

A STUDY OF CHATGPT AND USAGE AMONGST TEACHERS IN AIDED AND UNAIDED SECTION IN INDIA

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ABSTRACT

While many teachers believe that teaching may be negatively affected by the advent of ChatGPT, some teachers believe otherwise. This research paper tries to understand the usage of ChatGPT by teachers of higher education. Teachers have been categorised into aided and unaided section and their usage and acceptability of ChatGPT has been understood. A questionnaire consisting of 26 questions apart from the initial demographic questions was circulated amongst 390 respondents. The responses were analysed using Jamovi (Version 2.3). Statistical tools like Cronbach's Alpha, McDonalds Omega, Shapiro-Wilk Test, Independent Sample T-Test, Mann-Whitney U Test, Kruskal Wallis Test and Spearman's rho were used to perform various analyses and prove the hypothesis and find the correlation between section of teachers and usage and acceptability of ChatGPT. Exploratory Factor Analysis was used to determine the factors influential in usage of ChatGPT for teachers and Sentiment Analysis was used to understand the overall opinion of the respondents. It was proved there is a relationship between the section of teachers and the usage of ChatGPT. Automation, Student Efficiency and Teacher Efficiency are factors which positively influence the usage of ChatGPT. Recommendations have been given to further improve and enhance the usage of ChatGPT by teachers.

Keywords: Artificial Intelligence, ChatGPT, Technology, Acceptability of Technology, UTAUT model, TAM model

1. INTRODUCTION

In recent years, the educational landscape has been transformed by the rapid integration of artificial intelligence (AI) technologies, ushering in an era of innovation and possibilities. Among the myriad AI-driven tools, ChatGPT, developed by OpenAI, stands out as a remarkable language model capable of engaging in dynamic and contextually relevant conversations. This study endeavours to delve into the nuanced world of ChatGPT and its usage among teachers, distinguishing between those working in aided and unaided educational sectors.

The intersection of AI and education has given rise to unprecedented opportunities to revolutionize traditional teaching methodologies. ChatGPT, powered by the advanced GPT-3.5 architecture, represents a leap forward in natural language processing and understanding. Its ability to generate human-like text and engage in coherent conversations has implications for instructional design, personalized learning experiences, and the augmentation of teacher-student interactions.

Teachers, as key stakeholders in the educational ecosystem, play a pivotal role in shaping the future of AI integration in classrooms. Their adoption and utilization of ChatGPT can provide valuable insights into the practical implications and challenges associated with incorporating AI technologies into pedagogical practices. By focusing on the aided and unaided educational sectors, this study aims to unravel the multifaceted dimensions of ChatGPT usage, taking into account contextual variations, resource disparities, and the evolving dynamics of educational environments.

The educational landscape has been witnessing a paradigm shift, with AI technologies gradually permeating classrooms and learning environments. This shift is driven by the recognition of AI's potential to enhance educational outcomes, facilitate personalized learning, and address the diverse needs of students. ChatGPT, with its ability to simulate natural language conversations, presents a unique avenue for educators to explore the realms of AI-driven educational support. Not only this, the teachers can be assisted by ChatGPT in other non-teaching and administrative works and in making the work easier and quicker.

In aided educational institutions, characterized by external support and financial resources, the integration of AI tools may be influenced by institutional policies, available technology infrastructure, and teacher training initiatives. The accessibility of resources in aided sectors often opens doors for a more seamless integration of advanced technologies. On the other hand, unaided educational environments, grappling with resource constraints, may see the adoption of AI solutions as a pragmatic approach to enriching educational experiences without substantial financial investments.

Additionally, it is seen that due to job security in the aided section, the teachers may tend to not use the various features of ChatGPT inspite of provision of various technology-driven features of ChatGPT. No need for staying on top of your job can lead to non-usage and non-implementation of ChatGPT inspite of its multiple benefits. However, the very need to be competitive in the unaided sector can positively force the teachers to make better and improved usage of ChatGPT in their teaching and non-teaching work.

Conceptual Clarity:

Aided Section – The teachers whose salaries are fully funded by the Government and have the security of their jobs

Unaided Section – The teachers whose salaries are self-financed by the students and do not have job security.

2. REVIEW OF LITERATURE

ChatGPT usually enhances the motivation level of learners to improve writing and reading skills rather than listening and speaking skills. The findings also suggested that teaching which consists of ChatGPT is highly motivational. It should be used as a learning tool rather than fearing the negative impact of it. (Ali, Shamsan, Hezam, & Mohammed, 2023). Artificial Intelligence and ChatGPT have the potential to positively transform the field of education and its application has become more and more prevalent. (Futterer, et al., 2023). AI technologies are becoming inevitable. It is better to take advantage of it, rather than allow it to rule over you. (Ayman, El-Seoud, Nagaty, & Karam, 2023).

ChatGPT supports language formation and learning. It stimulates authentic interactions. It develops quizzes, annotations, tests, and solutions, offers definitions and meanings, etc. AI and ChatGPT-based tools are here to stay and teachers are expected to be conversant with advanced digital competence to capitalize on this and overcome the challenges by using it successfully. (Kohnke, Moorhouse, & Zou, 2023)

Expert systems and machine intelligence have the potential to revolutionize the education sector and allow teachers to focus on more important tasks such as giving personal one-to-one attention to the students. (Opara, Theresa, & Tolorunleke, 2023). ChatGPT has 5 main benefits viz. creating learning assessment, enhancing pedagogical practice, offering virtual personal tutoring, creating an outline, and brainstorming ideas. (Sok & Heng, 2023)

ChatGPT poses potential threats and difficulties. But it helps in improving the programming skills of the students. (Rahman & Watanobe, 2023). There are risks related to academic integrity issues, unfair learning assessment, inaccurate information, and over-reliance on AI. (Sok & Heng, 2023). Academicians should be careful while using ChatGPT for research purposes. Initial idea generation for the research can be greatly assisted by ChatGPT. However, further analysis and synthesis of data and literature should not be done with the help of ChatGPT. (Rahman, Terano, Rahman, & Salamzadeh, 2023).

Twitter Users expressed general positivity towards the usage of ChatGPT in the education sector. However, tech companies should take proactive measures to improve the capabilities of their technologies and collaborate with educationists and the teaching sector to determine policies. (Li, et al., 2023). There are both concerns and optimism regarding ChatGPT in education. (Memarian & Doleck, 2023)

ChatGPT possesses the highest potential to change the entire education ecosystem by enabling students with customized learning, improvement in written and oral communication, and completing time-consuming and unproductive tasks of teachers. However, it is important to remember that ChatGPT can assist as a tool for teachers and not replace the teachers completely. (Bozic & Poola, 2023)

ARGUMENT BUILDING

The research has focused on teaching aspects of ChatGPT and how teachers can use it for effective teaching and enhancing their teaching capability. Though teaching can be improved, the non-teaching aspects can also be improved using ChatGPT. ChatGPT can assist teachers in reducing unproductive work at the workplace. But it is upto the teachers to make effective use of this tool. Teachers, whether in aided or unaided section, may not be motivated enough to use ChatGPT even if it is for their own benefits. For motivating the teachers to use ChatGPT, factors need to be identified that can motivate and influence them positively to use this tool for academic as well as non-academic purposes.

RESEARCH GAP IDENTIFIED

After careful analysis of the literature already available, the researcher could identify the following research-related gaps:

1. The research on ChatGPT-based teaching has focused on teaching and not concentrated on the usage of ChatGPT in teaching as well as non-teaching aspects
2. The research till date has focussed only on the effect of ChatGPT on teachers in general. No research has focussed on how teachers use ChatGPT in aided and unaided sections. This lacuna in previous research motivates the researcher to research aided and unaided teachers.
3. The Technology Adoption Model (TAM) focuses on how employees perceive technology usage at the workplace. TAM has not been specifically implemented to find out factors that motivate teachers to use ChatGPT.

This absence in previous research may help to find out the factors influential in researching ChatGPT and teachers' usage in aided and unaided sections.

2.1 UTAUT Model

The Unified Theory of Acceptance and Use of Technology (UTAUT Model) is a widely recognised theoretical framework for understanding the factors influencing the acceptance and adoption of technology. It incorporates four key variables which are:

1. Performance Expectancy (PE)
2. Effort Expectancy (EE)
3. Social Influence (SI)
4. Facilitating Conditions (FC)

In addition to the above, the theory also consists of 3 moderator variables which influence the strength of relationships between the key variables and user's intention to use technology:

1. Gender (G)
2. Age (A)
3. Experience (E)

This theory has been primarily relied on to frame the questionnaire for this research.

2.2 TAM Model

Technology Acceptance Model (TAM) is a widely recognised framework for understanding the factors influencing user's acceptance and adoption of information technology. It has 2 main variables i.e. Perceived Ease of Use and Perceived Usefulness. This has a few limitations, primarily that it focuses on individual factors rather than institutional factors. Hence, this model is used in conjunction with other models and not independently. The basic features of this model was also relied on, at the time of framing of the questionnaire.

3. RESEARCH METHODOLOGY

3.1 Objectives of the Research

1. To understand the relationship between the section of teachers and usage of ChatGPT in aided as well as unaided section
2. To identify the factors affecting or influencing the teacher's decision to adopt ChatGPT in their educational and allied practices
3. To delve into the sentiment amongst the teachers with regards to usage of ChatGPT in educational and allied practices

3.2 Hypothesis of Research

A hypothesis is an assumption on which the research is based on. This acts as an initial point of any investigative research based on some review of literature and already existing evidence. For the purpose of this research, the hypothesis framed are as follows:

H₀ There is no significant relationship between the Section of teachers and Usage of ChatGPT

H₁ There is a significant relationship between Section of teachers and the Usage of ChatGPT

3.3 Research Design and Research Tools Used

The research consisted of primary data which is used to analyse and prove the hypothesis. Secondary data was relied on to frame constructs and a path for doing this entire research.

The research tools to analyse the primary data are specifically mentioned below:

To present the demographic data	Frequencies and Percentage Method
To determine internal consistency amongst the questions in the questionnaire	Cronbach's Alpha and supported by McDonald's Omega
To check whether sample comes from a population with a specific distribution	Shapiro-Wilk Test
To test the hypothesis	Independent Sample t-test (Student t-test), Mann-Whitney U Test and supported by Kruskal-Wallis Test
To find the correlation between section of teachers and usage of ChatGPT	Spearman's rho (Spearman's Rank Correlation Test)
To find out the important factors influencing usage of ChatGPT amongst the teaching fraternity	Exploratory Factor Analysis
To check the sentiment amongst the teachers about benefits of ChatGPT	Sentiment Analysis

3.4 Sample Size

As per Cochran's Formula to compute the sample size, the formula is

$$n_0 = \frac{z^2 pq}{e^2}$$

Where n_0 is the sample size

z is the value found out from the z -value table p is the estimated proportion of the population which has the same desired characteristics of a particular question q is $1-p$ e is the margin of error

Based on the above formula, the ideal sample size for any research would be 385 (approximately) since the population size of research is infinite and not known exactly. For this research, 390 teachers were taken into consideration to give more representation to a larger number of respondents. This was done with the aim of reducing the bias in the research, if any. A further detailed analysis of the demographic profile of the respondents has been given in '4.1 Demographic Data' later in the research.

The respondents were selected based on convenience sampling and snowball sampling techniques. The respondents were from all over India but no specific demarcation or weightage was given to any specific area or type of institution.

3.5 Limitations of the Study

1. Data was collected from respondents in the month of November and December 2023. This time period is a limited time period for doing any high quality research. While all possible care was taken that limited time does not hamper the process of research, certain incorrectness may not be ruled out.
2. The number of respondents has been derived at using Cochran's formula which is a standard practice in social science research. The population being infinite, the number of respondents in this research i.e. 390 may become too insignificant. Therefore, further research with a greater number of respondents is always recommended.
3. The responses have been taken through an impersonal approach i.e. google form questionnaire. Therefore, the authenticity of the respondents cannot be guaranteed with 100% accuracy.
4. The questionnaire was anonymous. However, inspite of being anonymous, the respondents may be hesitant to give honest opinions which may lead to distorted opinions and ultimately affect the quality of the research.

4. DATA ANALYSIS AND INTERPRETATION

4.1 Demographic Data

Table 1: Frequencies of Gender			
Gender	Counts	% of Total	Cumulative %
Female	138	35.4 %	35.4 %
Male	252	64.6 %	100.0 %

Source: Data collected through a questionnaire and analysed through Jamovi (Version 2.3)

Table 2: Frequencies of Age Group			
Age Group	Counts	% of Total	Cumulative %
21 - 30	108	27.7 %	27.7 %
31 - 40	186	47.7 %	75.4 %
41 - 50	78	20.0 %	95.4 %
51 - 60	18	4.6 %	100.0 %

Source: Data collected through a questionnaire and analysed through Jamovi (Version 2.3)

Table 3: Frequencies of Section			
Section	Counts	% of Total	Cumulative %
Unaided Section	198	50.8 %	50.8 %
Aided Section	192	49.2 %	100.0 %

Source: Data collected through a questionnaire and analysed through Jamovi (Version 2.3)

Table 4: Frequencies of Teaching Experience			
Teaching Experience	Counts	% of Total	Cumulative %
0 - 10 years	246	63.1 %	63.1 %
21 - 30 years	90	23.1 %	86.2 %
11 - 20 years	54	13.8 %	100.0 %

Source: Data collected through a questionnaire and analysed through Jamovi (Version 2.3)

Table 5: Frequencies of User of ChatGPT			
User of ChatGPT	Counts	% of Total	Cumulative %
Rarely	276	70.8 %	70.8 %
Regularly	54	13.8 %	84.6 %
Frequently	60	15.4 %	100.0 %

Source: Data collected through a questionnaire and analysed through Jamovi (Version 2.3)

4.2 Reliability Analysis

It is important to test whether the questionnaire used for the research is reliable or not. For this purpose, Cronbach's Alpha was used as it is the most popularly used test for checking reliability. If the Cronbach's Alpha is greater than 0.9, it indicates that the questionnaire is highly reliable.

Table 6: Scale Reliability Statistics using Cronbach's Alpha	
	Cronbach's α
scale	0.956

Source: Data collected through a questionnaire and analysed through Jamovi (Version 2.3)

From Table 6, we can understand that the questionnaire is highly reliable. To further strengthen the research, McDonald's Omega was used. This will help in cross-checking whether the statistics presented are reliable or not.

Table 7: Scale Reliability Statistics using McDonald's Omega	
	McDonald's ω
scale	0.958

Source: Data collected through a questionnaire and analysed through Jamovi (Version 2.3)

If the McDonald's Omega is above 0.7, it indicates that the questionnaire is highly reliable. From Table 7, we can conclude that the questionnaire is highly reliable.

4.3 Normality Test

Once it is proved that the questionnaire is reliable, it is important to check whether the respondents belong to the same population or not. This will help in deciding the further statistical tests to be used for the research. For determining the normality distribution, Shapiro-Wilk test was used.

Table 8: Normality Distribution using Shapiro-Wilk Test							
					Shapiro-Wilk		
	N	Mean	Median	SD	Variance	W	p
V1	384	3.66	3.50	0.834	0.696	0.803	<.001
V2	390	3.54	4.00	0.806	0.650	0.823	<.001
V3	390	3.52	3.00	0.897	0.805	0.865	<.001
V4	390	3.35	3.00	0.667	0.445	0.776	<.001
V5	390	3.18	3.00	0.580	0.336	0.697	<.001
V6	390	3.54	4.00	0.704	0.496	0.828	<.001
V7	390	3.34	3.00	0.709	0.502	0.830	<.001
V8	390	3.29	3.00	0.696	0.485	0.808	<.001
V9	390	3.22	3.00	0.775	0.601	0.802	<.001
V10	390	3.34	3.00	0.829	0.687	0.872	<.001
V11	390	3.06	3.00	0.840	0.706	0.821	<.001
V12	390	3.42	3.00	0.722	0.521	0.818	<.001
V13	390	3.52	4.00	0.747	0.559	0.847	<.001
V14	390	3.52	3.00	0.914	0.836	0.726	<.001
V15	390	3.55	4.00	0.766	0.587	0.836	<.001
V16	390	3.29	3.00	0.780	0.608	0.848	<.001
V17	390	3.49	4.00	0.898	0.806	0.882	<.001
V18	390	3.52	3.00	0.897	0.805	0.779	<.001
V19	390	3.77	4.00	0.800	0.641	0.769	<.001
V20	390	3.60	3.00	0.943	0.888	0.862	<.001
V21	390	3.48	4.00	0.747	0.559	0.825	<.001
V22	390	3.74	4.00	0.563	0.317	0.730	<.001
V23	390	3.69	4.00	1.038	1.077	0.851	<.001
V24	390	3.43	3.00	0.860	0.739	0.862	<.001
V25	390	3.48	3.00	0.788	0.620	0.844	<.001
V26	390	3.68	4.00	1.011	1.021	0.884	<.001

Source: Data collected through a questionnaire and analysed through Jamovi (Version 2.3)

From Table 8, we can infer that p value for all the questions is below 0.05 (which is the significance level) for the research. This observation helps us in concluding that the sample does not belong to the same set of distribution.

This indicates that the data is not normal. Therefore, parametric tests cannot be applied to test the hypothesis. Non-parametric tests like Independent Sample T-Test (Student t-test) and Mann-Whitney U-Test can be used for testing the hypothesis.

4.4 Hypothesis Testing

Non-parametric tests like Independent Sample T-Test (Student t-test) and Mann-Whitney U Test shall be used for testing the hypothesis.

Table 9: Hypothesis Testing using Independent Samples T-Test and Mann-Whitney U Test (Based on Section of Teachers)					
		Statistic		df	p
V1	Student's t	-7.598		382	< .001
	Mann-Whitney U	11934	a		< .001
V2	Student's t	0.927		388	0.354
	Mann-Whitney U	16704	a		0.023
V3	Student's t	-5.071		388	< .001
	Mann-Whitney U	13896	a		< .001
V4	Student's t	-4.357		388	< .001
	Mann-Whitney U	14400	a		< .001
V5	Student's t	2.008		388	0.045
	Mann-Whitney U	17496	a		0.083
V6	Student's t	-6.108		388	< .001
	Mann-Whitney U	13392	a		< .001
V7	Student's t	-4.544		388	< .001
	Mann-Whitney U	14400	a		< .001
V8	Student's t	-6.060		388	< .001
	Mann-Whitney U	13248	a		< .001
V9	Student's t	-0.868		388	0.386
	Mann-Whitney U	18288	a		0.453
V10	Student's t	-7.141		388	< .001
	Mann-Whitney U	12528			< .001
V11	Student's t	-4.468		388	< .001
	Mann-Whitney U	15192	a		< .001
V12	Student's t	-5.886		388	< .001
	Mann-Whitney U	13680	a		< .001
V13	Student's t	-6.180		388	< .001
	Mann-Whitney U	13464			< .001
V14	Student's t	-8.079		388	< .001
	Mann-Whitney U	11952	a		< .001
V15	Student's t	-1.811		388	0.071
	Mann-Whitney U	17280			0.089
V16	Student's t	-5.359		388	< .001
	Mann-Whitney U	12672			< .001
V17	Student's t	-5.813		388	< .001
	Mann-Whitney U	13824			< .001
V18	Student's t	-5.071		388	< .001
	Mann-Whitney U	15192			< .001
V19	Student's t	-5.840		388	< .001
	Mann-Whitney U	13608			< .001
V20	Student's t	-9.075		388	< .001
	Mann-Whitney U	10728			< .001
V21	Student's t	-3.924		388	< .001
	Mann-Whitney U	15192			< .001
V22	Student's t	3.993		388	< .001
	Mann-Whitney U	15624			< .001
V23	Student's t	-6.020		388	< .001
	Mann-Whitney U	13824			< .001
V24	Student's t	-4.500		388	< .001
	Mann-Whitney U	15408			< .001
V25	Student's t	-3.716		388	< .001
	Mann-Whitney U	15984			0.003

V26	Student's t	-6.542		388	< .001
	Mann-Whitney U	13176			< .001
Note. $H_a \mu_{\text{Unaided Section}} \neq \mu_{\text{Aided Section}}$					
^a Levene's test is significant ($p < .05$), suggesting a violation of the assumption of equal variances					

From Table 9, we can infer that the p-value is less than 0.05 (significance level for this research). This is proved by Student's t-test and Mann-Whitney U Test (and supported by Levene's Test). This shows that the null hypothesis can be rejected and alternative hypothesis turns out to be true. Therefore, we can conclude that there is a significant relationship between Section of teachers and Usage of ChatGPT.

For further testing whether the analysis done is correct or not, Kruskal-Wallis test (another non-parametric test for testing of hypothesis) was used.

Table 10: Hypothesis Testing using Kruskal-Wallis Test (Based on Section of Teachers)			
	χ^2	df	p
V1	41.846	1	< .001
V2	5.138	1	0.023
V3	24.166	1	< .001
V4	22.228	1	< .001
V5	2.999	1	0.083
V6	30.651	1	< .001
V7	20.570	1	< .001
V8	33.228	1	< .001
V9	0.564	1	0.452
V10	39.597	1	< .001
V11	15.449	1	< .001
V12	28.312	1	< .001
V13	29.320	1	< .001
V14	54.648	1	< .001
V15	2.890	1	0.089
V16	39.626	1	< .001
V17	24.564	1	< .001
V18	14.664	1	< .001
V19	27.365	1	< .001
V20	62.676	1	< .001
V21	14.212	1	< .001
V22	12.612	1	< .001
V23	24.288	1	< .001
V24	12.169	1	< .001
V25	8.786	1	0.003
V26	30.049	1	< .001

Source: Data collected through questionnaire and analysed through Jamovi (Version 2.3)

The Kruskal-Wallis Test performed in Table 10 also proved that the p-value is below 0.05 (significance level of this research). Therefore, the null hypothesis is rejected and it is proved that there is a significant relationship between the section of teachers and usage of ChatGPT.

4.5 Correlation Testing

Since there is a relationship between section of teachers and usage of ChatGPT, we now need to test the correlation between the 2 variables. For testing the correlation, we can use:

1. Pearson's r
2. Spearman's rho
3. Kendall's Tau

Pearson's r is used in case of parametric data. Since, our data is non-parametric, we need to use the equivalent of Pearson's r i.e. Spearman's rho.

Spearman's rho was found to be -0.05194 and p-value was found to be 0.47433. (Social Science Statistics, 2023). Since the absolute value of Spearman's rho was lesser than the p-value, it indicates that the relationship is not statistically significant. Thus, we can conclude that there is a relationship but the relationship is minimal between section of the teachers and the usage of ChatGPT.

4.6 Exploratory Factor Analysis

It is now necessary to find the importance factors which can influence a higher usage of ChatGPT amongst the teaching fraternity. For this purpose, exploratory factor analysis was used.

Table 11: Factor Loadings

	Factor			
	1	2	3	Uniqueness
V1	0.596		0.595	0.162
V2			0.607	0.501
V3		0.589	0.527	0.251
V4				0.360
V5				0.910
V6	0.648			0.396
V7				0.712
V8	0.509			0.242
V9		0.967		0.148
V10		0.753		0.133
V11		0.867		0.298
V12	0.511	0.564		0.305
V13		0.641		0.258
V14	0.610		0.517	0.219
V15			0.614	0.406
V16		0.626	0.528	0.133
V17	0.656			0.369
V18	0.734			0.497
V19	0.876			0.243
V20	0.609			0.184
V21	0.927			0.206
V22				0.675
V23	0.879			0.244
V24	0.676			0.295
V25		0.616		0.209
V26	0.849			0.165

Note. 'Minimum residual' extraction method was used in combination with a 'oblimin' rotation

Based on Table 11, we can club all the significant factors into 3 main parts:

Factor 1	Automation Factors
Factor 2	Student Efficiency Factors
Factor 3	Teaching Efficiency Factors

If ChatGPT can be projected to the teachers using the three factors, then teachers would start accepting ChatGPT more comfortably irrespective of the section in which they are teaching. Thus, the factors can be pictographically represented in Figure 1.

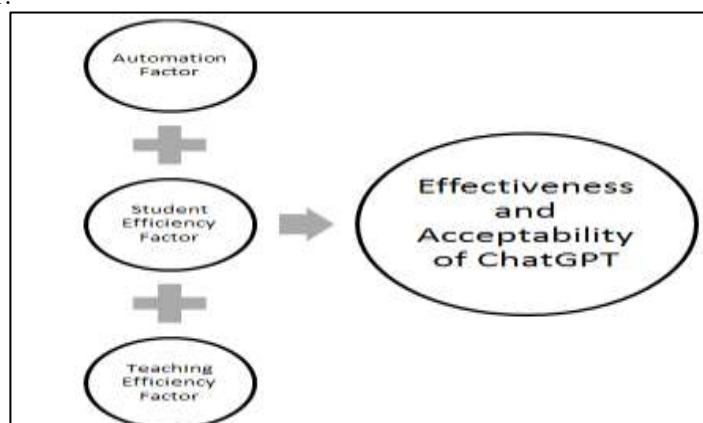


Figure 1: Exploratory Factor Analysis

4.7 Sentiment Analysis

The questionnaire also had a question to obtain certain opinions about ChatGPT from teachers through open-ended questions. Based on the opinions, a Sentiment Analysis was done and the findings are presented in Table 12.

Table 12: Sentiment Analysis

Positive Sentiment	0.684005050
Negative Sentiment	0.259333000
Average	0.594600448

From Table 12, we can conclude that the opinion about the teachers is slightly positive i.e. 0.594600448 which is slightly above 0.5. This also helps us to further prove that there is a relationship between the variables discussed in the research but not a statistically significant relationship. Overall, the opinion of the teachers is positive about ChatGPT.

5. RECOMMENDATIONS AND SOCIAL RELEVANCE

Based on the research above, the researcher would like to give the following recommendations:

1. Tech Companies should come forward and prepare technologies for teachers that are customized or can be customized by teachers at their level. This would help the teachers make better use of ChatGPT in their classroom for the teaching-learning-evaluation-feedback process as well as use it for non-academic work which will save a lot of their time.
2. The teaching industry as a whole is not capital-intensive. Lack of adequate funds is a cause of major concern amongst the educational institutes. Therefore, the industry-led and technology-enabled software shall ensure that the cost of such software is minimal. Having open-source-based ChatGPT or other AI-driven tools shall be encouraged or subsidized by the Government for better usage amongst the teachers. Government shall intervene in the price fixation for such tools so that both aided and unaided teachers can easily access such tools.
3. Educational institutes having both aided and unaided sections shall make it mandatory to have uniform usage of ChatGPT amongst their teachers. Collaborative efforts need to be taken by both aided and unaided sections.
4. The Educational Institutes shall provide proper and regular training to teachers of both aided and unaided sections. UGC may make efforts to organize Faculty Development Programs on the usage and implementation of ChatGPT in daily teaching and non-teaching activities.

6. SCOPE FOR FURTHER STUDY

This research has limited applicability and the researcher may suggest further research into the topic based on the following parameters:

1. Data of respondents need to be collected area wise for further research. This would help the researchers to identify concerns of ChatGPT in a smaller-demarcated area and bring out more facets of usage of ChatGPT.
2. This research was conducted to compare aided and unaided teachers' usage. However, the researcher recommends that further research can be done based on the stream of education, for example. Arts teaching, Commerce teaching, Management teaching, Engineering teaching, Science teaching etc. This would help in identification of factors in each of the fields as the demands of each field are varied and customisable.
3. School teachers were specifically excluded from the research. A thorough research in the school section (both primary and secondary) can be conducted for better understanding of the topic at hand.

7. CONCLUSION

ChatGPT has a whole of benefits to all individuals per se. The benefits range from solving complex queries to doing mundane tasks at hand for the query searcher. If ChatGPT can be used for ordinary day-to-day activities, then it can reap huge benefits in any skilled job, more so in education sector. The teachers can definitely use ChatGPT in all their teaching activities. Teaching being the main activity for teachers, ChatGPT can be used for improved teaching mechanisms and enhancing the quality of output by the teachers. The other non-teaching and administrative work in the teaching field can also be completed by the teachers using ChatGPT. It is upto the teachers to use this system promptly to stay ahead of others in this field.

This research has focused on the differences in usage of aided and unaided teachers and has given recommendations to improve the usage of ChatGPT in furtherance of the objectives of aided and unaided teachers. Understanding the factors influencing the usage of such technology is just the first step in promoting the usage of ChatGPT. Going ahead, if all the educational institutes of the country aim to use ChatGPT (backed by UGC), then a culture of technology-based teaching will be a common sight and help in achieving the aims and path laid down by NEP 2020.

8. DECLARATION OF COMPETING INTEREST

The author declares that he does not have any known competing interest while doing this research on a personal level that could hamper the process of doing this research.

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10. APPENDIX (ABBREVIATIONS USED IN THE RESEARCH PAPER FOR DATA ANALYSIS)

Variable Number	Variable Description
V1	General Perception of ChatGPT in Education [ChatGPT provides valuable assistance in lesson planning and content creation]
V2	General Perception of ChatGPT in Education [The use of ChatGPT enhances my ability to cater to diverse student needs]
V3	General Perception of ChatGPT in Education [ChatGPT contributes to creating a more inclusive and accessible learning environment]
V4	Integration and Impact on Teaching Practices [The integration of ChatGPT has positively influenced my overall teaching efficiency]
V5	Integration and Impact on Teaching Practices [The use of ChatGPT has positively impacted student-teacher interactions]
V6	Integration and Impact on Teaching Practices [ChatGPT has facilitated better communication and understanding between me and my students]
V7	Integration and Impact on Teaching Practices [Students are more engaged in class activities when ChatGPT is incorporated into the teaching process]
V8	Integration and Impact on Teaching Practices [I trust the suggestions and recommendations provided by ChatGPT in the educational context]
V9	Integration and Impact on Teaching Practices [Students who have been exposed to ChatGPT-guided instruction demonstrate improved academic performance]
V10	Integration and Impact on Teaching Practices [ChatGPT has positively contributed to students' critical thinking and problem-solving skills]

V11	Integration and Impact on Teaching Practices [The use of ChatGPT has positively influenced student retention of course content]
V12	Integration and Impact on Teaching Practices [I feel confident in troubleshooting issues related to the use of ChatGPT]
V13	Integration and Impact on Teaching Practices [ChatGPT has been effective in addressing the specific needs and challenges of my students]
V14	Professional Development and Continuous Learning [ChatGPT has provided valuable resources for my professional development]
V15	Professional Development and Continuous Learning [I feel more equipped to adapt to new teaching methodologies and technologies with the assistance of ChatGPT]
V16	Professional Development and Continuous Learning [Continuous exposure to ChatGPT has enhanced my teaching skills over time]
V17	Time Management and Efficiency [ChatGPT has helped me manage my teaching time more efficiently]
V18	Time Management and Efficiency [The time spent on administrative tasks has decreased with the use of ChatGPT]
V19	Time Management and Efficiency [ChatGPT has effectively assisted in automating routine tasks such as making of reports]
V20	Time Management and Efficiency [ChatGPT has improved the overall efficiency of my classroom instruction]
V21	Future Adoption and Recommendations [I would recommend the integration of ChatGPT to other educators]
V22	Future Adoption and Recommendations [Additional support and training is needed for educators to effectively use ChatGPT]
V23	Future Adoption and Recommendations [I believe ChatGPT will play a significant role in the future of education]
V24	Future Adoption and Recommendations [I plan to continue using ChatGPT in my teaching practices in the long term]
V25	Future Adoption and Recommendations [The benefits of ChatGPT outweigh any potential challenges or concerns in the long run]
V26	Future Adoption and Recommendations [I see ChatGPT as a valuable tool for the future of education]