


SOCIAL MEDIA AND MATHEMATICS LEARNING

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Abstract

The covid-19 pandemic has given an entire new dimension to the teaching learning process. Work from home for school and college teachers in India has opened up new resources and tools for adopting teaching methodologies in the virtual mode of education which will have long term effects in the teaching pedagogy. Whatever may be the methodology of instruction, what remains common is the use of e-resources, techniques learnt by teachers on war front in the lockdown period and the wide use of social media for communicating with the students. The challenge was more daunting for mathematics teachers who had a tough job in first learning online tools for teaching and then communicating effectively with the students. The paper is an attempt to study the use of social media as an education tool for mathematics teaching and communication to bridge the gap, with special reference to undergraduate students in cities of Mumbai and Thane. The researcher has used primary data as well as secondary data for the study.

Keywords: *mathematics, social media, online teaching, communication*

Introduction

It is rightly said that ‘Necessity is the mother of invention’.

Mathematics has always been one of the most unpopular and dreaded subjects amongst students, reasons for which being students find the subject tough, complicated and hence lack of interest in the subject. These are the most common reasons for low performance of students. Mathematics teachers all over the world are seeking solutions to this problem and finding ways to involve students in the learning process. Moreover, the covid-19 pandemic situation has made the matters worst as classroom teaching has totally being replaced by online teaching. To overcome the challenges, mathematics teachers have undergone trainings for online teaching and experimented with available online educational tools to cater to the needs of the students. But, involvement of students in the online teaching mode remains a challenge. The researcher wants to explore the use of social media platform to encourage optimum student involvement in the learning process.

Objectives:

- To study student feedback on mathematics learning during Covid pandemic
- To study student feedback on use of social media as a tool for education and in specific, mathematics learning

Literature review:

Development and Use of Social Media-Based Mathematics Instructional Module for Grade 7 Students of Geras Integrated School, Saniya G. Abirin, Mario R. Obra Jr., Ed.D, The purpose of the study was to develop a social media based mathematics instructional module for the grade 7 students of Geras integrated school and study its use in



meeting the learning competencies of students in mathematics with the help of pre and post-tests results. The results of the study showed a positive mean gain in three out of four learning competencies. The researchers suggested mathematics teachers to develop modules using social media platforms.

Learning and Teaching Mathematics with Online Social Networks: The case of Facebook, Yaniv Biton, Ruti Segal, The focus of the researcher was to study Facebook as an online social network to motivate high school students to be prepared for their matriculation exam in mathematics. The objective of the study was to find the teaching and learning opportunities offered by Facebook for mathematics students and how the teachers and students perceive learning through social networks. Findings of the study showed that students were satisfied with Facebook for learning mathematics. The forum promoted interaction between teachers and students as well as peer communication. Facebook was found to be user friendly platform to discuss solutions to problems, peer learning and different methods of problem solving. Students gave a positive opinion about learning mathematics from Facebook.

Social Media Interaction Analysis With Trends Among The Post Graduate Students Of Mathematics Department Of Kadi Sarva Vishwavidyalaya, Gandhinagar, Pathak Sandip J, The objective of the study was to find the reasons for which mathematics students used social media, identify students perception of social media and to find the time period of social media usage. The researcher found that social media has helped mathematics students to achieve academic excellence.

The Affect of The Internet and Social Media: Mathematics Learning Environment Context, Achmad Hidayatullah, Endang Suprpti, In this paper, the researcher's focus is on the impact of social media on mathematics learning. The paper discusses on the reduced communication gap between teachers and students and the role of teachers in the era of social networking.

Current Scenario:

According to Statista, the most popularly used social media platforms world-wide as of January 2021 were Facebook (2740 millions), YouTube (2291 millions) and WhatsApp (2000 millions). According to statcounter, social media statistics in India, Facebook viewership was 82.55% in February 2021, the highest among all the social media networks, followed by YouTube (7.76%), Pinterest (3.59%) and Instagram (3.12%). The education sector underwent a turmoil to keep the teaching- learning process unhindered in the lockdown period announced during the Covid-19 pandemic. Lot of trials with online tools were experimented by the teachers to carry out the teaching process smoothly. The millennials are avid users of social media. Students, the primary stakeholders of education had the following to say in a survey conducted among the undergraduate mathematics students in the city of Mumbai and Thane.

Findings: In a survey conducted among 195 undergraduate Mathematics students from colleges in Mumbai and Thane about use of social media for mathematics learning, following were the findings of the survey-

- The most popular social media platforms used by the students were WhatsApp (89.7%), YouTube (73.3%), Instagram (64.1%), Snapchat (44.1%), Facebook (26.2%) and Telegram (23.1%), the rest being negligible. Only 1.5% students were Blog users/followers.
- The time spend by the students on social media-
Upto 1 hour: 31.8%, 1-3 hours: 46.2%, 3-5 hours- 12.8%, more than 5 hours: 7.2% where as 2.1% responded that they didn't use social media.

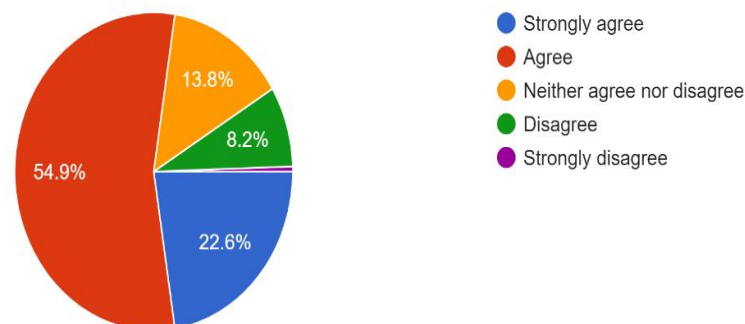


- The most preferred social media platforms by the students were Instagram, WhatsApp, YouTube and Facebook. As compared to this, telegram, snapchat and twitter were less preferred.
- When asked if they use social media for education purpose, 89.7% students responded in affirmative while 10.3% said they don't use it for education. The social media platforms used for education purpose by the students were YouTube, WhatsApp, Telegram, Instagram and Facebook.
- When asked whether they used social media for learning mathematics, 64.6% answered positive whereas 35.4% answered negative. 126 students answered that they used YouTube, WhatsApp, and other coaching academies like Topper.com, Khan academy and unacademy for learning mathematics. These students found that the mathematics learning experience was- very helpful (32.7%), helpful (53.3%), neither helpful nor unhelpful (9.3%), unhelpful (2.7%) and very unhelpful (0.7%).
- The impact of Covid-19 on the teaching-learning process posed a lot of challenges for the students as well as teachers. On asked whether the tools used by mathematics teachers for teaching mathematical concepts online were effective, the students' response was - strongly agree (22.6%), agree (52.8%), neither agree nor disagree (21%), disagree (2.6%), strongly disagree (1%).
- 61% respondents replied that mathematics teachers used social media for teaching whereas 39% answered in negative. The social media platforms used by the teachers were YouTube, WhatsApp and Telegram.
- When questioned on whether they have created their own social media groups for assignment work, for discussion purpose and providing support to friends- 53.8% students answered affirmative and 46.2% said that they have not created any social media groups.

Finally following was the response for the question-

Do you think that social media is a good education tool?

195 responses



When asked whether social media is a good education tool, following was the response: strongly agree (22.6%), agree (54.9%), neither agree nor disagree (13.8%), disagree (8.2%), strongly disagree (0.5%).

Few suggestions given by students in the survey: The respondents preferred offline teaching but at the same time felt that online learning should be encouraged. Some of the students found mathematics learning through social media



effective and useful, specially the anytime, anywhere learning feature. They felt that valuable knowledge can be gained through social media and were of the opinion that educational institutions must be active on social media. Students suggested development of app for Basic mathematics, new social media launch for mathematics, cartoon videography, preparation of videos and sharing through YouTube, telegram, Instagram and clarifying concepts with the help of social media.

Interpretation: Feedback received from the students show that majority of the students are inclined towards using social media for education purpose, specifically to learn mathematics. Suggestions given by them are also indicative of improvisations required to adopt the use of social media in teaching pedagogy.

Suggestions:

- Google classroom can be used for creating a social network group of mathematics teachers and students from various colleges for healthy interaction and discussions. Lecture Videos, presentations and other links can be shared, which will encourage collaborative learning and exchange of ideas. This network can be used as a type of virtual student-faculty exchange.
- Blog writing is one practice that mathematics teachers should inculcate and encourage students to follow their blogs, read and discuss their opinions and ideas.
- Facebook, the social media platform universally used should be used by the mathematics teachers to carry out discussions and interaction with the students. Such discussion forums may encourage analytical, evaluative and creative skills among the students.
- YouTube is one social media that is very popular among students for entertainment as well as for education purpose. As audio-visuals are best form of learning materials, teachers should start their own YouTube channels, post videos and cater to the needs of students crosscutting all boundaries.
- Institutions should have their own social media page dedicated for education purpose. Students must be encouraged to follow it for academics and communication purpose.
- The networking opportunities offered by Instagram to remain personally connected with the students can be used to advantage by the teachers. Teachers can also use Instagram to connect with other mathematics teachers and share ideas, resources and innovative pedagogies.
- Over and above students need to be guided for using social media as a learning medium for positive outcome.

Conclusion: The Covid-19 pandemic has had a drastic impact on the teaching learning scenario all over the world, especially in India. Teachers who were more inclined towards classroom teaching had to change their mindset, undergo trainings for online teaching and use tools for online mathematics teaching. In a way the pandemic has highlighted the advantages and disadvantages of online teaching vs classroom teaching. Of course, one has realized that the way further is blending of online and offline teaching. In the era of internet, the use of social media as an educational tool plays an important role in this blended method. Wisdom lies in using technology to our advantage. Mathematics teachers can use social media for enhanced communication and simplifying concepts out of classroom through use of audio-visuals which can prove to be advantageous to learners, especially slow learners and help in developing interest in the subject. Finally, the aim of teaching is to develop the analytical, evaluative and creative skills among learners. By adopting blended learning with the help of social media as an educational tool for mathematics teaching, the researcher feels that teachers can be one step closer to this aim.


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