

Effectiveness of Different Methodological Interventions For Private Schools of Small Towns



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Abstract

Teaching and its effectiveness are always crucial for nation building. There is lack of resources in small towns of India and the private schools which are serving in these small towns have very limited resources and less financial assistance yet they strive to increase their effectiveness by introducing different methodological interventions. Here research was done to assess four major interventions that are unique in current scenario and their effectiveness was measured from the perspective of teachers. It was found that all these interventions are effective while gamification of few chapters is considered as most effective. It increases the interest of students and releases the pressure of study and makes study more encouraging and joyful. T test and analysis of variance test have confirmed the research outcome.

Key words: small towns, methodological interventions, gamification, effectiveness

Introduction:

School education is the foundation of higher education and prosperity of the country. A lot depends on the conceptual understanding of students; whether they will be able to apply the knowledge in real world with comfort and precision. Generally, students just cram the things and reproduce it in examination and get marks. It simply creates wrong notion that wisdom and intellect are rising which actually do not take place so few other methods and interventions are required to actually develop the intellect of students and arouse interest among them for studies which is long lasting and natural.

Ali S. Bhutta, et al. (2024) Public private partnership in schools can raise the level of resources not just in terms of finance but also in terms of knowledge. Gross enrolment ratio and attendance of students can be improved with this approach. Drop out ratio of students can also be controlled but for that purpose the quality of teaching needs to be focus on. Until and unless teaching practices in primary and secondary school are improved, interest of students can't be spontaneously increased. When it will happen things will be streamlined. [1]

Vandenbergh V. and Robin S. (2004) Spending on school do not directly result into quality education and the performance of students can't be correlated with expenditure incurred by the school administration. Organisational culture of the school matters a lot for developing an eco system where education thrive and flourish. It is not similar to the other service sectors as it is related to the skill set development of human being. Personal attention, care and customization is extremely required and things can't be imposed at large. [2]

Kortelainen M. and Manninen K. (2019) A detailed and intensive study was conducted in Finland related to the effectiveness of teaching being provided by private schools in comparison to the Government schools in the city of Helsinki which is the capital of Finland. It was found that culture in private schools is somewhat more conducive for education. Teachers are little more sensitized and that has resulted into marginally better performance than the public schools. The differences is not significant yet it is appreciable that organizational culture and minor interventions can also contribute in better performance of students and school at large. [3]

Petrosino A., et al. (2012) In developing Nations education is a tool to spread social welfare provide economic development of set in equalities and disparity promote harmony and cohesiveness at institutional level and exercise in society education is required to be provided to all so consistent efforts are required to enrol maximum students so that anyone may not get left behind and deprived from being educated private schools can deliver public schools Government schools. [4]

Goswami S. and Mehta A. (2024) Education is also an enterprise and it has to be run with providing value to the students. This has to be done consistently with great rigor. Many innovations need to be incorporated in the era of artificial intelligence to keep the syllabus updated and to provide the best of the prevailing knowledge to the students. Interventions like audio books and critical detailed notes can also provide greater quality of education. Especially the schools which are technology oriented must use artificial intelligence for development of their study material and its effective delivery. [5]

Objective:

1. To study the effectiveness of methodological interventions for private schools of small towns.
2. To study the difference in effectiveness of methodological interventions for private schools of small towns.

Hypothesis:

1. There is no significant effectiveness of methodological interventions for private schools of small towns.
2. There is no significant difference in effectiveness of methodological interventions for private schools of small towns.

Research Methodology:

40 smaller towns of South Rajasthan have been chosen randomly and 8 teachers were picked from each school and the information related to different methodological interventions have been collected from these teachers on the basis of well-prepared questionnaire. This data was data was collected on 4 on five point scale where 0 indicates absolute disagreement with the effectiveness of methodological interventions and 4 indicates absolute agreement with the effectiveness of methodological interventions.

Analysis of collected data:

Research has shown that there is good impact of using lesson plan. Information collected from 320 private school teachers working in small towns have agreement that use of lesson plan can be of a great impact and on a 0 to 4 points scale it was rated at 2.89 on an average by all the respondents. As per opinion of teachers, it can be 72.19% effective.

The use of extracting practical applications of the concepts which are taught in the classroom with the help of artificial intelligence; is considered highly effective for extracting different practical applications of the concepts being taught in the classroom. In all it was rated at 3.26 on an average by all the respondents. As per opinion of teachers, it can be 81.41% effective.

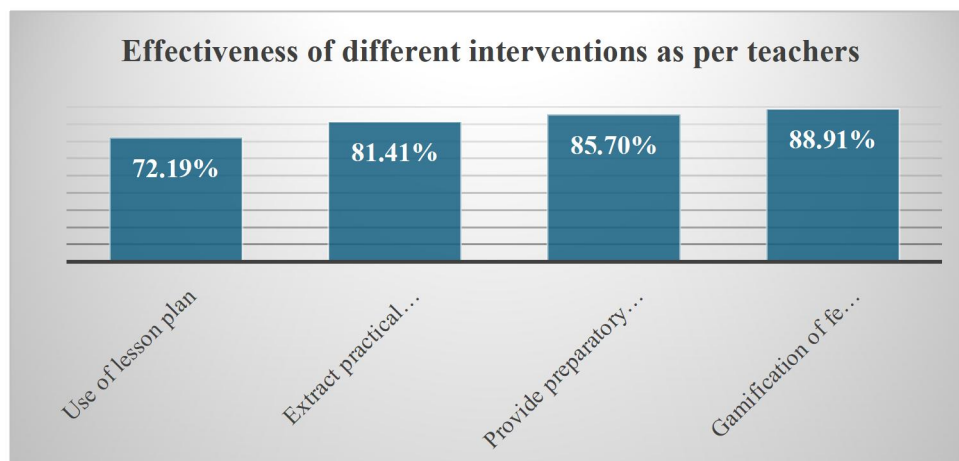
It was also expressed that providing preparatory notes to the students will develop fundamental understanding among students. They will come up in the class with some preparation and put their brain together and deliberate, discuss and explore different dimensions of the topic on which notes have been given earlier. So it is easy for the teacher to make them understand the things in detail with less efforts. This has been rated at 3.43 i.e. 85.70% effectiveness which is really appreciable.

Putting things in simple is not just the solution for everything. It may not ignite the interest. Students are in their teenage and they want something amazing, adventurous and challenging so when the chapter, its parts or the teaching assignments are presented like a game students interest arise considerably and it has been rated by the teachers at 3.56 i.e. 88.91% effectiveness which is the highest among all studied interventions.

Table 1: Interventions and their effectiveness

Intervention	Total Score	Average Score on 0 to 4 point scale
Use of lesson plan	924	2.89
Extract practical applications from AI	1042	3.26
Provide preparatory notes to students for brainstorming	1097	3.43
Gamification of few chapters	1138	3.56

Chart 1



One sample T test has been done for assessing significance of methodological interventions for private schools of small towns. As shown in table 2 the calculated t-value of each intervention is more than critical value 1.65 and the p-values are also less than 0.05 which proves there is significant effectiveness of all the four methodological interventions for private schools of small towns. Hence first hypothesis is rejected.

Table 2 One Sample T Test

Intervention	Mean (X̄)	Test Value	Mean Difference	t-value	df	p-value	Decision
Use of Lesson Plan	2.89	2	0.89	19.91	319	<0.001	Significant
Extract AI Applications	3.26	2	1.26	28.19	319	<0.001	Significant
Preparatory Notes	3.43	2	1.43	31.99	319	<0.001	Significant
Gamification	3.56	2	1.56	34.90	319	<0.001	Significant

Analysis of variance test (ANOVA) has been done for assessing significance of difference in effectiveness of methodological interventions for private schools of small towns. As shown in table 3 the F value is more than critical value 2.60 and the p-value is also less than 0.05 which proves there is significant difference in effectiveness of methodological interventions for private schools of small towns. Hence second hypothesis is rejected.

Table 3 : ANOVA Test

Source	SS	df	MS	F	p-value
Between Groups	75.2	3	25.07	39.17	<0.001
Within Groups	816.64	1276	0.64		
Total	891.84	1279			

For further analysis of difference in effectiveness of methodological interventions for private schools of small towns, Tukey HSD Post Hoc Test has been done. It shows difference among all is significant except Preparatory Notes and Gamification. Both are highly effective and difference in their effectiveness is very low.

Table 4: Post Hoc Test

(I) Intervention	(J) Intervention	Mean Diff	p-value	Decision
Lesson Plan	AI	-0.37	<0.001	Significant
Lesson Plan	Preparatory Notes	-0.54	<0.001	Significant
Lesson Plan	Gamification	-0.67	<0.001	Significant
AI	Preparatory Notes	-0.17	<0.05	Significant
AI	Gamification	-0.3	<0.001	Significant
Preparatory Notes	Gamification	-0.13	>0.05	Not Significant

Research findings and conclusion:

Research has shown that all the four methodological interventions namely the use of detail lesson plan, extraction of practical applications of the concept going to be taught in classroom with the use of artificial intelligence, providing preparatory notes to the students to generate basic information of the topic going to be discussed initially in the classroom before further analysis & explanation and lastly the gamification of selected chapters are all very

significant. Teachers considered them as highly effective so these interventions are recommended to be used by the small schools working in small towns of Rajasthan and later to be used by other schools operating in rest of the nation. There is not much differences in the effectiveness of these four interventions yet gamification is of highest effectiveness over others and it is quite feasible too. It will increase genuine interest of students in studies and they will understand the practical

aspects of the subject and topic being taught in the classroom. All these interventions are not contradictory or in competition to each other; they all must be used collectively for greater impact.

References:

1. Ali, S., Bhutta, S. M., Ahmad, S., Ansari, A. N., Ahmed, A., & Qadir, Y. (2024). PROTOCOL: Effectiveness of public private partnerships on educational access and quality of primary and secondary schooling in low and middle income countries: A systematic review. *Campbell Systematic Reviews*, 20(2), e1385.
2. Vandenberghe V., and Robin S. (2004). Evaluating the effectiveness of private education across countries: a comparison of methods. *Labour economics*, 11(4), 487-506.
3. Kortelainen, M., & Manninen, K. (2019). Effectiveness of private and public high schools: Evidence from Finland. *CESifo Economic Studies*, 65(4), 424-445.
4. Petrosino, A., Morgan, C., Fronius, T. A., Tanner-Smith, E. E., & Boruch, R. F. (2012). Interventions in developing nations for improving primary and secondary school enrollment of children: A systematic review. *Campbell Systematic Reviews*, 8(1), i-192.
5. Goswami, S., & Mehta, A. (2024). A Study on Impact of Financial Challenges on Entrepreneurial Innovation and Growth in Rajasthan. *Issue 3 Int'l JL Mgmt. & Human.*, 7, 2303.