

Investigating the Influence of YouTube Educators on Academic Achievement: A Study of Teenagers Preparing for Competitive Exams

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Abstract

YouTube is one of the most widely used applications on the internet in the present times. It is an application used for utilising content in video medium. While the use of YouTube have been initially for entertainment purposes, in the recent times it has been used as a platform for information generation, marketing and serving an educational purpose as well. The study here is interested in understanding the role of YouTube as an educator in enhancing the academic achievement of individuals. A total 352 teenagers have been selected for the purpose of primary data collection and have been analysed using tools such as Principal Component Analysis and Multiple Linear Regression. With a total variance of 58.6%, there are three variables that significantly affect the preference to use YouTube for competitive exams. While the challenges influence negatively and cause the highest variance, it is positively followed by perceived effectiveness and self- directed learning. Lastly, the study examined if the competitive exam a teenager is preparing for can cause an impact on the preference to use YouTube. Interestingly it is found that the type of competitive exam can actually result in a statistically significant mean score difference.

Keywords – Competitive; YouTube; Exams; Teenagers; Education

1. Introduction

YouTube is one of the most widely used applications on the internet in the present times. It is an application used for utilising content in video medium. While the use of YouTube have been initially for entertainment purposes, in the recent times it has been used as a platform for information generation, marketing and serving an educational purpose as well (Burns et al., 2020). The role of YouTube as an online learning platform has been found to be effective by many students as well as their parents (Nacak et al., 2020). While many educational organisations have used YouTube as their medium of imparting knowledge, there are challenges that have been observed in the process as well (Mustafa et al., 2020). There are constant debates being circulated over the use of YouTube among researchers, which shows its role in serving both educational and entertainment purposes (Elsherbiny & H. Al Maamari, 2021; Martinez et al., 2022; Vega-Ramírez et al., 2020). The study here is interested in understanding the role of YouTube as an educator in enhancing the academic achievement of individuals. The focus here is on the preparation of competitive exams especially for teenagers and how YouTube can help in contributing significantly towards it. There are studies related to the use of YouTube as a learning medium but that for understanding teenagers process of competitive exam preparations are low. In today's world there are many competitive exams conducted which helps in giving the students the career of their choice. It has become essential to consider any form of learning resource that can serve as an effective medium of help. In order to understand the same, the study would address the following research questions –

RQ1: Can YouTube help teenagers to prepare for competitive exams?

RQ2: What are the impact of YouTube educators on teenagers' study habits, motivation, and self-directed learning behaviours in the context of exam preparation?

RQ3: Are there any potential challenges in the use of YouTube as a learning resource for teenagers' competitive exam preparation?

The above questions would be enquired in the course of this study and a look into the current body of knowledge is done in the next section.

2. Review of Literature

The review of literature conducted for the purpose of the study has been to understand how far the role of YouTube as an educator have been extended. The review would provide an idea on the current body of knowledge and whether the role of YouTube in the preparation of competitive exams are being investigated thoroughly or not. This section provides insights into the study related to the use of YouTube in the course of academic learning and are discussed below.

2.1 YouTube as a Learning Resource

The use of YouTube as an English learning resources provided as a source of smart multimedia learning has been used by many students over the period of time (Alobaid, 2020). These research findings underscore a noteworthy and statistically significant difference in certain dimensions of learners' writing fluency following exposure to YouTube over a five-month period. Specifically, improvements were observed in the accuracy and organization of ideas, serving as qualitative benchmarks for fluency. This enhancement was particularly evident when YouTube content offered engagement, enhancement, and intelligibility through its multi-mediated input. YouTube, emerged as more effective than alternative sources for language learning within the learners' environment. Consequently, this study strongly advocates the use of multimedia educational tools, particularly YouTube, for both language learners and educators. Further the role of YouTube as a learning medium and its effectiveness in the process of imparting learning have been investigated using qualitative methods of study (Rahmatika et al., 2021). Such research here has been able to establish that YouTube is able to make itself a learning medium, which provides students a chance to learn independently. The use of YouTube as a learning aid can be used by teachers as well to make their learning process more effective. YouTube as an educational videos provider especially for science communication is also an area being investigated repeatedly (Kohler & Dietrich, 2021). YouTube has evolved into a supplementary learning platform, providing on-demand educational content through videos. Educational videos are recognized as an effective strategy to enrich users' knowledge and find applications not only in schools but also in science communication initiatives, such as disseminating information about climate change. There can be two distinct perspectives emerging in current research literature on educational videos available on YouTube. The first perspective posits that watching educational videos can induce changes in the attitudes or behaviours of recipients. The second perspective questions whether educational videos yield a more significant impact compared to other informational materials, such as texts. Both perspectives are contextualized within theories from media effect studies and learning concepts derived from education science. The role of YouTube in improving the studies of a student on complex science topics such as Optics through PhET simulations has also been investigated (Ndihokubwayo et al., 2020). The studying of physics requires extra effort from the teachers as it must engulf a number of instructional tools. The research conducted here showed that YouTube assisted studies in optics generated of 11 to 12% across the two groups as compared to those who gained only 2% from the traditional mediums of learning. Studies with a data collected from 150 participants through a quantitative method have led to understand YouTube as a learning medium in accordance to a social cognitive perspective (Zhou et al., 2020). The findings clearly showed that factors such as attitude, sociability and behavioral aspects have an impact on the use of YouTube as a learning medium. Moreover, there are other studies who believe and support the use of YouTube for learning aids whether it is to enhance their regular curriculum or for any extracurricular preparation (Ilyas & Putri, 2020; Rachmawati & Cahyani, 2020; Syafiq et al., 2021). The use of Youtube is multifaceted and not only caters as an educational support system but also helps in developing the overall well-being of the students. The use of it among students is high due to the flexibility and innovative aids that it provides in regards to learning.

2.2 Use of YouTube in Exam Preparation

The use of YouTube is not only limited to utilising it as a learning resource, but also is actively used in preparation of various examinations (DeMara et al., 2016). The use of this medium earlier served only the purpose of entertainment, but in the present times, various students as well as the instructors have started using it as a medium of exchanging education. It is seen that whether it is the students regular grade exams or preparation for any competitive exam, the use of YouTube as a learning resource along with the traditional methods is prevalent (Azer et al., 2013; Chorna et al., 2019). There are a number of benefits of incorporating YouTube in the exam preparation method. It allows for easy access at a convenient level with the help of Internet and a mobile device. It has been a source of knowledge, which is presented in different forms and caters to the different levels of understanding possessed by the students (D'Aquila et

al., 2019; Ranga, 2017). The studies have revealed the challenges of using YouTube as an effective medium of exam preparation. It needs to be mentioned that its use is both ways, it depends on the student to use it for building a study schedule, which is according to their own pace, and understanding. While are you actively using YouTube for exam preparations, there are several added materials that are provided for practice among the students (Helming et al., 2021). These resources act as an added medium of identifying the level of performance in the preparation. The use of YouTube is no longer used only for gaining preliminary understanding about a topic but it can be used repeatedly all along the course to eventually prepare and appear for different levels of exams.

The above discussion shows that the role of YouTube in the learning community is increasing. Many studies focus on its role as an educational information generator. In this case, the study here is focused on understanding the role of YouTube as a tool for competitive exam preparation. The number of studies that focus only on this aspect of YouTube are comparatively low and hence this study would bridge the gap in the literature. The following objectives are laid down in the study to understand the role of YouTube in this regard-

1. To assess the extent to which teenagers utilize YouTube educators as a supplementary learning resource in their preparation for competitive exams within the curriculum.
2. To investigate the perceived effectiveness of YouTube educational content in aiding teenagers' understanding and retention of curriculum-based concepts relevant to competitive exams.
3. To explore the impact of YouTube educators on teenagers' study habits, motivation, and self-directed learning behaviours in the context of exam preparation.
4. To identify potential challenges or limitations associated with using YouTube educators for exam preparation and
5. To propose recommendations for optimizing the educational efficacy of such resources.

3. Method

The research design created for the purpose of the study is to support the descriptive nature of the analysis. The need to design an optimum method for conducting the study is essential so that there is a systematic and scientific flow of information. The study is quantitative in nature where primary and secondary sources of data have been utilised to arrive at the results of the study.

Participants

The use of both set of data provides a detailed insight into the study. The secondary sources of data have been collected from journals, books, reports and other online websites. The secondary sources have been used quite effectively to design the research instrument for the study. The primary data sources are generated using non-probabilistic sampling method using purposive sampling. The study uses the teenagers as its targeted population in India and out of them, only those teenagers are considered who are in the process of preparation for competitive exams. There are 352 responses gathered and their demographic composition are shown in tables 1 & 2 below.

Frequencies of Gender

Gender	Counts	% of Total	Cumulative %
Female	135	38.4 %	38.4 %
Male	217	61.6 %	100.0 %

Frequencies of Age

Age	Counts	% of Total	Cumulative %
13-15 years	54	15.3 %	15.3 %
15-17 years	163	46.3 %	61.6 %
18-19 years	135	38.4 %	100.0 %

The two demographic variables used to understand the participants include gender and age. These two are quite important parameters to draw differences in a study. It is seen that majority of the respondents i.e., 61.6% are males and remaining 38.4% are females. In the three different age groups for the respondents, there are 46.3% for 15 to 17 years of age followed by 38.4% in the 18-19 years of age group. These are the age groups where maximum preparations for the competitive exams take place and the sample here have covered them thoroughly.

Data Sources and Procedures

A structured questionnaire is designed which includes the scales measuring the variables considered in the objectives of the study in 5 Point Likert Type scale. The total of 352 responses gathered and would be analysed using a set of statistical methods including principal component analysis (PCA) and multiple linear regression along with other measures of mean score analysis. The research instrument here consists of three distinct sections.

Section 1 - YouTube as a supplementary learning resource

The use of YouTube is done in many aspects of educational learning. However, here the motive is to understand its role as a supplementary source of learning along with the main elements of the preparation. A scale using six items have been used in this regard and the items are prepared by consulting the works of (Almobarraz, 2018; Moghavvemi et al., 2018) in a similar approach.

Section 2 - Perception on the use of YouTube as Educators

In this section, the aim is to highlight the potential areas in which the use of YouTube as educator has majorly been beneficial. For this purpose, scale derived from literature review of different research such as (Joa et al., 2023; Mohamed & Shoufan, 2022) whose suggestions has been used. There are a total of 16 items have been taken. The motive is to take an approach towards the factors of study habits, self-directed learning, perceived effectiveness, and motivation. These factors although have been specified in the scale would be validated using PCA to extract the underlying factors from the scale.

Section 3 – Challenges

The last scale is to determine the challenges, as it is crucial to the adoption of any medium for results. The challenges have been identified using a total of 7 items taken from studies such as (Yaacob & Saad, 2020). These items have been analysed to determine the potential challenges that lies across the use of YouTube for preparing for competitive exams.

The data analysis methods used to arrive at the results of the study is put forward in the next section of the paper.

4. Data Analysis and Interpretation

In this section of the study, a detailed statistical analysis of the 352 datasets collected have been put forward. As mentioned earlier, a structured questionnaire have been used to arrive at the results of the study.

As the demographics are discussed above, one of the questions asked to the respondents was about the exam that they are preparing for in order to understand about the role of YouTube better in the upcoming sections.

Frequencies of The name of competitive Exam

The name of competitive Exam	Counts	% of Total	Cumulative %
Banking Exams (IBPS PO, IBPS Clerk, SBI PO, SBI Clerk, RBI Grade B)	109	31.0 %	31.0 %
CAT	27	7.7 %	38.6 %
CLAT	27	7.7 %	46.3 %
GATE	27	7.7 %	54.0 %
JEE / NEET	54	15.3 %	69.3 %
NET	54	15.3 %	84.7 %
SSC Examinations	27	7.7 %	92.3 %
UPSC / CDSE	27	7.7 %	100.0 %

Many competitive exams cater to different fields of education. It allows the students to get into the course of their choice and contribute towards their career development. In this study, as the respondents belong to different fields, the choices of the exams provided range to a number of different options. The respondents are enquired about the competitive exam that they are currently preparing for with the help of YouTube and it is seen that majority with 31% are preparing for banking exams. In India, the entry into the public sector banks are derived from a common exam that is appeared by the aspirants. It involves rigorous preparation and the role of YouTube in this aspect can be beneficial. The next set of responses agreed that they use the platform for JEE/NEET preparations and also for NET. The JEE and NEET are entrance examinations that students appear to get into engineering or medical field. In this case as well, it demands high level of preparation from the students and as observed above, the role of YouTube can be effective. The national eligibility test or NET is for enrolling into PhD programmes and make a career in the education sector. It is conducted across all different subjects that are offered in different colleges in India. In this case, as well, the role of YouTube is effective. The other exams include preparing for civil services and other national level exams for jobs such as SSC. It reflects that across all set of competitive exams there are students collected for the analysing the data here.

Now, the interpretation of the results would be done by proceeding from one section of the questionnaire to the other.

The first section includes a total of 6-items that determine the role of YouTube as a supplementary resource for learning in case of competitive exams and the responses are as follows-

Descriptives

	N	Mean	Median	SD	Minimum	Maximum
I prefer using YouTube educators as a supplementary learning resource for competitive exam preparation from the first day	352	3.77	4.00	1.251	2	5
I regularly watch educational videos on YouTube related to your competitive exam preparation	352	3.46	3.00	1.217	2	5

Descriptives

	N	Mean	Median	SD	Minimum	Maximum
I refer to the content provided by YouTube educators in understanding complex topics for competitive exams	352	3.31	3.00	0.821	2	5
YouTube educators have positively influenced your exam preparation strategy	352	3.61	4.00	1.080	2	5
I am confident to use competitive exam preparation when using YouTube educators as a supplementary learning resource	352	3.53	4.00	0.933	2	5
YouTube educators complements the traditional study materials for competitive exam preparation	352	3.46	3.00	0.843	2	5

The highest mean score is found to be at 3.77, which represents the preference to positively use YouTube as a supplementary learning resource. The question directly interrogates about the level of agreement of the respondents in terms of using YouTube as the resource. It is evident that majority of the students preparing for any of the exams mentioned prefer to make use of it. On the other side, the lowest value is that of 3.31 which refers to the help provided by YouTube to understand complex topics. It suggest that although YouTube can be a supplementary resources for such preparation, its use in understanding the complex topics related to their preparation is least preferred by the students. Other responses enquiring their daily consumption of YouTube content in this regard, their confidence and positivity level for using YouTube as a medium ranges around a score of 3.5. This shows that they are quite positive about the use of the medium and takes a beneficial approach with its usage. Overall, the use of YouTube as a supplementary learning resource is highly agreed upon by the respondents.

The next set of questions is about the investigation of the perspectives of using YouTube for preparation. In the study includes a total of 16 items which shows a diverse range of perspectives considered essential when utilising YouTube as a learning resource. While the factors targeted have been provided in the questionnaire, the extraction of the factors from the dataset are done using statistical tools. In order to understand the underlying factors from these 16 items, Principal Component Analysis (PCA) is conducted using varimax rotation. The method would extract the number of factors having eigen values of more than 1 and the factor loadings considered significant to represent a factor is more than 0.4. It is considered optimal when the sample sizes are more than 200 (Hair et al., 2006).

Before the PCA, sampling adequacy tests for the items have been conducted to determine its meeting for sampling requirements. These are fulfilled using the KMO and Bartlett's test of Sphericity. The overall KMO value for the 16 items stood at 0.844 which is above the acceptable range of 0.7 and the Bartlett's test generated a p-value of less than 0.05 showing sampling adequacy. This reflects the fact that the samples used for the study are appropriate to generate reliable results for the study here. As these aspects are fulfilled, the rotated component matrix generated as a result of PCA using varimax rotation method are as follows-

Component Loadings

	Component				Uniqueness
	1	2	3	4	
SH1: I use YouTube for educative purposes	0.548				0.1400
SH2: I use YouTube to stay updated on news in the education sector	0.773				0.2137
SH4: The content on YouTube matches my interests in education	0.581				0.1475
SH4: The explanations on the topics are interesting and attractive	0.978				0.0173
SD1: The duration of the videos are adequate for learning	0.748				0.3782
SD2: The content of the videos are always up to date	0.906				0.1135
SD3: The audio visual resources help me to learn better	0.898				0.0927
SD4: YouTube helps me understand the topics I am interested in	0.978				0.0173
PE1: Using YouTube is an effective way of preparing for competitive exams			0.845		0.1855
PE2: I feel I have gained confidence from learning using YouTube educators before my competitive exams			0.643		0.5520
PE3: YouTube educators have stimulated my interest to learn for competitive exams			0.795		0.2253
PE4: I can find all the important information about competitive exams from the content provided by YouTube educators			0.978		0.0173
MO1: I really like preparing for my competitive exams using YouTube				0.615	0.3774
MO2: Using YouTube to prepare for my competitive exams as I can be more knowledgeable				0.978	0.0173
MO3: Using YouTube to prepare for my competitive exams as I can				0.661	0.2919
MO4: Using YouTube to prepare for my competitive exams as it is easy to access				0.824	0.1311

Note. 'varimax' rotation was used

The table above shows that while all the items generate factor loadings of more than 0.4, there are four factors extracted which have eigen values of more than one. These factors are explained below.

Factor Name	Number of Items	Description
Study Habits	4	This factors talks about the impact of YouTube on developing the study habits of the teenagers

Self-Directed Learning	4	It refers to how YouTube can help the teenagers build a learning environment which is self- directed
Perceived Effectiveness	4	It talks about how much effectiveness can be derived with the preparation aided by YouTube
Motivation	4	It talks about the level of motivation derived in preparing for competitive exams using YouTube

The factors described above represent the most important aspects in which using YouTube in preparation for competitive exams can be beneficial. The holistic approach in this study through these factors can generate interesting set of results and implications from them. These factors derived would be analysed further in the course of this study to understand its influence on using YouTube as an effective learning resource.

Descriptives

	N	Mean	Median	SD	Minimum	Maximum
Study Habits	352	4.11	4.25	0.555	3.00	5.00
Self- Directed Learning	352	3.65	3.75	0.449	2.50	4.25
Perceived Effectiveness	352	3.54	3.50	0.572	2.75	4.75
Motivation	352	3.82	4.00	0.456	3.00	4.50

As the factors are extracted, the mean scores for each of them are provided in the table above. Out of the four extracted factors, it is the study habits that have the highest mean score at 4.11 followed by motivation at 3.82. This states that according to the students, YouTube can be highly beneficial in forming study habits. It could be due to the amount of interest that it generates in the students as compared to traditional medium of studying. It can help to maintain the study hours even though students are reluctant to engage in them further. The motivation levels provided by YouTube towards the preparation are quite high at a score of 3.82 and it can be beneficial in generating flexibility among the students about their approach. The next high mean score of self-directed learning suggest that in terms of competitive exams as well, YouTube can be used as a useful resource for generating self-directed learning process. Students can use it in the future as a medium of starting their exam preparation. The perceived effectiveness levels are the lowest and suggest that in the remaining section, using YouTube can be effective but not in all aspects. It is not effective in providing confidence levels or stimulate interest. If one is focused towards their goal then only this medium can be slotted as highly effective.

In the third section of the questionnaire, the potential challenges of using this medium of preparation is enquired. A total of 7 items are considered for this purpose and the descriptives are as follows.

Descriptives

	N	Mean	Median	SD	Minimum	Maximum
YouTube is unable to provide face-to-face interaction method of learning	352	3.31	3.00	0.915	2	5
The effectiveness of learning cannot be measured using YouTube applications	352	3.08	3.00	0.998	2	5
Real time problem solving is a challenge	352	3.84	4.00	0.663	3	5

Descriptives

	N	Mean	Median	SD	Minimum	Maximum
There is a lack of immediate feedback	352	4.23	4.00	0.802	3	5
Quality of content delivered is not always up to the mark	352	4.08	4.00	0.830	3	5
Interruptions due to network issues	352	4.69	5.00	0.463	4	5
Lack of technical skills to access all the content	352	1.15	1.00	0.361	1	2

The highest mean score is at 4.69 and it refers to the network issues posing as the most difficult challenges. It is one of the common problems faced by students especially in rural areas where the infrastructure associated to the use of YouTube can be a hindrance. The network issues can lead to losing the pace of one's preparation. This can have significant impact on the planned schedules and eventually affect their performances in the exam. The lowest mean score is at 1.15 and refers to the technical skill difficulties in using YouTube for learning purpose. In the present times, the basic digital skills are acquired by everyone especially among the age group considered here. Therefore, it is the least challenging aspect with the use of YouTube as a medium for preparing for competitive exams.

Now, in order to understand the role of the extracted factors in considering YouTube for their competitive exam preparation, the study here would undergo a multiple linear regression where these variables would be considered as independent variables.

Model Fit Measures

Model	R	R ²	Adjusted R ²	Overall Model Test			
				F	df1	df2	p
1	0.769	0.592	0.586	100	5	346	< .001

Model Coefficients – YouTube as Supplementary Learning Tool

Predictor	Estimate	SE	t	p
Intercept	0.3782	0.4024	0.940	0.348
Study Habits	0.0597	0.0968	0.617	0.538
Self-Directed Learning	.10132	0.0828	12.241	< .001
Perceived Effectiveness	0.2212	0.0523	4.231	< .001
Motivation	-0.1517	0.0815	-1.862	0.063
Challenges	-0.2839	0.0889	-3.192	0.002

The above model considered YouTube as Supplementary Learning Tool to be the dependent variable and the five other factors in the study as the independent variables. With a p-value of less than 0.05, the model is statistically significant with an adjusted R² value of 0.586. This states that with one unit change in the independent variables, the agreement to

use YouTube as Supplementary Learning Tool can be increased by 58.6%. Now, looking into the model co-efficient, it can be found that except for study habits and motivation, the other three factors significantly influence on the use of YouTube. The challenges impact negatively and caused the highest variance. It state that the need to address the problems and challenges before using YouTube as a tool for such preparation is mandatory. The hindrance as discussed above can lead to lower level of performances in the exam. This can put them at risk of not being selected. There is a positive impact of perceived effectiveness and self- directed learning observed. This shows that using YouTube can arise from the flexibility and knowledge that they can derive conveniently and make them regularly use the medium for study.

As these variables and its impact are determined, the next analysis understands the agreement to use YouTube as Supplementary Learning Tool for competitive exams based on the demographics in the study. While with respect to age and gender there are no significant differences in the mean scores observed but with respect to the competitive exam the teenagers are preparing there are significant mean score differences observed. The results of the One Way ANOVA along with the post hoc analysis are as follows-

One Way ANOVA – Competitive Exam

	χ^2	df	p
Supplementary Learning Tool	202	7	< .001

Pairwise comparisons - Supplementary Learning Tool

		W	p
Banking Exams (IBPS PO, IBPS Clerk, SBI PO, SBI Clerk, RBI Grade B)	CAT	- 11.587	< .001
Banking Exams (IBPS PO, IBPS Clerk, SBI PO, SBI Clerk, RBI Grade B)	CLAT	-8.842	< .001
Banking Exams (IBPS PO, IBPS Clerk, SBI PO, SBI Clerk, RBI Grade B)	GATE	11.587	< .001
Banking Exams (IBPS PO, IBPS Clerk, SBI PO, SBI Clerk, RBI Grade B)	JEE / NEET	9.487	< .001
Banking Exams (IBPS PO, IBPS Clerk, SBI PO, SBI Clerk, RBI Grade B)	NET	3.823	0.122
Banking Exams (IBPS PO, IBPS Clerk, SBI PO, SBI Clerk, RBI Grade B)	SSC Examinations	8.938	< .001
Banking Exams (IBPS PO, IBPS Clerk, SBI PO, SBI Clerk, RBI Grade B)	UPSC / CDSE	0.106	1.000
CAT	CLAT	10.296	< .001
CAT	GATE	10.296	< .001
CAT	JEE / NEET	10.954	< .001
CAT	NET	10.954	< .001
CAT	SSC Examinations	10.296	< .001

Pairwise comparisons - Supplementary Learning Tool

		W	p
CAT	UPSC / CDSE	10.296	< .001
CLAT	GATE	10.296	< .001
CLAT	JEE / NEET	10.954	< .001
CLAT	NET	10.954	< .001
CLAT	SSC Examinations	10.296	< .001
CLAT	UPSC / CDSE	10.296	< .001
GATE	JEE / NEET	-6.325	< .001
GATE	NET	0.000	1.000
GATE	SSC Examinations	- 10.296	< .001
GATE	UPSC / CDSE	- 10.296	< .001
JEE / NEET	NET	0.000	1.000
JEE / NEET	SSC Examinations	0.000	1.000
JEE / NEET	UPSC / CDSE	- 10.954	< .001
NET	SSC Examinations	0.000	1.000
NET	UPSC / CDSE	0.000	1.000
SSC Examinations	UPSC / CDSE	- 10.296	< .001

The test results shows that with a p- value of less than 0.05, there are significant mean scores observed. Now, looking into the post hoc analysis, the categories where maximum differences are found include the banking exams and CAT exams. These two exams are different from each other. While banking exams cover a number of different topics, CAT exams are focused on the management perspectives mostly. One is for attaining a job while other one is for further education. While the eligibility to appear in both include graduation level, the approach and ultimate result expectation are different, there might be a significant difference between the two.

A detailed discussion and the probable implications of the results derived are provided in the next section.

5. Discussion and Implications

The importance of indulging into a holistic preparation level for competitive exams is very essential as it incorporates many crucial aspects around it. The study here has been a descriptive analysis about understanding the role of YouTube as an educator in deriving success among teenagers preparing for competitive exams. With a primary dataset of 352 teenagers preparing for various competitive exams including banking exams, JEE/NEET, CAT, NET, CLAT, SSC and UPSC/CDSE. The study attempted to understand how far these respondents consider YouTube as an effective supplementary tool for preparation. Using structured questionnaires, the study included understanding about the

consideration of YouTube as the supplementary tool, the challenges involved and its role in developing characteristics among the teenagers such as study habits, perceived effectiveness, self-directed learning and motivation to study. YouTube provides a convenient platform for accessing a wide range of educational content anytime, anywhere (Sharma & Sharma, 2021). This accessibility can benefit students who may not have access to traditional educational resources or live in remote areas with limited educational facilities. It provides content on a diverse range of topics and formulating their study habits according to these resources can affect positively in their preparation (Joa et al., 2023; Shoufan & Mohamed, 2022). YouTube enables self-directed learning, whose pace can be determined by the students themselves. They have the option to pause, rewind, and replay videos as needed to review concepts or clarify doubts at their own pace. This flexibility creates diverse learning styles and ensures that students can learn at a comfortable speed without feeling rushed or pressured (Helming et al., 2021). Besides the content, YouTube can be a source of motivation. With its diverse range of options, students have the option of relaxing themselves by watching success stories (Moghavvemi et al., 2018). There are however certain challenges showed and the most anticipated aspect include the network issues posing to the continues use of YouTube for learning. However, with a mean score of 3.77, the preference of using YouTube as the supplementary learning resource is quite evidently positive. The multiple linear regression conducted have helped in providing an idea about the individual variance caused by every factor on the use of YouTube. With a total variance of 58.6%, there are three variables that significantly impact on the preference to use YouTube for competitive exams. While the challenges impact negatively and cause the highest variance, it is positively followed by perceived effectiveness and self- directed learning. Lastly, the study examined if the competitive exam a teenager is preparing for can cause an impact on the preference to use YouTube. Interestingly it is found that the type of competitive exam can actually result in a statistically significant mean score difference.

The use of YouTube as a medium of audio visual aid for various learning methods have been stated effective by previous studies (Harper et al., 2023). Some of the main reasons why it is able to generate itself as a resource for learning include flexibility of use and convenience to access. While the Covid-19 had put restrictions to many learning options, YouTube stood as one of the consistent methods of gaining knowledge and supported students across the world (Habes et al., 2020; Yaacob & Saad, 2020). The consideration of YouTube as a medium for learning has also created many scope within the field and have led to many innovative practices to establish itself as a learning medium as well (Lee & Lehto, 2013; Ramírez-Correa et al., 2019). The results of the study generated are in fact in concordance with the one's provided by (Fyfield et al., 2021; Kunze et al., 2020; Luu et al., 2021) where the role of YouTube as an educator is stated and it can be extended further effectively in the preparation spectrum of competitive exams as well. It can lead towards causing a positive impact on academic achievement of teenagers when preparing for such exams.

6. Limitations

The study here has been limited to a small group of respondents. Although these respondents preparing for various competitive exams provide good external validity, the limited number of samples make it difficult for generalisation of the results.

7. Future Directions

The thorough investigation of the study has led to many future opportunities to be undertaken by researchers. Firstly, the future research directions can investigate on how YouTube can be a helping hand in creating a holistic learning enhancement process for students especially teenagers when preparing for complex competitive exams. The model constructed here can be expanded by using other factors, which are related to the learning process. Moreover, conducting comparative analyses among students from different geographical regions could yield valuable insights into the effectiveness of YouTube as a learning tool across diverse cultural and educational contexts. By examining variations in access to educational resources, socio-economic factors, and educational policies, researchers can identify potential disparities in learning outcomes and explore strategies for addressing them. Studies focusing on the content type availed by the students in YouTube can also be investigated for better insights.

8. Conclusion

The role of YouTube as an educator can be now called effective as research over the years and including this study as well have well-established the same. The study have shown how using YouTube for the preparation of competitive exams can cause a significant impact on the study habits, motivation levels, perceived effectiveness and self-directed learning methods. The use of YouTube can lead to several other useful levels especially in case of teenagers learning habits. YouTube offers a plethora of educational channels and videos covering a wide range of subjects. Teenagers preparing for competitive exams can benefit from diverse learning resources, including lectures, tutorials, and animated explanations that cater to different learning styles. YouTube would allow teenagers to learn at their own pace. They can rewind, pause, and replay videos as needed, facilitating a personalized learning experience. This adaptability is particularly valuable for exam preparation, allowing students to focus on areas where they need more assistance. Alongside academic content, YouTube offers channels focused on mindfulness, meditation, and stress management. Teenagers can benefit from incorporating these resources into their routine to maintain a healthy balance during the exam preparation period. This shows that the use of YouTube can be made for different aspects in the study preparation phase and can lead to better success stories in the future.

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