

# Learning Mathematics “Asyik” with Youtube Educative Media

W N Sari <sup>1\*</sup>, B S Samosir <sup>1</sup>, N Sahara <sup>1</sup>, L Agustina <sup>1</sup>, Y Anita <sup>1</sup>

<sup>1</sup> Mathematics Study Program, Faculty of Teacher Training and Education, Universitas Muhammadiyah Tapanuli Selatan, Padangsidempuan, Indonesia

\*wiwik.novitasari@um-tapsel.ac.id

**Abstract.** The research aims to find out how the use of YouTube Educative as education media by students, parents, and teachers in improving knowledge, skills, and creativity generally in education and especially in mathematics studies. Besides that research also recommend YouTube Educative to help students so that learning mathematics becomes fun. This study applied descriptive qualitative research. This study applied descriptive qualitative research. The subjects of this study were the principal (headmaster), students and mathematics teachers. The object of this research was YouTube. The results of the study found that principal (headmaster), teachers, and students had not taken the advantages of YouTube as educative media in mathematics learning activities. Youtube is mostly used for playing games, watching cartoons, funny videos, arts and cooking recipes. Recommendation related to the use of YouTube Educative help students more easily understand concepts and learn mathematics becomes more fun.

## 1. Introduction

Dispersed information and developing technology are characteristic of the knowledge age, 21st century. In the context of the use of information and communication technology in the world of education, it has been proven by the increasingly narrowing and widening of the "space and time" factor, which has been an aspect of determining the speed and success of science by people human. The characteristics of the 21st century are marked by the increasingly tight links of knowledge so that synergies between them become faster and faster [3]. The 21st Century is also marked by the amount (a) of information available anywhere and can be accessed at any time; (c) faster computing; (3) automatically replacing routine jobs; (d) communication that can be done from anywhere and everywhere [9]. The presence of the internet provides a new color as a source of learning. Associated with mathematics that requires detailed explanation and steps, video learning resources are one alternative to replace text-shaped media.

Technology can bring abstract thinking to the real world. The abstract of the study object that makes it difficult for students to learn can be reduced by the help of technology [11]. Learning videos can be uploaded on the internet so they can be a source of learning mathematics that students can learn online.

Youtube is a popular video sharing service where users can load, watch, and share video clips for free. Youtube is a social media that is practical and easily accessible. Learning media like YouTube are currently very popular. YouTube media is also packaged very interesting so that it can increase knowledge for its users. Interestingly presented lesson content triggers users to deepen the material being studied table [5].



Students as a generation of learners including the internet generation were born in the digital millennial era, so they have a different learning style from the previous generation. The gap between generations of the internet is often misunderstood as a shallow generation. This generation is also bored and lazy to learn. The characteristics of internet generation learners are independent and autonomous. They are persistent information seekers and consciously determine the choice of learning models that suit themselves. They are also active and want varied learning models and tend to get bored easily with conventional learning models with limited resources and models [2].

Serving learners with these characteristics requires teachers to create classes that meet their demands. Advances in technology, especially the internet have been in line with the demands of the internet generation so that its integration will be following the way of learning favored by students and the results will be optimal. The learning media has been using video for a long time, the advantage of learning by using video is to produce an image and sound representation of an idea or event to learners in the classroom. Youtube is one of the most popular video services on the internet today [9].

YouTube is the largest and most popular online video sharing media website on the internet [8]. Since it was launched in December 2005 and acquired by Google in 2006, Youtube users have continued to increase, reaching more than one billion hours per day. The latest statistics show that more than 4 billion YouTube videos are watched every day. Youtube is a web-based file sharing service that allows individuals to build public profiles, determine lists of other users to share videos as well as to see a list of connections/content made by others [1]. Youtube is an alternative source of timely learning related to educational videos for educators and students [4].

Integrating certain videos from YouTube can develop students' appreciative abilities and provide learning experiences, not only limited to the subject matter but also the technology used [8].

The advantages of Youtube [10]:

1. Potential, i.e., Youtube is the most popular site in the internet world today that can provide edit value to education.
2. Practical, i.e., YouTube is easy to use and can be followed by all groups including students and teachers.
3. Informative, namely YouTube provides information about the development of education, technology, culture, etc.
4. Interactive, YouTube facilitates us to discuss or conduct question and answer and even review a learning video.
5. Shareable, i.e., Youtube has an HTML link facility, Embed learning video code that can be shared on social networks like Facebook, twitter and also blogs/websites.
6. Economical, i.e. Youtube is free for all circles.

The internet has experienced rapid progress and development since it was first launched. Now, the internet is not only for reading but also become a read-write web. When connected with learning, today's internet technology is aligned with the learner-centered learning approach, where the learner becomes the center and the main actor in learning activities.

Internet generation learners with autonomous, independent, multitask characteristics, like multidimensional input, and get bored easily because they have a short attention span, require a learning atmosphere that facilitates these things. Internet advances that enable network-based read-write activities can facilitate the needs of generations in this digital age. The daily experience of the internet generation will affect the mindset and the way they communicate.[6].

One site that can be utilized to facilitate digital generation learning that requires simultaneous is youtube. Youtube is the most popular video site at the moment. Youtube can be a source of learning and learning media for digital age students that can increase interest and support student learning styles in this era. Youtube offers a learning experience with new technology that will be useful when they graduate [4].

## 2. Methods

This type of research is descriptive qualitative. According to Bogdan and Taylor in [7], qualitative research is research that produces qualitative descriptive data in the form of written or oral words from people and observed behavior. The subjects that will be used as data sources in this study are, among others: the principal, teachers, students, and parents of students. While the data collection methods used are interviews, observation, and documentation.

## 3. Result and Discussion

**Table 1.** Description of using Youtube learning by MIN Padangsidempuan students

No	Grade	Male	Female	Total
1	III	23	27	40
2	IV	18	23	43
3	V	19	20	39
Total				122

**Tabel 2.** Data description of students who have gadgets / smartphones

No	Indicator	Total	Percentage
1	Using smartphone/Gadget average time 1 hour/ day	45	36,9
2	Using smartphone/Gadget average 2 hours/ day	67	54,9
3	Using smartphone/Gadget average 3 hours/ day	7	5,7
4	Using smartphone more than 3 hours/ day	3	2,5
Total		122	100

**Table 3.** Information sources use YouTube to understand mathematics subject matter

No	Informant	Yes	Percentage	No	Percentage
1	Parents	8	6,56	114	93,44
2	Teacher	2	1,64	120	98,36
3	Friend	6	4,92	116	95,08

## 4. Conclusion

Youtube education can be used to reduce student learning difficulties. Youtube education is packaged in an interesting video sharing, containing various information so that it helps its users to deepen the material being studied. YouTube education presents the material with details along with a simple explanation of problem solving. Another convenience is, if students do not understand the material then YouTube education can be played back some even whole videos until students understand the material described. Also available is a comment column that can help students interact with the account owner. The communication interaction can be in the form of suggestions, questions about material that are not yet understood and even requests for discussion of material to be discussed in the next video.

From 122 students, researchers get information that on average students in the age range of 9 to 12 years use gadgets / smartphones every day. Students use gadgets / smartphones in the duration of 1 to 3 hours per day. But students of MIN 5 Padangsidempuan have not maximally used the gadget / smartphone to access the subject matter. They use the majority of gadgets to play games and other entertainment.

The presence of youtube education can actually be used by students to help overcome the problems encountered, especially mathematics subject matter. Students can learn mathematical material in a more relaxed atmosphere, more interesting offerings that can be accessed anywhere and anytime. Gadgets that have barriers can be used wisely, the role of parents, teachers and other students is very important. They can inform that YouTube Education provides a lot of content to help overcome the difficulties of learning mathematics. Not only that the packaging of mathematics material in YouTube education is also more interesting making it easier for students to understand the material. Learning mathematics is fun as exciting as watching with YouTube education.

## 5. References

- [1] Agazio & Bucklev (2008). An untapped resource: Using YouTube in nursing education, Nurse Educator, 34 (1), 23-28.
- [2] Barnes, K., R. Marateo, and S. Ferris. 2007. Teaching and learning with the net generation. Innovate 3 (4).
- [3] BNSP. (2010). Paradigma Pendidikan Nasional Abad XXI.
- [4] Burke, S., & Snyder, S. (2008). Youtube: An innovative learning resource for college health education courses.
- [5] Iga Luhsasi, Dwi& Sadjarto, Arief. (2017). "Youtube: Trobosan Media Pembelajaran Mahasiswa." Jurnal Ekonomi Pendidikan dan Kewirausahaan (Vol. 5 Nomor 2).
- [6] Litbang Kemdikbud.(2013). Kurikulum 2013: Pergeseran Paradigma Belajar Abad-21. <http://litbang.kemdikbud.go.id/index.php/index-Berita-kurikulum/243-kurikulum-2013-pergeseran-paradigma-belajar-abad-21>.
- [7] Poerwandari. 2017. Pendekatan Kualitatif untuk Penelitian Perilaku Manusia. Jakarta: Lembaga Pengembangan Sarana Pengukuran dan Pendidikan Psikologi Fakultas Psikologi Universitas Indonesia.)
- [8] Andi Prastowo. (2011). Metode Penelitian Kualitatif dalam Perspektif Rancangan Penelitian. Jogjakarta: Ar-Ruzz Media.
- [9] Snelson, C. 2011. Youtube Across the Discipline. A review of L. MERLOT Journal of Online Learning and Teaching. Vol. 7, No 1, March 2011.
- [10] Sukarni. 2012. Memanfaatkan Youtube Sebagai Media Pembelajaran yang Interaktif, Menarik dan Menyenangkan. [http://guraru.org/guru-berbagi/memanfaatkan\\_youtube\\_sebagai\\_media\\_pembelajaran\\_yang\\_interaktif](http://guraru.org/guru-berbagi/memanfaatkan_youtube_sebagai_media_pembelajaran_yang_interaktif)
- [11] Yanti Mulyanti. 2018. Profile of Students' Technological Content Knowledge in School Mathematics. IOP Conf. Series: Journal of Physics: Conf. Series 1179 (2019) 012059 doi:10.1088/1742-6596/1179/1/012059. [online tersedia: <https://iopscience.iop.org/issue/1742-6596/1179/1>]