

The Use of Social Media Technology in Educational Research at COVID-19 Time: Accounts and Problems

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Abstract: The Covid-19 outbreak has impacted research since the government employs social distancing and physical distancing. As a matter of fact, the data collection process should use technology. This article aims to reveal the use of social media technology as a research tool during the pandemic time. This study focused on the potential and challenges of using social media in the educational research field. Basically, social media can be freely used by various circles, both in terms of cost and time spent. In addition, looking at the economic conditions during the declining Covid-19 pandemic, making social media can be used as an alternative tool compared to other technological platforms. Based on these facts, the authors are interested in studying social media as an alternative research tool in favor of the Covid-19 policy. This study revealed the high potential of social media use (YouTube, Instagram, and WhatsApp) in educational research. The low-cost feature of social media made this alternative should be considered although having some challenges. This study promoted social media as one of the alternative troubleshooting educational researches during the COVID-19 period. The research hopefully contributed to the development of technology for research at the limitation of the COVID-19 pandemic.

Keywords: Educational research; Problems; Social media

Introduction

The COVID-19 outbreak has given a significant influence on various aspects of human life. To prevent the massive virus outbreak, many countries have decided on a social restrictions policy for all infected areas. The restriction potentially causes various problems. In some developing countries where economic growth depends on labor-intensive industries, most of the workers potentially were laid off, and the rest of the small and medium business enterprises will stop operating (Rinaldi et al., 2020). This policy will undoubtedly affect money circulation decrease and will finally get an economic recession. To restore economic growth, many countries implement a new normal policy by permitting some influential sectors to operate by strict health procedures (Kemenkes, 2020). This policy emphasizes the reopening of initially closed activities during the social restriction.

Although by economic motif, the policy was now implemented in many sectors, including education. In

the new normal period, schooling is conducted online, and possible for blended learning is only for safety areas (Kemendikbud, 2020). Research activities were also impacted since the new normal policy will give a big barrier facing interviewees and other research subjects. Educational research, which generally focuses on school interaction, is also potentially facing the accounts and problems. These situations need adaptive educational research enterprises in methods. The decreasing economic growth, which also sways the educational research budget, has turned out to be the main reason for this shift.

Research is conducted in very diverse settings, but it is primarily led or driven by educational context (e.g., university). Universities tend to create an ideal setting for research enterprises and attract funding from government and private organizations. Educational research has been impacted in some dramatic and challenging ways by the COVID-19 outbreak. Many educational researchers try to describe the effects that the COVID-19 pandemic inflicted upon the educational

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community and focused attention on the research enterprise.

This paper contributes a response that may be made by researchers to the changing research landscape. Facilitating learning is now still conducted through internet-based resources and shifting into a non-physical classroom (Nadeak, 2020). Consequently, it creates a change in educational research to follow the paradigm. Search engines, open courses, websites, mobile apps, e-library, and social media are some massive familiar internet platforms that can facilitate learning. Well-known designed, interactive, and accessible principles induce the technology to come into a necessity (Karampiperis & Sampson, 2020) and should also take into account the educational research work.

Social media as a learning platform is recognized as one of the preferences of internet-based learning. It can be a source of advanced adaptive tools since facilitates teachers and learners to be connected anywhere and anytime. Social media bridge the communicative obstacles to be more informal, collegial, and interactive environment (Bozarth, 2010). The implementation of social media changes judgments about learning activities produced and disseminated in the public domain into new information for the community (Etter et al., 2019). The accessible and free characteristics of social media drive individuals to use it massively (Allcott et al., 2020) as well as the casual communication feature that attracted people to prefer other various developed tools (Moor et al., 2011). Educational researchers should also take the potential as an alternative (Wilson et al., 2012).

During rapid technology growth, a new technologically literate generation grows with networking skills needed and absorbs existing information through social media. The data revealed that 15-20 percents of the Indonesian population are internet users (Pratomo, 2019) and the most elevated portion (85%) was the school-aged user. It means that educators have a big potential role in optimizing and guiding the user into educational usage. Social media utilization as an education platform is deemed necessary since the high potential users and become more familiar since completing the user needs for information updates, live broadcasting, chatting, and entertaining features (Obi-Ani et al., 2020).

The problem of social media use also exists instead of its positive impacts. The potential for rapid information distribution can produce misinformation (Allcott et al., 2019) and hoaxes (false information) (Levin, 2017). Without proper guidelines and management, social media will be tricky. Information bias also becomes a big challenge when the educational researcher employs social media as a tool. To seek

proper implementation, the researcher proposed to identify the potential of the performance of social media as a tool of educational research. This study will contribute to the existing consideration of social media use in educational research during social restrictions due to the COVID-19 pandemic. By this exploration, it will hopefully educate researchers on the consideration of using social media as an alternative tool in research.

Method

The method of the research was following the general guidelines for the methodology of the literature review. It attempted to integrate what others have done, criticize previous scientific works, build bridges between related topic areas, and identify issues in a study to be new information (Cooper, 1998). The steps in conducting this research were collecting data with related topics and themes, analyzing relevant data and theories, describing the analysis results, and deducing or drawing conclusions consecutively. In the first stage, the researcher collected data about social restriction, educational research, and social media use from books, websites, and related journal articles. The researcher analyzed the data gained and described the analysis results in a rational model of description and, finally, formulate conclusions from the analysis result conducted (Fink, 2014). This study limits social media use to WhatsApp, YouTube, and Instagram platforms.

Researchers conducted the literature review following steps in the Figure 1. The researcher followed the methodological steps and excluded the perform meta-analysis output since focus on descriptive instead of statistical combination result.

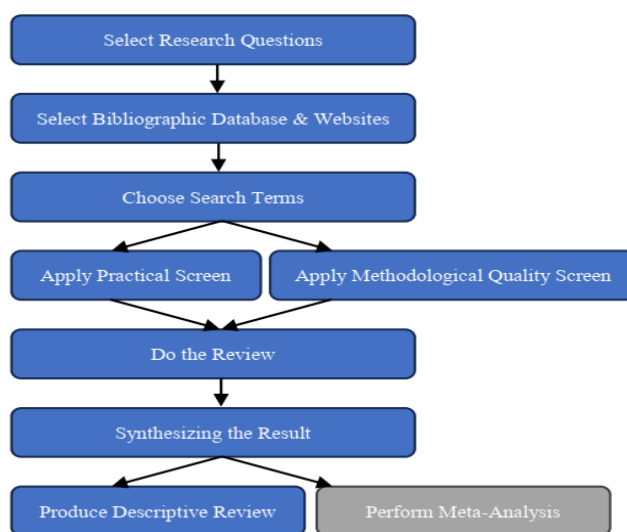


Figure 1. Steps Conducting Literature Review (Fink, 2014)

Result and Discussion

Educational Research Challenges in COVID-19 Outbreak

Governments have had to restrict people's movement and have required quarantining or isolating COVID-19-infected or suspected people under medical supervision. Moreover, the public has been required to familiarize themselves with various precautions such as social distancing, hand washing, and limiting or eliminating person-to-person contact with people. These conditions rise a number of consequences, including restrictions upon interaction with other people, limits on travel, and changes to schooling. Redirection of research focus and rationalization of research projects should be executed (Barn, 2020; Amano-Patiño et al., 2020). Medical and epidemiological topics have been highly demanded, so these research sectors have had to be bolstered with massive funding and significantly increased (British Council and Oxford Economics, 2012; Grossi et al., 2020).

The topic of the reopening of schools, online learning, COVID-19 protocols in the educational community, pandemic adjustment curriculum, and new educational modes development in the post-COVID-19 era will be some alternatives for redirecting educational research priorities (Bapuji et al., 2020). Redevelopment of research collaboration efforts also needs in this pandemic time. Although cross-institutional collaboration should remain an important part of the strategies (Salim & Waterworth, 2015; Waterworth, 2021), readjusting educational research domestically has diverted the researchers' attention since problems with communication technology. In an educational context, a face-to-face meeting is regarded as essential to team bonding—especially with research partners abroad (Croucher & Locke, 2020).

Social Media in Social Restriction Period

The government tried to maximize the online implementation for schooling to stop the COVID-19 spread chain in severely affected areas. Therefore, educators, students, administrators, as well as educational researchers, should maximize the existing use of social media tools to support the policy, especially to still connect with each other. Social media, as a communication medium, create highly interactive platforms and enable educational components to share, collaborate, and modify content synchronously (Hussain, 2020; Alomiry, 2022).

In terms of educational research, social media will create connections between researchers and the subject of study as well as capture the ongoing interactions between educational components. Integrating social media in an educational environment may generate new

forms of communication and emotional impacts (Greenhow & Lewin, 2016) and encourage a wide range of research subjects through its popularity (Balakrishnan & Gan, 2016). Social media features can create online group discussions, idea sharing, and promote active interaction between educational actors. The researchers should divide which procedure of research employs and select the feasible social media as a tool in educational research. Thus, defining the data taken from social media as primary or complementary data is also essential. Live streaming feature equipped on YouTube, Instagram, and WhatsApp is very beneficial during the social restriction period (Ahmad & Murad, 2020). The researcher should also consider the selection among those three social media options based on the subject preferences.

YouTube as an Educational Research Tool

By creating an interactive and fully customizable experience, YouTube has revolutionized as the most online video platform used worldwide. The video content is highly customizable by the creator to be thematic and freely accessible depending on user-generated needs (de Boer, Neal & Westlake, 2015). With those features, researchers can employ YouTube to give asynchronous instruction during the research process (Social Media Research Group, 2016). YouTube aims to share videos with others, and it can also provide a platform to respond to other questions asynchronously.

Researchers can manipulate the interviewee or subject to answer his question by reaction video (reply by video). By video, the researcher can also get emotional data or expressions during interviews and observation without physical presence at the same time and place. In classroom action research, an observer can explore the class situation through video recordings without a presence in the classroom. The virtual presence of the observer will not disturb the teachers' focus on their treatments. Moreover, it also provides a large number of educational videos (Buzetto-More, 2014) that can be a huge source for a literature study. Users are allowed to download, view, and share videos of various contents by limitation, so there will be substantial and helpful to sort out the related videos.

By comment feature and other forms of interaction (including like and dislike), it can be optimized for gaining responses to the essay questions thus like or dislike button functioned as a scale (yes or no question). The different ways to communicate and collaborate using social media will make the research subject feel involved (Iqbal et al., 2019; Iwantara et al., 2014). YouTube was acceptable as an alternative medium for online communication in an educational setting. YouTube has a wide range of distributive abilities as

could reach abroad viewers in one video simultaneously, so that will be useful for snowball sampling researchers to get the prospective research subjects. The success of YouTube showed by the number of video viewers (Jackman, 2019; Walsh, O'Brien et al., 2019), so the researchers get the privilege to stop whether the number of research responses was sufficient.

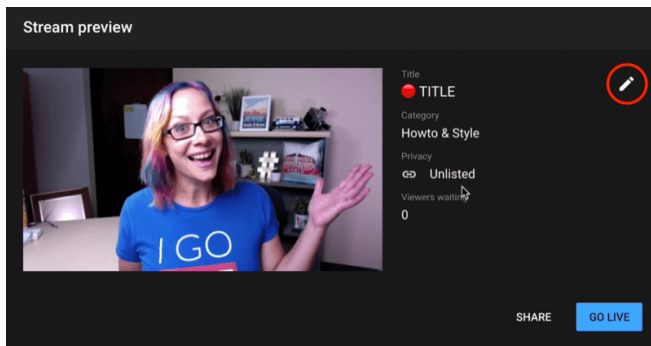


Figure 2. Analytic livestream feature on YouTube studio (Source: <https://www.socialmediaexaminer.com/how-to-easily-go-live-on-youtube-from-computer/>)

The use of YouTube in educational research will potentially face some challenges, such as content and management (Setiadi et al., 2019). To engage the research participants, the videos should be attractive since most social media contained many entertaining contents. YouTube has a violation policy to prevent the child and segmented users. The videos should follow the rules of appropriateness as they exhibit educational videos and age restrictions. Although YouTube provides its own search engine, unspecific video searches can produce large video displays and spin users in selecting an appropriate video need. To minimize challenges, the researcher should consider shortening the video duration. The professional editing and sorting of video will force the creator only to instill a brief, meaningful, concise, and explicit instruction video. Trying to create a specific channel, and renaming the video with a unique name (as well as a complete description) will help the viewer quickly find and mention the research purposes and address the targeted research subject.

Instagram as Educational Research Tool

Instagram, as one of the popular social media platforms, is now not only a social media functioning as photos sharing but also an innovative platform for videos and a short live story (Miles, 2019). The power of photo sharing makes the user engage in communicating. Instagram now has a video story feature to make it compete with YouTube. It seems less feasible than YouTube, but the photo as Instagram's primary element gets more attention to the story behind it. The attractive

feature of Instagram should see as an opportunity to be a research tool. Instagram has an exclusive feature to communicate by direct message to respond instead of likes and comments in a post. Instagram story is now equipped with a polling feature that can easily use by researchers on smartphones. A mobile-friendly photo is an effective and efficient tool to involve the research subject.

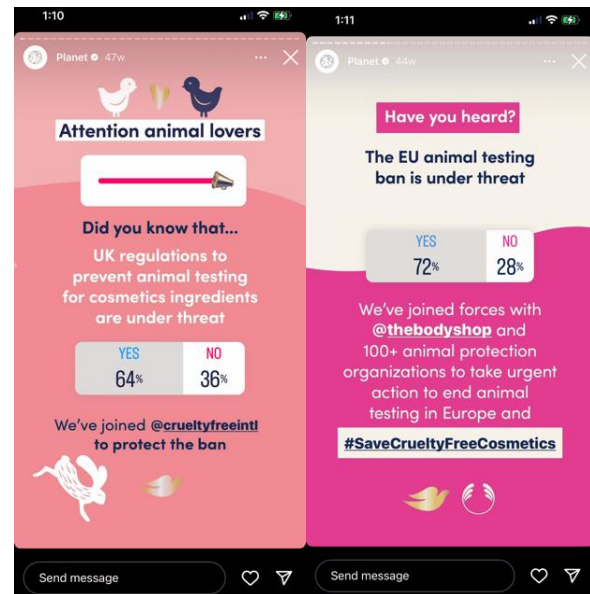


Figure 3. Examples of instagram poll feature result (Source: <https://blog.hootsuite.com/instagram-poll/>)

However, despite its popularity among adolescents, Instagram has high potential visual data gathered to spread the infographic information in only one page of the picture to disseminate the result of social research efficiently (Edwards et al., 2013). Instagram is also linked with other image-based creation platforms that make it famous and reachable. Instagram facilitated only limited space to write a caption (Shazali et al., 2019). In that way, the researcher mostly attracted the potential research subject through a graphic and accompanied by good writing skills (Thaariq, 2020).

To minimize the challenge of limited font characters, creating good content of brief and packed photos or videos attractively can be a solution. Further, organizing the management of each picture by the same theme and Twibbon feature will also benefit. The adorable 1-minute video or Instagram TV, a longer video post feature can be optimized to reach the audience. Combining attractive pictures, concise and curious wordings, and short and longer videos will create better alternatives for communication among the researcher and potential research subject involved (Thomas & Park, 2020).

WhatsApp as Educational Research Tool

As one of the popular messaging applications, WhatsApp allows users to send and receive not only text messages but also files, documents, images, videos, audio, and location information (Church & de Oliveira, 2013; Kaufmann & Peil, 2020). Texting becomes an old-fashioned way to communicate, but then WhatsApp innovates with features of group communication. A WhatsApp group (WAG) becomes a tool to make focus group discussions. The WAG direction is given by the group administrator, which has the authority to add or remove the group members. The leadership group discussion is a feasible way in many kinds of educational research (Ruths & Pfeffer, 2014). A private group also give discussion group freedom and guideline to focus on the discussion topic. Besides, all group members can be muted and unmuted by the leader to create smooth discussion and equality in response. Nowadays, WAG is limited only to 200 members, an adequate number of participants for medium-scale educational research subjects. In WhatsApp, users allow receiving notifications for each message sent or mute the incoming alerts for 8 hours, a day, or a full week. It is also useful for scheduling long-term research and keeps the discussion or collecting data focus (Bouhnik & Deshen, 2014).



Figure 4. Group call and polling of WhatsApp features
(Source: <https://about.fb.com/news/2022/12/improved-calling-features-on-whatsapp/>)

As a research tool, WhatsApp provides an easy-to-use interface supplemented by a live story. A limited time of text, pictures, and video can be uploaded in the live story can also give engagement to the research participants to respond asynchronously (Tufekci, 2014). Furthermore, WhatsApp compresses the quality of the picture sent in the application to make a compatible and light operation. WhatsApp is usually used to distribute slight and rapid learning materials in some provided extension formats file. The complete sharing file feature becomes the most considerable factor the educator uses as a medium in education (Kartikawati & Pratama, 2017; Suana et al., 2019).

As a texting app, WhatsApp interaction should be elaborated since the asynchronous approach of sending messages and instructions will potentially challenge getting a real-time response from participants (Susilo, 2014). It also revealed participants' boredom to read a long text instruction even though the administrator can utilize voice notes. Responding by texting is also a challenge for a critical discourse analysis that needs contextual material and avoids mistyping (Volkova et al., 2015). To anticipate the process, providing a longer time to respond will be powerful in applying WhatsApp as a research tool. The researcher also can maximize the use of the video call feature to gain a direct and real-time response from a maximum of 8 participants. As previous social media mentioned, brief and concise instruction should be the primary concern in optimizing all WhatsApp features.

Conclusion

Social restriction policy during the COVID-19 pandemic time will positively influence educational research activity. Optimizing internet-based technology to still connect with the educational community is affordable for everyone. Social media has become one of the platforms that give researchers the potential to save research costs during economic growth decreases. Many social media applications are affordable to use for particular purposes. The popularity and flexible use of social media should be the fundamental consideration of educational researchers to select a social media platform. The open and massive use in the educational context proves that social media has become the most powerful to still bridge the community during social restrictions due to the pandemic. YouTube, Instagram, and WhatsApp provide a specific feature to be maximized. Many ways of responding to others in such form as like, comment, texting, voice note audio and real-time video story becomes a powerful tool in educational research. Limited and segmented audiences and group discussions can address potential target participants. YouTube, with its powerful and wide-range video-based communication, has its own potential and accounts. In such a way, Instagram, with persuasive and attractive image instruction, also has its unique concern as well as WhatsApp by its complete file sharing and texting-based-communication accounts should be considered. Creating explicit instruction, leadership discussion, and quick responses will be beneficial for implementing any social media platform.

Author Contributions

In this research, Hanif performed conceptualization and analysis of the original draft. Salim, Widjojoko & Tirulina conceived the idea and wrote up some introductory

information and discussion of the research paper. Fatihatusyidah developed and reviewed the manuscript. Conceptualization, Hanif and Salim; methodology, Hanif; software, Hanif; validation, Hanif and Widjojoko; formal analysis, Hanif, Salim, Widjojoko and Tiurlina; investigation, Hanif; resources, Hanif; data curation, Hanif; writing – original draft preparation, Hanif; writing – review and editing, Fatihatusyidah; visualization, Hanif; supervision, Hanif; project administration, Hanif; funding acquisition, Hanif. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

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