A STUDY ON YOUTUBE USAGE OF UNDERGRADUATES OF UNIVERSITIES IN WESTERN PROVINCE

Group 05

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Abstract

The study observed the usage patterns of YouTube by University students for educational purposes. An online survey questionnaire was designed using Google Forms and responses were collected from undergraduates attending Universities in Western Province. Analyzing and visualizing data was done with MS Excel and IBM SPSS software. Several variables of the study have been summarized to illustrate the findings, and many variables have been observed concerning other variables to identify patterns. These findings have been visualized and explained in detail, later in this report. The findings of this study show that students prefer videos with solved examples more than any other type of video, and it shows that most of the students use YouTube to help themselves understand difficult parts of a subject. The study reveals many other things as well, that could be helpful to content creators of this genre or to any other party willing to give the students a better learning experience.

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1 Introduction

1.1 Overview

YouTube is one of the most popular social media platforms in the world right now. Its versatility has also made it one of the most used learning platforms because it has opened up new forms of learning in a world where education is becoming more digitized. It's easy to access, easy to incorporate and encourages online discussions over educational topics. Since self-learning has become a much bigger part of students' lives over the past 2 years with the global pandemic, YouTube has become even more popular among students; especially university students. This study will be focused on different attributes of YouTube usage of University students when it comes to educational purposes.

A survey comprising 28 questions that are designed to cover almost all the possible areas of YouTube usage by an undergraduate, has been circulated through undergraduates in Western Province, and the responses have been recorded. This report contains the findings from those responses in summarized form.

1.2 Objectives

1. To find out the purpose of watching educational YouTube videos.
2. To discover the factors that affect when choosing an educational video.
3. To find out the most preferable type of the video.
4. To examine the impact of nationality of the content creator of a video.
5. To observe the usage of non-educational videos to focus on studies.
6. To find out the impact of elements of a YouTube video when choosing a video.
7. To examine the most preferable average time duration of a video.

1.3 Data

Table 1:Variables Description Table

Variable	Description
YT_Usage	Do you use YouTube for educational purposes?
UNIVERSITY	What is your university?
AC_YEAR	What is your academic year?
FIELD_STD	What is your field of study?
FIELD_YT	What fields do you mostly use YouTube for when it comes to educational purposes? (PLEASE SELECT UPTO 3 OPTIONS)
PURPOSE	For what purpose(s) do you mostly use educational videos in YouTube ? (PLEASE SELECT UPTO 3 OPTIONS)
PROFESSION_IMP	Does the profession of the presenter of the video have an impact on your preference of the video?
PROFESSION_1	What profession(s) would you mostly prefer a content creator to have? Order. (1 being the most preferred) [1]
PROFESSION_2	What profession(s) would you mostly prefer a content creator to have? Order. (1 being the most preferred) [2]
PROFESSION_3	What profession(s) would you mostly prefer a content creator to have? Order. (1 being the most preferred) [3]
PROFESSION_4	What profession(s) would you mostly prefer a content creator to have? Order. (1 being the most preferred) [4]
PROFESSION_5	What profession(s) would you mostly prefer a content creator to have? Order. (1 being the most preferred) [5]
GENDER_IMP	How does the gender of the presenter of the video affect on your preference of the video?
YTC_PREF_1	Which of the following types of Youtube channels do you prefer the most? Order. (1 being the most preferred.) [1]
YTC_PREF_2	Which of the following types of Youtube channels do you prefer the most? Order. (1 being the most preferred.) [2]
YTC_PREF_3	Which of the following types of Youtube channels do you prefer the most? Order. (1 being the most preferred.) [3]

YTC_PREF_4	Which of the following types of Youtube channels do you prefer the most? Order. (1 being the most preferred.) [4]
PREF_VID_TYPE7	What type of videos do you mostly prefer to watch under a certain subject area? Order. (1 being the most preferred) [7]
LANGUAGE	What language would you like to watch a video in?
NATIONALITY	Does the nationality of the content creator have an impact when it comes to selecting a video from a list of search results? (considering the different accents and styles of explaining)
CC_IMP	Does the name of a content creator of a certain video, have an impact when it comes to selecting a video from a list of search results?
SUBS	Does the number of subscribers a certain content creator has, has an impact when it comes to selecting a video from a list of search results?
COMMENTS	Do you take the nature of the public comments a certain video has into consideration before committing to watch the video in full, after clicking on a video?
THUMB_IMP	Does the thumbnail of a video has an impact when it comes to selecting a video from a list of search results?
VID_QLT	What video quality do you mostly watch videos in?
NON_EDU_VID	Do you watch motivational or any other kind of non-educational videos to help keep yourselves focused on the studies?
FOCUS	Do you listen to music or any other kind of background audio via YouTube while you study, to help yourselves focus better?

Table 2: Demographic profile of the respondents

Measure	Item	Frequency	(%)
Viewing Educational Videos on You Tube	Yes	128	94%
	No	8	6%
Gender	Male	68	53%
	Female	60	47%
Academic Year	1st Year	13	10%
	2nd Year	24	19%
	3rd Year	77	60%
	4th Year	14	11%
Provinces	Central Province	10	8%
	Eastern Province	0	0%
	Northern Province	0	0%
	North Central Province	0	0%
	North Western Province	12	9.2%
	Sabaragamuwa Province	8	6%
	Southern Province	21	17%
	Uva Province	1	0.8%
	Western Province	76	59%
Field of Study	Biological Science	6	5%
	Chemistry	1	0.8%
	Education	1	0.8%
	Engineering	17	13.4%
	Industrial Statistics & Mathematical Finance	3	2%
	IT	19	15%
	Law	3	2%
	Management and Accounting	7	5%
	Maritime Transportation & Logistics	1	0.8%
	Medicine	2	1.6%
	Physical Science	66	52%
	Physiotherapy	1	0.8%
	Technology	1	0.8%

Device	PC	102	81%
	Mobile Phone	104	80%
	Tablet	10	8%

2 Methodology

An online survey questionnaire (via Google Forms) was used to collect the necessary data for the study. The population was all the undergraduates attending Universities in the Western Province. A total of 153 respondents participated in the survey. The questionnaire consisted of closed-ended questions and some open-ended questions as well. It mainly had 3 sections. The first one was a participation eligibility section which checked if the incoming respondent fit our population requirement and sent them out if not. The second section was for personal data, and the third section (which was also divided into some sections for convenience) contained all the major questions of the study.

Most of the major questions were in the "MCQ" form, and these included questions with a Likert scale as well. There were also questions with checkboxes, with instructions to select up to 3 responses.

After collecting data through the survey, MS Excel and IBM SPSS software were used to analyze the data. Several Bar charts, Pie charts and stacked bar charts were used to summarize individual variables, and many variables were compared with each other as well. Several custom tables had to be created in excel by filtering some of the variables to obtain these charts. All of the individual summarizations and comparisons are given later in this report.

3 Analysis

3.1 Academic Year vs Video Type

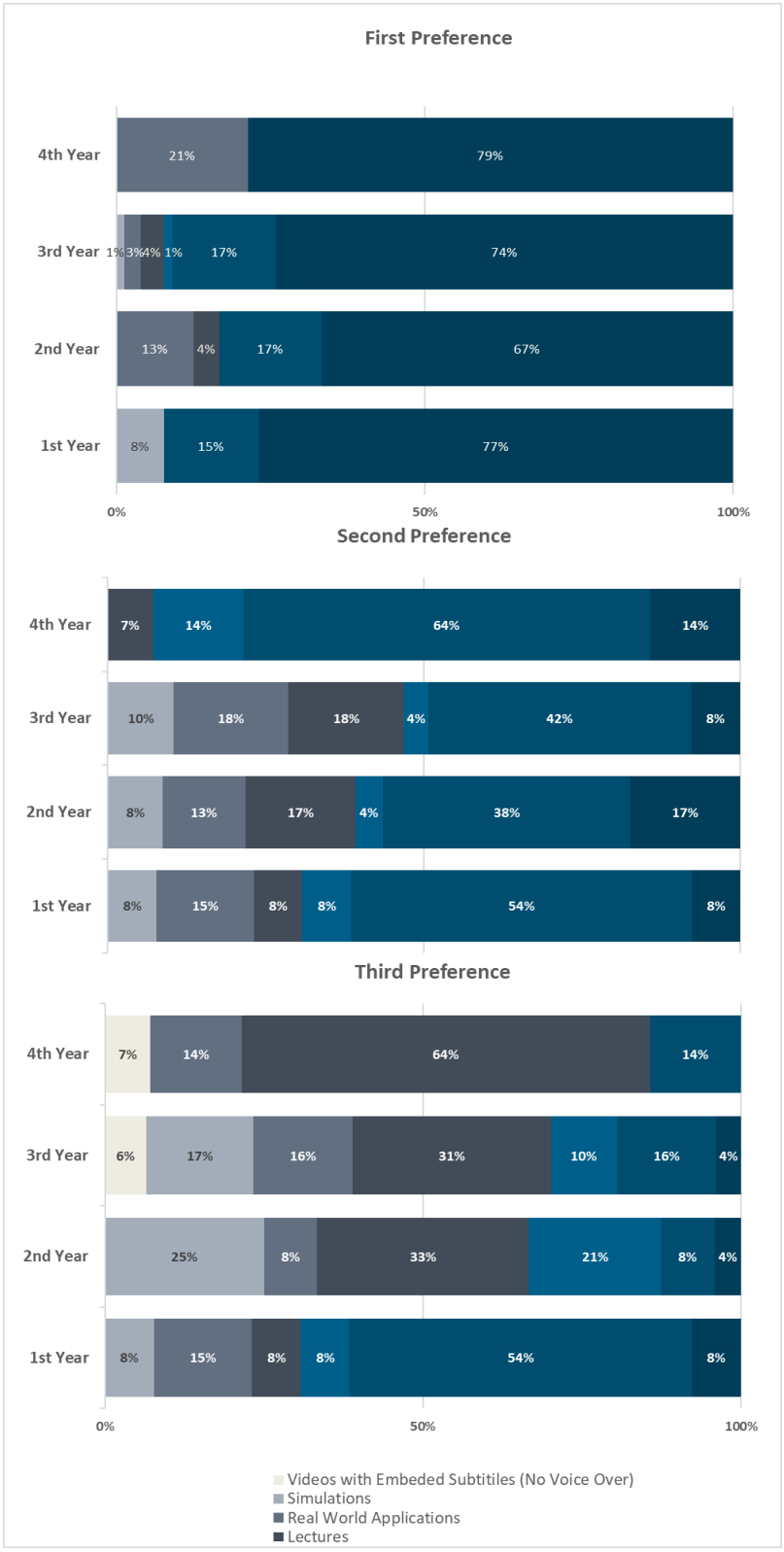

Figure 1: 1st, 2nd, 3rd.....

The question was to rate the respondents' preferences from 1 to 7, for various types of educational videos. Given above, are respectively the 1st, 2nd and 3rd preferences summarized in the form of 3 stacked bar charts. Initially, 4 separate graphs were made for the 4 academic years, but no significant pattern story could be seen. For all the years, the video type "Tutorial with solved examples" had the biggest amount of 1st preference picks, "Animated explainers" had the biggest amount of 2nd preference picks, and "Lectures", "Real world applications", "Simulations", "Laboratory experiments", "Videos with embedded subtitles" had the biggest amounts of 3rd, 4th, 5th, 6th, and 7th preference picks respectively. With separate graphs in terms of preference as above, the same thing can be seen in a different way. "Tutorials with solved examples" has the biggest number of picks in the 1st preference graph for all the years, "Animated explainers" in the second graph, and "Lectures" in the third graph.

3.2 Factors Affecting the Overall Video Quality

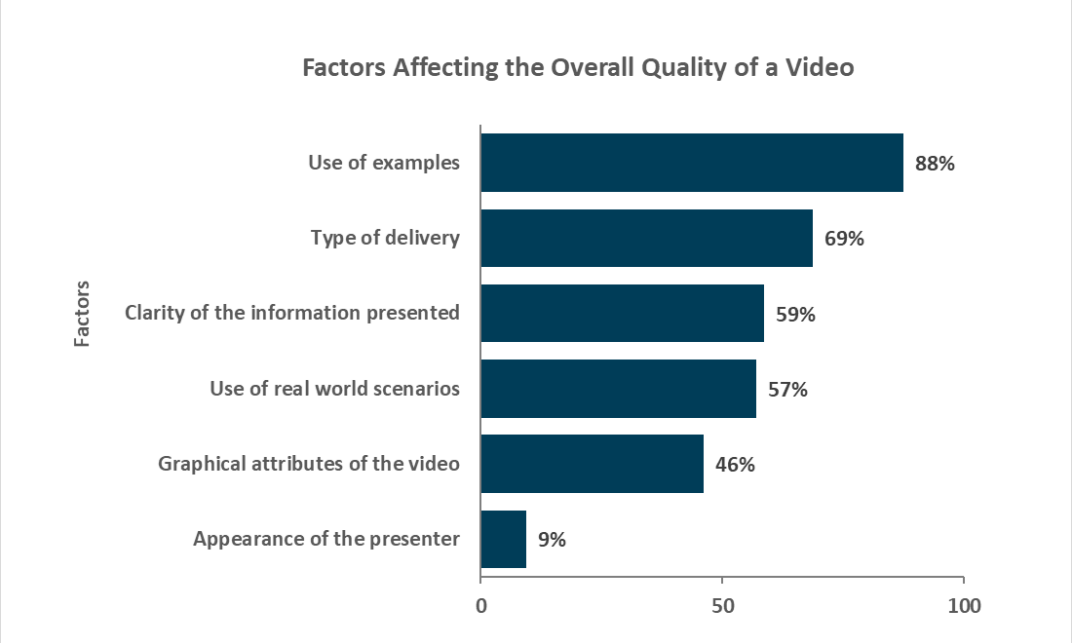

Figure 2 2: Bar Chart of percentages that affecting the overall video quality

The graph given above summarizes the responses to the question: "In your opinion what factors do you think affect the most towards the overall quality of a video?". Out of the several options given, it was instructed in the question to select upto 3 answers. Among them, "Use of examples" seemed to be the most selected answer, and the appearance of the presenter seemed to be of least importance.

3.3 Nationality and Academic Year

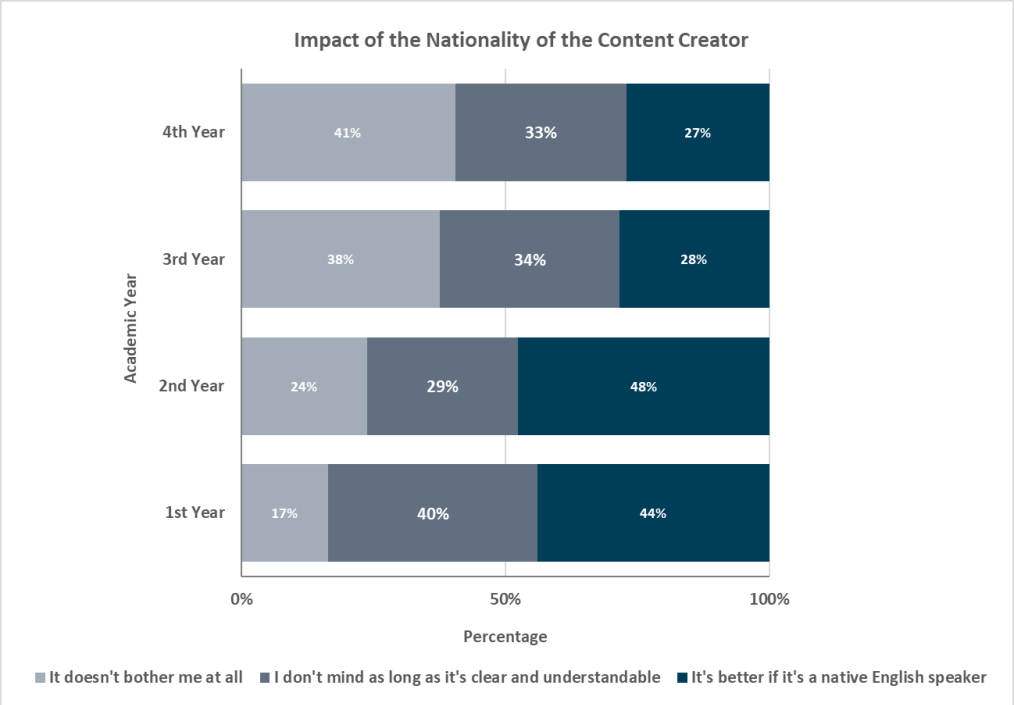

Figure 3:100% Component Bar Chart of Impact of the Nationality of the Content Creator with Academic Year

This stacked bar chart is drawn considering the academic year of the respondent and their preference of the nationality of the content creator. It can be seen that 1st and 2nd year undergraduates have selected the option “It’s better if it’s a native English speaker” more than 3rd and 4th undergraduates. It could be because the students tend to look for more convenience and quality in their early years in higher education, but with time they get used to all kinds of explanations and tones, hence lowering their expected standards in these materials as time pa

3.4 Quality of the Video with Province

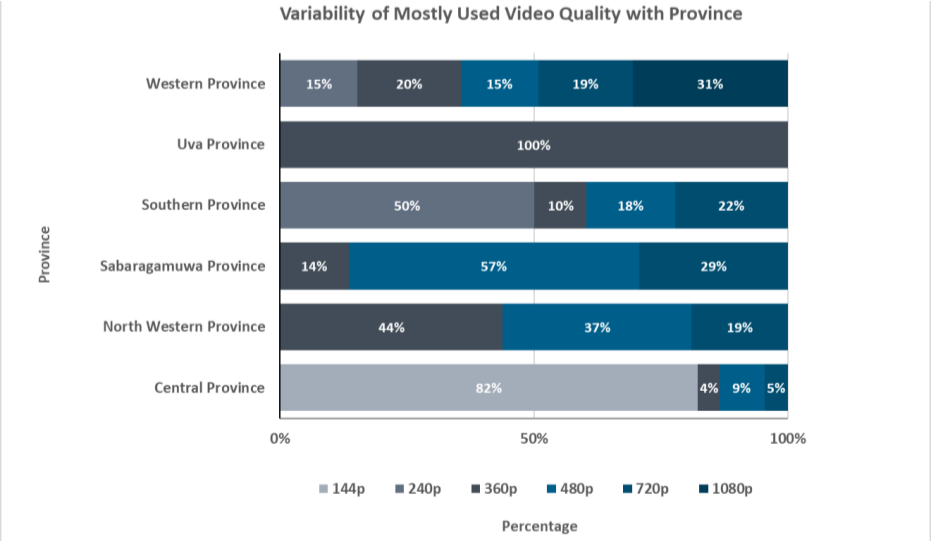

Figure 4: 100% Component Bar Chart of Most Used Video Quality with Province

There's a couple of important things that can be seen from this chart. Respondents from Central province are the only ones that have selected 144p which is the lowest YouTube quality. In fact, that's 82% of them. This is huge and the reason could be the fact that Central province has low reception in general. On the other hand, respondents from Western province are the only ones who have selected 1080p (best quality) at all. This could be because Western province has comparatively better reception in general. The bar for Uva province is a little unusual but that's because there were only a very few respondents from Uva province.

3.5 Variability of Watching Motivational Videos with Academic Year

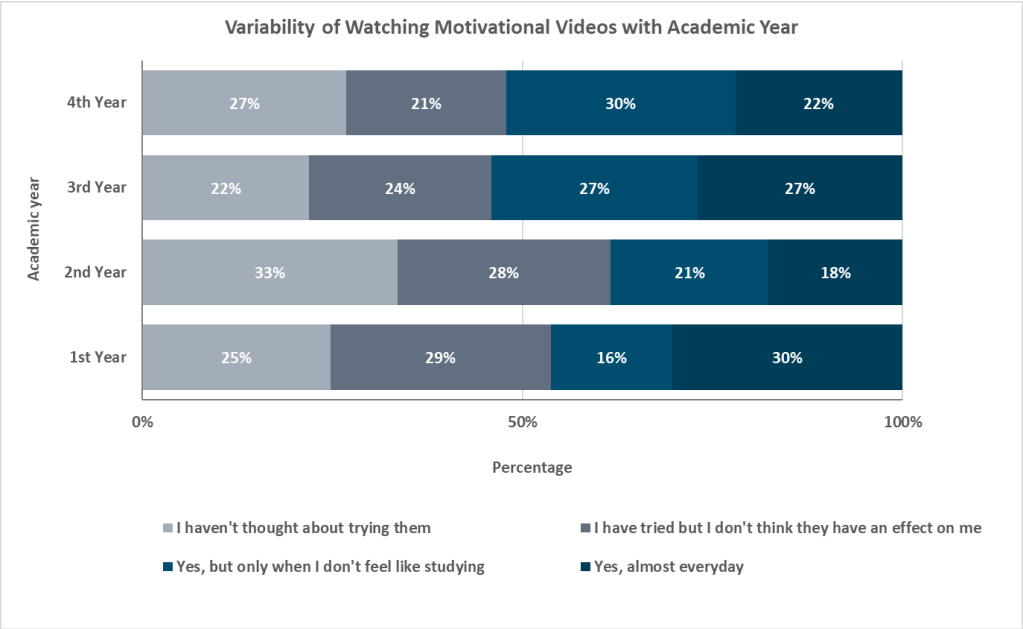

Figure 5: 100% Component Bar Chart of variability of Watching Motivational Videos with Academic Year

The variable explaining the respondents' way of watching motivational videos, is summarized here with the academic year. An interesting pattern can be seen with the answer "watching them when I don't feel like studying" because it increases with the academic year. 16% of 1st year respondents, 21% of 2nd year respondents, 27% of 3rd year respondents, and 30% of 4th year respondents have gone for that answer, showing a clear increase. Also, the answer "have tried but I don't think they have an effect on me" has shown a little decrease every year. It has gone down from 29% to 21% from 1st to 4th years. These increases and decreases suggest that more and more students have tried this technique to increase their studying efficiency, over the years in their higher education.

3.6 Variability of Listening to Focus Music with Academic Year

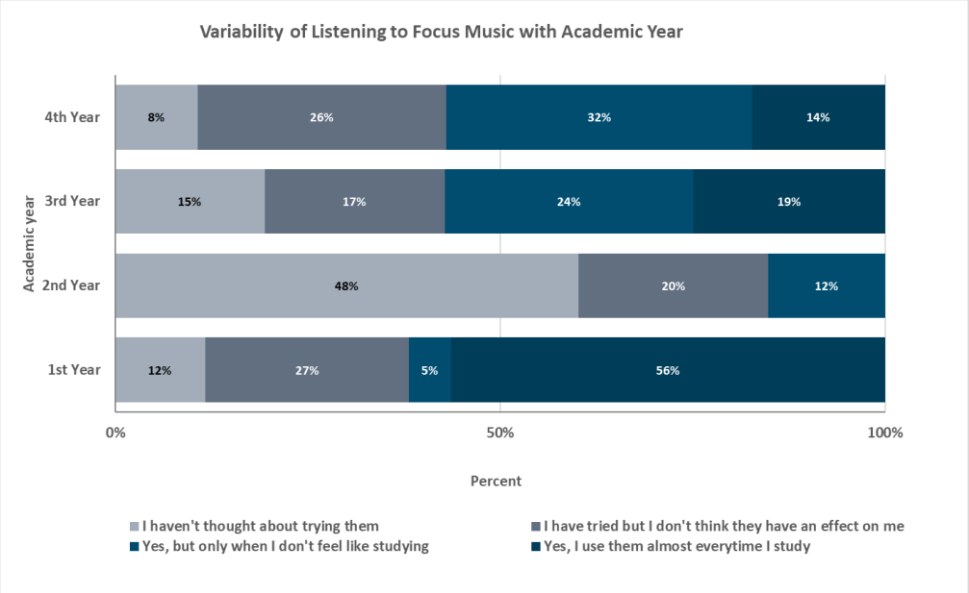

Figure 6: 100% Component Bar Chart of Listening to Focus Music with Academic Year

Here also, like in the previous chart, the answer "Watching them only when I don't feel like studying" has shown a dramatic increase over the years. It has gone up from 5% to a huge 32% going from 1st year to 4th year. This also, like in the previous instance, suggests that more and more students have tried this technique over the years in university.

A common trait that can be seen in both of the above charts, is that the percentages to the answer "Watching them everyday" has gone down in the second year and increasing again after 3rd year.

3.7 Purpose of Watching Educational Videos on Youtube

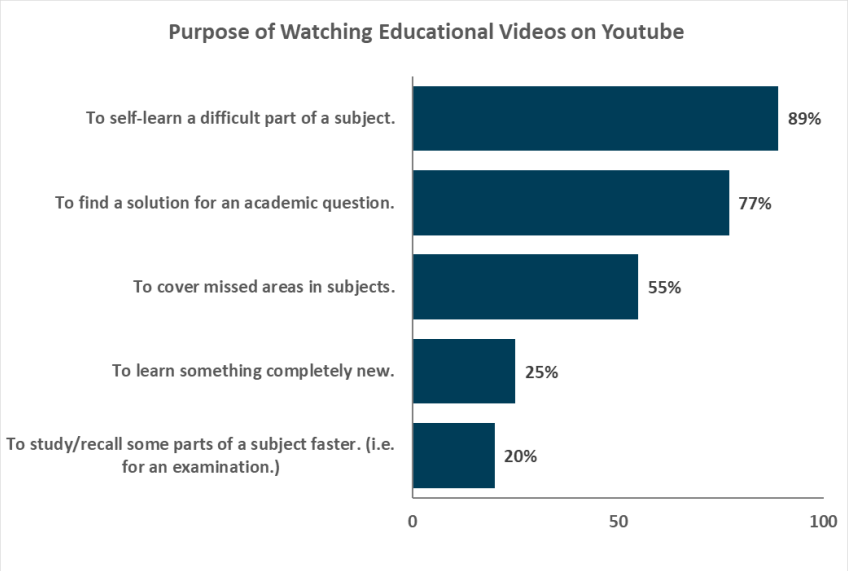

Figure 7:Bar Chart of Purpose of Watching Videos on Youtube

The above chart summarizes the answers to the question: “For what purpose(s) do you mostly use educational videos on YouTube?” it was also instructed to select upto 3 answers. According to the chart, most of the students use YouTube to “self learn a difficult part of a subject”, out of the given answers.

3.8 Impact of the Video Thumbnail with Gender

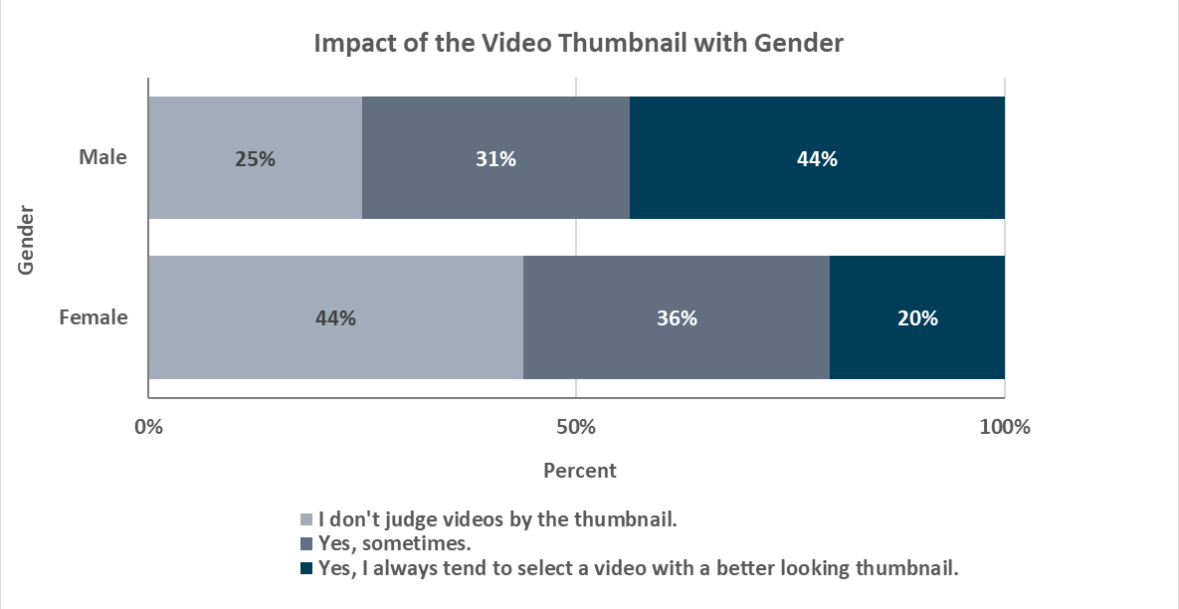

Figure 8: 100% Component Bar Chart of Impact of the Video Thumbnail with Gender

The above chart is about the impact of the video thumbnail when it comes to selecting a video from a list of search results. 44% of the Males have said that they always take the thumbnail into consideration, and 44% of the females have said that they don't consider that into at all. Considering that there are 3 answers to select from, it can be said that the majority of the males and females have gone for those mentioned answers. This suggests that males tend to consider the thumbnail of a video more than women do. This could be a useful piece of information for a YouTube content creator.

3.9 Average Time Spent on a Video

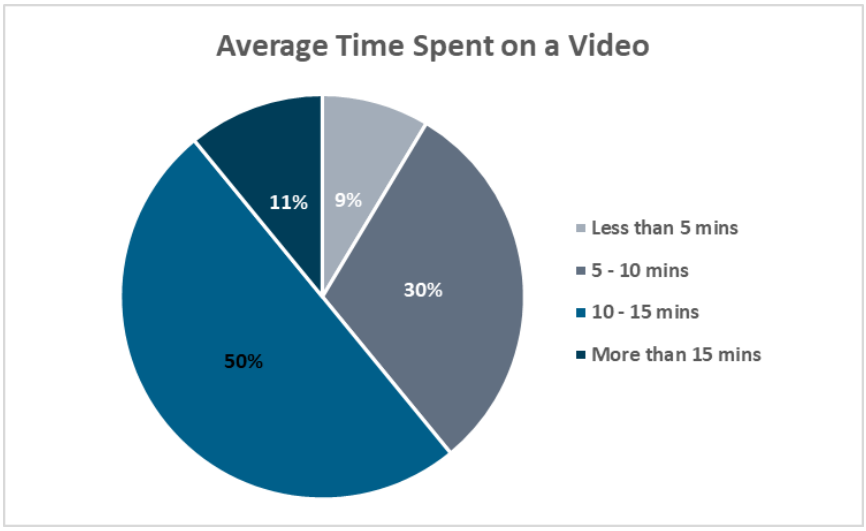

Figure 9: Pie Chart of Average Time Spent on a Video

This pie chart shows that exactly 50% of the respondents have said that they prefer videos that are between 10-15 minutes. Considering that there are 4 answers given here, 50% means the majority in this case. This also aligns with the fact that it's generally believed that videos between seven to 15 minutes perform well on the platform.

4 Conclusions & Recommendations

The study was focused on YouTube usage patterns of Undergraduates for educational purposes. An online survey questionnaire was used to collect data. Out of the respondents, only 5.22% had said that they were not using YouTube for educational work. This shows that YouTube is a crucial part of students' present academic life.

This study reveals that most of the students prefer educational videos that are in the form of tutorials with solved examples, over animated explainers, simulations, lectures and several other video types. The same thing was revealed again in another question that asked about the factors affecting the overall quality of a video, to which 88% of the respondents had selected "Use of examples". It could also be seen that the undergraduates of early university years (1st and 2nd) tend to consider the nationality of the content creator when selecting a video, more than students of years 3rd and 4th.

82% of the students from Central province use the lowest available quality for viewing videos, while the respondents from Western province were the only ones that are using the highest available quality (1080p) at all (31%), indicating the possible difference in general reception levels in certain areas in the island.

It was seen that students tend to watch motivational videos and listen to background music to improve their efficiency in studying more and more in 3rd and 4th years, than early years in university. Most of the students (89%) had selected the answer "To learn a difficult part of a subject" for a question that asked about their purposes of watching YouTube educational videos.

Another interesting finding was that males were more likely (44% positive, 25% negative, 31% neutral) to consider the thumbnail of a video than females (44% negative, 20% positive, 36% neutral). It was also found that most of the students prefer videos that are between 10-15 minutes.

5 References

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