 significance level is 3.07. Since the obtained F-value (1.030) is less than the critical value, the null hypothesis is accepted. This indicates that there is no significant difference in school adjustment among male secondary school students of CBSE, ICSE, and U.P. boards.

Hypothesis 1.3. There is no significant difference among Secondary School female Students of I.C.S.E., C.B.S.E. and U.P. boards on School Adjustment.

Table 4. Sum of Square, Mean Square and F-ratio of School Adjustment of Secondary School female Students of I.C.S.E., C.B.S.E. and U.P. Boards

Groups	Sum of Squares	Df	Mean Square	F	Significance
Between groups	677.671	2	338.835	3.584	Significant
Within groups	15124.636	160	94.529		at
Total	15802.307	162			0.05 level

Table 4 shows that the sum of squares between groups is 677.671 within groups is 15124.636. the calculated F-value is 3.584. at degree of freedom 2 and 160. By locating these dfs the critical ratio value of F-ratio is 3.06 at 0.05 level, since the obtained value of F-ratio is 3.584, which exceeds table value, so the null hypothesis is not accepted and there is exist significant difference in secondary school female students of ICSE, CBSE and U.P boards on School Adjustment. The results shows that School Adjustment in female

students of ICSE, CBSE and U.P boards are differ. The female students of different boards use separate types of patterns for learning. In this pandemic, All the schools had declared that the studies would be done through online mode. It started a new medium of teaching Some students had problem in adjusting with this method because they were not aware of this method they were not provided with updated teaching-learning resources.

Post-hoc test: - t-test was employed to determine the difference between the two groups.

Hypothesis 1.3.1. No significant difference between Secondary School female Students of ICSE and CBSE boards, ICSE and U.P boards and CBSE and U.P boards on School Adjustment.

Table 5. Descriptive statistics (Mean and SD) and t-test values for school adjustment among female secondary students of ICSE, CBSE, and U.P. boards

S.No.	Groups	N	Mean	SD	Df	t-value	Significance
1.	CBSE	61	105.15	9.393	116	2.090	Significant at
	ICSE	57	101.40	10.071			0.05 level
2.	ICSE	57	101.40	10.071	100	0.463	Not significant at
	U.P	45	100.49	9.713			0.05 level
3.	CBSE	61	105.15	9.393	104	2.488	Significant at
	U.P	45	100.49	9.713			0.05 level

Table 5 shows that the mean and standard deviation of school adjustment scores for female students from CBSE and ICSE boards were 105.15 (SD = 9.393) and 101.40 (SD = 10.071), respectively. The calculated t-value was 2.090, which is significant at the 0.05 level, indicating a significant difference between the two groups. Therefore, the null hypothesis is rejected. For the comparison between ICSE and U.P. board female students, the calculated t-value was 0.463, which is less than the critical value of 1.96 at the 0.05 level of significance. Hence, the null hypothesis is accepted, suggesting no significant difference in school adjustment between female students of these two boards. In the final comparison, the mean and standard deviation for CBSE and U.P. board female students were 105.15 (SD = 9.393) and 100.49 (SD = 9.713), respectively. The calculated t-value was 2.488, which is significant at the 0.05 level. Therefore, the null hypothesis is rejected, indicating a significant difference in school adjustment between these groups

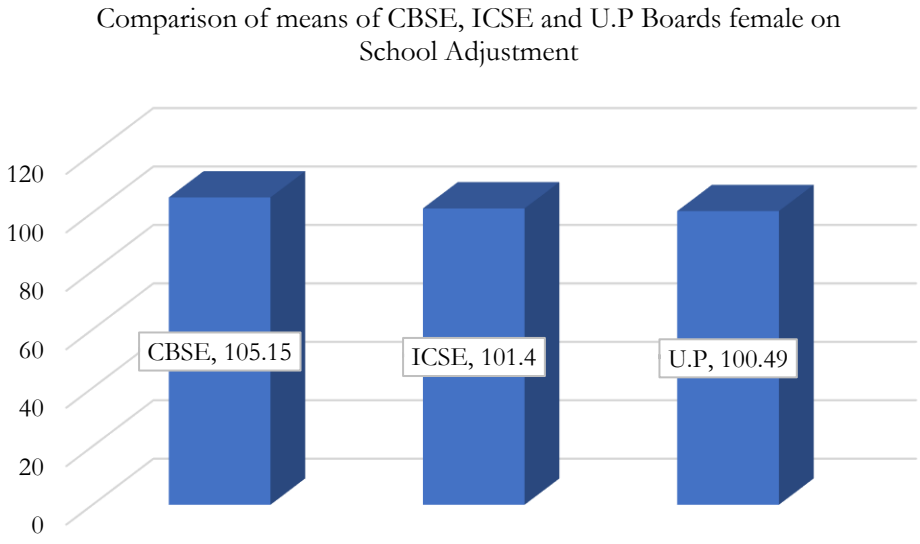

Figure 2. Comparison of Means of CBSE, ICSE and U.P Boards Female on School Adjustment

Hypothesis 2. There is no significant correlation between the use of Artificial Intelligence and School Adjustment Secondary School Students of I.C.S.E., C.B.S.E. and U.P. boards.

Table 6. Correlation of the use of Artificial Intelligence and School Adjustment of Secondary School Students of CBSE, ICSE and U.P boards

Variable	N	Coefficient of Correlation
Artificial Intelligence	300	0.501
School Adjustment	300	

Table 6 indicates a correlation coefficient of 0.501 between artificial intelligence and school adjustment among secondary school students. This represents a moderate positive correlation between the two variables. The findings suggest that as the use or understanding of artificial intelligence increases among secondary school students, their level of school adjustment also tends to improve, and vice versa.

3. DISCUSSION

This study highlights that students' levels of school adjustment vary across educational boards, with one contributing factor being unequal access to digital resources. During the COVID-19 pandemic, digital tools became essential for the teaching-learning process. However, some schools, particularly those under the U.P. Board, did not offer online classes, and many students lacked the necessary technical skills, making it difficult for them to adapt. The findings indicate a significant difference in school adjustment between ICSE and U.P. Board students. Students from CBSE and ICSE boards demonstrated higher levels of school adjustment, likely due to their exposure to more supportive and resource-rich learning environments. These boards ensured access to online classes, enabling continued education from home, whereas U.P. Board students faced challenges due to limited or ineffective digital learning facilities. Interestingly, the study also suggests that male students across all boards showed similar levels of school adjustment, possibly because they were less affected by external circumstances and adjusted more easily. This finding aligns with Bhagat and Baliya (2016), who reported no significant gender-based difference in academic adjustment among male secondary school students. Furthermore, research on school adjustment concerning gender and residence supports these results. In contrast, female students across different boards appeared to use distinct learning strategies and faced greater challenges adapting to the online mode of instruction introduced during the pandemic. Many struggled due to limited exposure to digital learning tools and a lack of updated educational resources.

4. CONCLUSION

In this study, researcher achieved all the objectives. During the research for achieving the objectives two scales are constructed Artificial Intelligence Scale and School Adjustment Scale. Jain et al. (2014) in their study describe a tool Artificial Intelligence based student learning evaluated tool (AISLE). Parametric test was used to analyze the data. This shows that artificial intelligence concepts and practical aspects are mostly used in I.C.S.E. and C.B.S.E. boards because their pattern of teaching and syllabus are much better than U.P. board. So, this research reveals that no proper training and syllabus were provided. This result of this study shows that gender, locality and boards play important role in the use of Artificial Intelligence and School Adjustment of secondary school students. By the result of correlation 0.501 is found the between Artificial Intelligence and School Adjustment present moderate correlation which means if the use of Artificial Intelligence will increase of secondary school students their School Adjustment also increase.

Acknowledgment. Huma Naz sincerely acknowledge Integral University, Lucknow, India, for its valuable institutional support and for providing the essential facilities needed to carry out this research.

Research Ethics. Participants were verbally informed about the objectives of the study and provided their consent voluntarily, without any coercion.

Data Availability Statement. The author declared the availability of the data used in the research based on enhancing School Adjustment in Secondary School Students through Artificial Intelligence.

Conflicts of Interest. The author declared there was no conflicts of interest during or after the research.

Funding. The authors declared that the research did not receive any external funds during the research.

REFERENCES

Archbold, S. M., Lutman, M. E., Gregory, S., O'Neill, C., & Nikolopoulos, T. P. (2002). Parents and their deaf child: their perceptions three years after cochlear implantation. *Deafness & Education International*, *4*(1), 12-40. https://doi.org/10.1002/dei.114

Aunola, K., Stattin, H., & Nurmi, J. E. (2000). Adolescents' achievement strategies, school adjustment, and externalizing and internalizing problem behaviors. *Journal of youth and adolescence*, *29*(3), 289-306. https://doi.org/10.1023/A:1005143607919

Bhagat, P., & Baliya, J. N. (2016). Self-efficacy and adjustment of secondary school students in relation to their gender and academic Achievement. *International Journal of Allied Practice, Research and Review*, *8*(3), 9-17. https://www.ijaprr.com/download/issue/Volume_III/Issue_VIII/128_Volume_III_Issue_VIII_09-17_Pooja_Bhagat.pdf

Bhat, K. A. & Basu, N. (2021). Home Adjustment, School Adjustment and Social Adjustment of Higher Secondary School Student: A Review. *International Journal of Advanced Research in Science, Communication and Technology, 8*(1), 502-506. https://ijarsct.co.in/Paper1889.pdf

Chen, X., Chang, L., He, Y., & Liu, H. (2005). The peer group as a context: Moderating effects on relations between maternal parenting and social and school adjustment in Chinese children. *Child Development*, *76*(2), 417-434. https://doi.org/10.1111/j.1467-8624.2005.00854.x

Guler, A. (2021). Acculturation, Perceived Discrimination and School Adjustment Among Forcibly Displaced Syrian Youths in Turkey. *Journal of School and Educational Psychology*, *1*(1), 26-34. https://journalofschoolpsychology.com/index.php/josep/article/view/9

Hillekens, J., Baysu, G., & Phalet, K. (2023). How School and Home Contexts Impact the School Adjustment of Adolescents from Different Ethnic and SES Backgrounds During COVID-19 School Closures. *Journal of Youth and Adolescence*, 1-17. https://doi.org/10.1007/s10964-023-01772-z

Jain, G. P., Gurupur, V. P., Schroeder, J. L., & Faulkenberry, E. D. (2014). Artificial intelligence-based student learning evaluation: a concept map-based approach for analyzing a student's understanding of a topic. *IEEE Transactions on Learning Technologies*, *7*(3), 267-279. http://doi.org/10.1109/TLT.2014.2330297

Ladd, G. W., & Burgess, K. B. (2001). Do relational risks and protective factors moderate the linkages between childhood aggression and early psychological and school adjustment? *Child development*, *72*(5), 1579-1601. https://doi.org/10.1111/1467-8624.00366

Nansel, T. R., Haynie, D. L., & Simons-Morton, B. G. (2013). The association of bullying and victimization with middle school adjustment. In *Bullying, Peer Harassment, and Victimization in the Schools* (pp. 45-62). Routledge.

Schotte, K., Rjosk, C., Edele, A., Hachfeld, A., & Stanat, P. (2022). Do teachers' cultural beliefs matter for students' school adaptation? A multilevel analysis of students' academic achievement and psychological school adjustment. *Social Psychology of Education*, *25*(1), 75-112. https://doi.org/10.1007/s11218-021-09669-0

Taylor, C. A., Liang, B., Tracy, A. J., Williams, L. M., & Seigle, P. (2002). Gender differences in middle school adjustment, physical fighting, and social skills: Evaluation of a social competency program. *Journal of Primary Prevention*, *23*, 259-272. https://doi.org/10.1023/A:1019976617776

Wu, J. (2014). Children with cochlear implants: educational placement and school adjustment. *E-pedagogium*, 79-85. http://dx.doi.org/10.5507/epd.2014.044

Xu, M., Kushner Benson, S. N., Mudrey-Camino, R., & Steiner, R. P. (2010). The relationship between parental involvement, self-regulated learning, and reading achievement of fifth graders: A path analysis using the ECLS-K database. *Social Psychology of Education*, *13*, 237-269. https://psycnet.apa.org/doi/10.1007/s11218-009-9104-4

Yoleri, S. (2014). The effects of age, gender, and temperament traits on school adjustment for preschool children. *International Journal of Educational Research*, *5*(2), 54-66. https://doi.org/10.19160/e-ijer.55208