

Social Media and Learning Apps: Influence on Education

Xueyang An^{1,a,*}

¹*Department of Sociology, Oberlin College, OH, USA*

a. aan@oberlin.edu

** corresponding author*

Abstract: The study explored the different kinds of social media apps and learning apps in terms of education. Firstly, the lecture explained the origin of social media and how social media becomes popular. Then the categorization of social media is explained by exploring research on social media apps on university students. This article also distinguished the conventional way of categorization and categorization based on educational purposes. Since the general categorization of social media would be Social Networking, Photo Sharing, Video Sharing, Interactive Media, and Blogging/Community Building, the top four kinds of social media that students thought is helpful to education are: web-based or cloud-based collaborative writing platforms, Sharing information sharing websites, Professional networking, Tracking and managing academic schedule apps. At last, two powerful social media and learning app archetypes, online collaborating tools, and computer aid translators were explored and analyzed. The study specifically analyzed the functionality of the two archetypes and demonstrated evidence that educators and students used them to enhance their learning skills. In addition, the drawbacks of those learning apps were also illustrated and analyzed. At last, the study also talked about how people could use social media and learning apps efficiently to enhance their learning skills and some future research directions and possibilities.

Keywords: Social media, education, learning apps

1. Introduction

Communication has always been a big part of human activities throughout history. In ancient times, people invented different kinds of language at first. In ancient Egypt, people invented plant-based writing sheet papyrus to deliver information from a far distance. In modern times, social media was invented to connect people around the world. Social media is the next invention for people to communicate. Since a growing number of people have begun to use social media after 2010, it has thrived in the market. At that time, the most used social media are Facebook and Instagram [1]. In the education field, however, social media have often been seen as a distraction and time-consuming. Many studies in the past experienced a negative relationship between social media use and academic performance [2]. Those studies collect data about students' GPAs and their average social media usage hours. In these methods, they started to notice that people with more time spend on social media generally have less GPA scores than people with less time spent on social media. The study wants to focus on how different kinds of social media have influenced people's capacity to study with the development of the internet and smartphone [3].

The internet as we know it started as a giant Bulletin Board System. Primarily, internet users could only exchange software, data, messages, and news with each other. In the late 1990s, homepages became the main way people access the internet. This led to a popularity surge in weblogs or blog websites, where users share information about their lives and ideas. The early concept of social media first emerged when an early social networking site called “Open Diary” was created by Bruce and Susan Abelson. The website built a community around online blog writers over the English-speaking world. In the early 2000s, the growing availability of high-speed Internet access contributes to the development of social media websites. And the invention of smartphones allows users to gain easy and mobile access to social media communities. Websites like Myspace and Facebook made social media contribute to the popularity of social media and granted it a prominent role in most people’s daily life [4].

In 2012, the EDUCAUSE Center for Applied Research (ECAR) did research to study the educational behavior of undergraduate students. In the research, 75% of undergraduate students implied that their academic achievements benefit from technology. However, most of the students reported that they prefer in-person interaction with their instructors rather than digital communication when the students were asked about social media technologies specifically [5]. A longitudinal study on undergraduate students showed that an increasing number of students prefer to keep their social and academic lives separate [6]. Therefore, the discrepancy between the technologies that students value to be meaningful to their academic ability, and the social media that the students choose to use for their study is clearly shown.

Based on the above discussion, social media and learning apps have become significant ways of learning. However, there is little research on these two subject matters and there has not been a systematic consensus. This study wants to explore the relationship between academic performance and social media apps and learning apps. This is an analysis of how different kinds of apps influence learning skills.

2. The Category of Social Media

In the 2012 ECAR research, the researchers used 30 semi-structured interviews and an online survey to explore why and how undergraduates from different institutions view social media technologies to be a meaningful part of their university learning [5]. The results from interviews and online surveys show the drastic difference between the social media that students found helpful for their university learning and the social media they used daily. Generally, social media could be categorized as Social Networking, Photo Sharing, Video Sharing, Interactive Media, and Blogging/Community Building [7]. However, when the researchers asked students which certain aspect of social media contributes to their academic learning, students reported similar high ratings for these social media categories [8]:

1. Web-based or cloud-based collaborative writing platforms (e.g., Google Docs)
2. Sharing information online (e.g., links to websites, articles)
3. Professional networking (e.g., Xing, LinkedIn)
4. Tracking and managing academic schedule

Social media apps such as Google Docs and Shimo Docs are powerful collaboration tools that aim to create a collaborative document shared among all editors. Traditionally, collaboration can be done by attaching documents to e-mail and sending them to collaborators. Traditionally, writers could only use email and send documents to collaborate. The web-based or cloud-based collaborative writing platforms changed this scenario. Take Google Docs as an example. The copy of the document is always stored on the internet for editing and reviewing. One writer has to create a Google document so the others could be invited as collaborators. The collaborators have to organize the editing task before the writing process so that each of the collaborators knows the part

they are supposed to write. Collaborative writing platforms offer real-time collaboration which means that one writer can work on their parts while the others can complete their parts at the same time. It breaks the traditional linear cycle of write-review-correct. In Google Docs, there are three kinds of participants: document owner, viewer, and collaborator. The document owner creates a document and invites viewers and collaborators. Collaborators are invited by the document owner to edit the document. And the viewers can only view the document but can't edit it[9].

Collaborative writing platforms are also useful collaborative tools for educational purposes. Students could collaborate in group projects in a much easier way, Instructors can use Google Docs to review student papers, which could be done by asking students to invite the instructors to share the document [10].

Educators have adopted these collaborative writing platforms to fulfill their intended purposes, such as course content development, student performance assessment, or group project activities [11]. In research of undergraduate students from the Information Management program at The University of Hong Kong. All the students in the class are demanded to use Google Docs for their final year project. Many students in the research gave positive feedback for using Google Docs as a collaborative tool in group projects. The user-friendly features of Google Docs were praised and appreciated by the students. In the research, Google Docs also gave instructors the liberty to review student progress instantly so the instructors could provide feedback efficiently in the report writing process [12].

In research of a similar setting at the University of Georgia, where all students of an introductory psychology class need to accomplish 2 assignments via Google Docs. The researchers find out that Google Docs changed the means of communication used in collaborative writing, 93% of students considered Google Docs a useful tool for group work, and half of the students reported they would like to use Google Docs in the future. This shows that Google docs and other web-based collaborative writing platforms create much more benefits than harm than traditional writing apps [13].

However, there are still possible limitations regarding the use of collaborative writing platforms. First, it requires a steady internet connection, the effectiveness of using collaborative writing platforms can only be assured if the internet connection is good, otherwise, it might lose the efficiency of user. [9] Second, errors might occur if the two writers are editing in the same region of the paragraph. The collaborators have to organize the editing task before the writing process to solve this problem [14].

3. Translational Apps

Computer-aided Translation Apps such as Google translate or Youdao translate drastically reduced the time and energy for translation. Compare with a traditional dictionary, the convenience and mobility of digital translation apps could let users obtain information in a more time-efficient way. Digital translation apps usually use two types of translational technologies: Machine Translate and Translation Memory [15]. Machine Translate is a technology that uses computers as an aid to translate one language into another language. The computer analyzes the context and grammar of the original text, then converts the language of the original text to the translated text. Machine Translate has greatly improved the efficiency of translation to the maximum translation volume of thousands of words per second. Translation Memory works as a language database to store the original text and its translation The technology is constantly learning and storing new translations in the database automatically, which allows the translation becomes more accurate and efficient [16]. The technology also increased the readability of some unconventional sentence structure in a certain language, such as imperative moods and unrealis moods in English.

Most online translation apps use both machine translate and translation memory nowadays. Take Youdao translate as an example, after the user input or scan a text by hand or by digital scanners, the software would break down the text into small components based on the characteristics of the translated language, and then match the same components in the two languages one by one. At last, Youdao uses its translation memory database to allocate the field and context of the text, then retrieves professional terms from the database to match a more accurate translation [15].

Translational apps are also proven to be time-efficient for educators and students when covering professional terms in foreign languages. This technology has shown tremendous potential in education for medicine, pharmacology, biology, and the economy. A three-year nursing program from Gansu Health Vocational College incorporated Youdao Dictionary in their online courses during the covid-19 pandemic. The teachers insert pictures of the translation in their courseware and made searching for translation in the dictionary part of the in-class assignment. Teachers also use the example sentence function in the app to enhance the student's understanding of specific terms based on contexts. The study found that the students could memorize difficult medical terms better and keep up with the teachers with the help of an online translation app. The research also found that this mode of teaching also helps students to take more accurate notes faster [17].

Although the fast, convenient and accurate translation has made digital translation apps more appealing than a traditional dictionary, there are also drawbacks. One of the drawbacks is that users often forget the information so easily retrieved on translation apps. In research on students of English who used English learners' dictionaries on CD-ROM, it was found that one-fifth of the students did not know the spelling or meaning of a word even if they had just checked it [18]. Similar research on English learners in Japan showed that the convenience of an electric dictionary doesn't help students memorize English terms [19]. The reason for that might be because the learner's deep involvement in the vocabulary learning process from search in a traditional dictionary is more conducive to the long-term memory of vocabulary than search in translation apps [20]. Therefore, the users of digital translation technologies might be less likely to recall and use the word in the future [21].

4. Conclusions

In conclusion, social media was first introduced as a weblog writing community such as "Open Diary" founded based surge of homepages in the late 1990s. The creation of Myspace in 2003 and Facebook in 2004 added to the popularity of this technology. Although the general categorization of social media would be Social Networking, Photo Sharing, Video Sharing, Interactive Media, and Blogging/Community Building, the top four kinds of social media that students thinks is helpful to education are web-based or cloud-based collaborative writing platforms, information sharing websites, Professional networking, Tracking and managing academic schedule apps. Which, collaborative writing platforms such as google docs played an important role in increasing the efficiency and productivity of students and educators. Its function to allow multiple writers to write at the same time breaks the cycle of write-review-correct. It was shown that it changed the means of communication for the students and the teachers in day-to-day classes. Google docs also give teachers the option to closely monitor students and provide feedback instantly. However, the possible limitation of this app this that there might be internet lagging or two writers working on the same sentence. The other kind of app that the study explored in the article is computer-aid translation. In the modern day, the computer-aid translation uses both machine translation and translation memory technology to maximize the efficiency and accuracy of the translation. Translate memory helps with the accuracy of the translation by access to a translational database and could select words based on context and profession. This has improved the accuracy of the translation and benefits education for medicine, pharmacology, biology, and other fields with a lot

of professional terminologies drastically. In research, it was shown that the productivity of the class is increased because of the accurate translation of professional terms by translation apps as well.

Based on the above discussion, scholars and educators still have a lot to learn about social media and online learning apps. As more and more students start to use social media technologies for the study, the influence of social media and learning apps would only increase. A few suggestions for the educators and the students could have to be made based on the study. Educators should allow for more opportunities for social media and learning apps in the classroom. There are thousands of social media and learning apps and many of them could benefit students in various ways. Educators should take the risk of letting students choose the study methods that best fit them. Educators should also know how to select the apps that correspond with the content that they teach. For example, web-based or cloud-based collaborative writing platforms is good for group projects or cowriting classes, but it is not useful for online searching or information sharing.

However, there is still a lot to explore on social media and learning apps that need further research. Research could explore the relationship between different kinds of learning apps and how they could work with each other. For example, how translation technology could work with social media to keep the translation updated, or online writing collaboration tools could work with calendar apps to improve writers' productivity. This kind of intersectional research is often neglected. In addition, there is a vast discrepancy between the general categorization of social media and how educators' categorization of social media. Future researchers could analyze the pros and cons of each categorization under the context of education or find a new method of categorization that combines the previous two. Overall, there is still a lot to cover until educators to fully understand social media and learning apps.

References

- [1] Best, P et al,(2014). *Online communication, social media and adolescent wellbeing: A systematic narrative review*, *Children and Youth Services Review* 41: 27-36, <https://doi.org/10.1016/j.chldyouth.2014.03.001>.
- [2] Young, B. (2006) *A Study on the Effect of Internet Use and Social Capital on the Academic Performance*. *Development and Society*, 35(1) 123. <http://www.jstor.org/stable/deveandsoci.35.1.107>
- [3] Kolhar, M., Kazi, R., & Alameen, A. (2021). *Effect of social media use on learning, social interactions, and sleep duration among university students*. *Saudi journal of biological sciences*, 28(4), 2216–2222. <https://doi.org/10.1016/j.sjbs.2021.01.010>
- [4] Kaplan, A, Haenlein, M (2010) *Users of the world, unite! The challenges and opportunities of Social Media*. *Business Horizons*. 53 (1)<https://doi.org/10.1016/j.bushor.2009.09.003>.
- [5] Dahlstrom, E. (2012). *ECAR study of undergraduate students and information technology, 2012*. EDUCAUSE Center for Applied Research, Retrieved from <http://net.educause.edu/ir/library/pdf/ERS1208/ERS1208.pdf>.
- [6] Smith, E.E. (2017) *Social media in undergraduate learning: categories and characteristics*. *Int J Educ Technol High Educ* 14, 12 <https://doi.org/10.1186/s41239-017-0049-y>
- [7] Anderson, T. (2008). *Towards a theory of online learning*. In T. Anderson (Ed.), *The theory and practice of online learning* (2nd ed., pp. 45–74). Retrieved from <http://www.aupress.ca/index.php/books/120146>.
- [8] Smith, E. E. (2016). *Exploring undergraduate perceptions of meaning making and social media in their learning* (Doctoral thesis, University of Alberta, Edmonton, Canada). Retrieved from: <http://hdl.handle.net/11205/271>.
- [9] Mansor, A (2012) *Google Docs as a Collaborating Tool for Academicians*, *Procedia - Social and Behavioral Sciences*, 59, <https://doi.org/10.1016/j.sbspro.2012.09.295>.
- [10] Jeong, K (2016) *A Study on the Integration of Google Docs as a Webbased Collaborative Learning Platform in EFL Writing Instruction*. *Indian Journal of Science and Technology*, Vol 9(39), DOI: 10.17485/ijst/2016/v9i39/103239
- [11] Savelyeva, N(2021) *Pedagogical features of the organization of competence-oriented work and interaction of students with the use of google-doc tools*. *Applied Linguistics Research Journal*. doi: 10.14744/alrj.2020.53824
- [12] Chu, SKW et al (2009) *MediaWiki and Google Docs as online collaboration tools for group project co-construction*. *The 6th International Conference on Knowledge Management, Hong Kong*, 3-4. 1-14 <http://hdl.handle.net/10722/127073>
- [13] Zhou, W et al (2012) *Google Docs in an Out-of-Class Collaborative Writing Activity* *International Journal of Teaching and Learning in Higher Education*, 24:3 359-375 ISSN-1812-9129

- [14] Broin, D.Ó., & Raftery, D. (2011). *Using Google Docs to Support Project-based Learning*. *AISHE-J: The All Ireland Journal of Teaching and Learning in Higher Education*, 3.
- [15] Qichen L et al, (2022) *A survey on computer-aided translation software under the background of AI*. *Computer Era* 8 DOI:10.16644/j.cnki.cn33-1094/tp.2022.08.010
- [16] Bowker, L (2002) *Computer-Aided Translation Technology: A Practical Introduction*. University of Ottawa Press. *Didactic of Translation Series*
- [17] Xiaojing, G (2021) *Using Netease Youdao Dictionary as Part of Online Medical Training—Taking the Three Year Nursing Program as an Example*. *Gansu Health Vocational College. Overseas English*. ISSN 1000-5039
- [18] Winkler, B. 2001. *English learners' dictionaries on CD-ROM as reference and language learning tools [J]*. *ReCALL*,13(2):191-205.
- [19] Sharpe, P. A. 1995. *Electronic Dictionaries with Particular Reference to the Design of an Electronic Bilingual Dictionary for English-speaking Learners of Japanese [J]*. *International Journal of Lexicography*, 8(1):39-54.
- [20] Stirling, J. *The Portable Electronic Dictionary: Faithful Friend or Faceless Foe? [J]*. Available: <http://www.bankgatetutors.co.uk/PEDs.pdf>.
- [21] Xinpeng, W (2010) *The Education of Users of Electronic Dictionary*. *Journal of Chifeng University*. 23 DOI:10.13398/j.cnki.issn1673-260x.2012.23.022