Facebook as Potential Tool for Qualitative Source of Data

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Abstract

The Internet is increasingly being used for social research, especially for obtaining qualitative data. Social environments are among Internet's greatest information-rich resources. Such environments preserve a depth of information about their users and their interactions. Textual content are now part of the massive amount of qualitative material available on the Internet. These social network sites can provide a unique insight into people's experiences. This paper provides an overview of recent literature that describes studies that use Facebook as a data source. Then, researcher discusses an example of data collection and analysis from the study, which employed Facebook as a secondary data source. We conclude that by discussing some key characteristics of Facebook and highlighting some of its strong points, we propose that social networking sites are an important part of informant lives and have the potential to be used in a variety of future studies, both qualitative and quantitative.

Keywords: *Data collection, Facebook, Qualitative*

Introduction

The Internet is increasingly being used for social research, especially for obtaining qualitative data. According to Mastykash et al. (2018) social environments are among Internet's greatest information-rich resources. Such environments preserve a depth of information about their users and their interactions. Most of this content is public, permanent, and searchable. Textual content including videos, postings, tweets, social networking comments, and so forth are all now part of the massive amount of qualitative material available on the Internet. As a result, there seem to be no standardized methods for obtaining online qualitative data given the different data types (Hewson, 2014). For qualitative analysis, the platforms of social media on the Internet should be categorized using the following characteristics; content accessibility, completeness of the user's page description, and the existence of main nodes (Mastykash et al., 2018).

The term "social media" refers to a broad category of Internet services founded on Web 2.0 concepts that enable site visitors to produce and distribute online content (Van Dijck, 2013). Social networking sites (such as Facebook and Instagram), wikis (such as Wikipedia), multi-media sharing spaces (such as Flickr and YouTube) and a variety of other shared content are among the central technologies and services that contribute to Web 2.0. Moreover, the nature of mobile devices, which enable these platforms and services to be accessed while 'on the go,' has, leaves the illusion that Web 2.0 is virtually 'always-on'. Accessible, connected, and reachable accounts, as well as content sharing sites, characterize these social networking sites. Given the wide range of options available, from tweets to video content sharing, it's obvious to see why social media sites place such a focus on user behaviour, as well as their links and social networks. The impact of social media discussed has triggered an increased interest in academic study on these platforms and the phenomenon which they can represent.

In the social media world, Facebook is by far the most powerful player. The number of active Facebook users has risen steadily over the last decade, from 1.34 million in 2014 to more than 1.6 billion in 2020 (Internet World Stats, 2020). Furthermore, according to statistics, nearly half of Asians already use Facebook by December 2020. Moreover, approximately 74% of Facebook users visit the site on a regular basis and spend an average of 38 minutes per day on the site (Aslam, 2021), where they can find information, entertainment, news, connect with loved ones, and support their offline lives (Spiliotopoulos & Oakley, 2020).

The usage of social media platform such as Facebook as a data collection method has been found to be useful because the social media platform contains authentic descriptions of people's experiences (Baker, 2013; Barnes, 2014). In addition, the number of studies proposing different techniques and methodologies to exploit this content as data for researchers in different disciplines is also growing.

This paper is structured as follows: First, we begin with a discussion on the Facebook as a research tool in data collection. Then, we present a brief literature review on why Facebook was chosen as the data collection tool. Following our discussion of this social media, we discuss

the data collection applied for our study and then, we present the analysis for the study. Finally, we draw the conclusion that social media, in particular Facebook, have potential for many future research regardless qualitative or quantitative.

Facebook Platform as Research Tool for Data Collection

Facebook is a relatively valuable source of qualitative data for researchers because it is used to perform a major part of people's social lives (Franz et al., 2019). Numerous studies ranging in topic from studying the user behaviour (Spiliotopoulos & Oakley, 2020) and cultural values (Abbas & Mesch, 2015; Błachnio et al., 2016) to identify location (Sharma & Anand, 2020) have incorporated data from Facebook. Furthermore, some researchers have used Facebook to recruit informants (Sinclair & Grieve, 2017; Whitaker, Stevelink, & Fear, 2017) or to perform online surveys of the wider population (Grow et al., 2021). These methods are especially promising because they are much simpler, less expensive, and allow better access to the targeted group (Rosenzweig et al., 2020). It also facilitates data collection by keeping reliable records of informant backgrounds, personal interactions and behaviours (Kosinski et al., 2015). These data can be processed subjectively in a brief, accurate, and minimal way with informants' prior consent.

Facebook Platforms Features

As this Facebook platforms present data from a variety of forms, giving researchers with unique user experiences and opportunities, it is important to provide an overview of Facebook's features before diving into the literature review. This seems to be vital since platforms are important both in terms of the social activities they can support and in terms of the research possibilities they provide to researchers. It makes little sense nowadays to talk about social media study that is unique but has no relation to a real-world platform.

Facebook is made up of a collection of interconnected profile pages where users can post a myriad of information about them and connect their accounts to the accounts of others. All pages have social features including links to friends' pages, membership in social networks, and an online discussion forum named the wall which friends can leave notes for the owner. A "message" system which enables for private discussion and a "wall" system that provides for a somewhat public medium of interaction are two major aspects that facilitate communication (Grimmelmann, 2009). Though most details in profile pages is kept private by default, details on pages, special profiles for businesses as well as brands is made available to the public. This basic difference has lately been blurred by recent service developments that enable users to select the target audience for every post on a post-by-post basis (e.g. some/ all Friends/ Public) (Wilson, Gosling, & Graham, 2012). Since the vast majority of users only share content with their "Friends," a current research on public contents posted on Facebook is nearly useless. When working with statistical techniques to contents (posts, images, videos, links, and events) posted on Facebook by users or groups, some of the differences between profiles and pages exist.

The main aim of Facebook is to use the status update function to keep track of personal activities. A status update is a short, posted virtual diary that is organised like an online forum and can be commented on by a user's Facebook network (or Friends). Even though Facebook status update did not provide a complete understanding of the online world of the informants, several authors (Barnes, 2014; Rife et al., 2016; Schneider & Harknett, 2019) insist that the update offers researcher with some informal learning regarding the informant's world and a viable approach over conventional methods. Most importantly, the Facebook status allows researcher to accumulate more information based on the number of discussions among the informants that took place twenty-four seven.

Facebook also has devoted a growing amount of attention to developing a set of privacy settings and, more recently, to making these settings more usable. Despite this, current findings on Facebook privacy policies showed that privacy settings, disclosure, and social capital differ depending on user intentions as well as the perspectives of particular social media sites (Shane-Simpson et al., 2018). The difficulty of Facebook privacy settings, on the other hand, is outside the scope of this article. Facebook, like any other social networking site, is just as successful as the content its users post. As a result, a design that promotes content creation enhances the user experience generally. Unintentional exposure of personal data, ruined credibility due to misinformation, inappropriate communication and abuse, risk to stalkers or perverts, misuse personal data by a third party, intrusion, and identity fraud are all possible privacy risks associated with sharing content and private information on Facebook (Ehondor, & Ogbu, 2020; Haigh, Haigh, & Kozak, 2018; Malik, Hiekkanen, Dhir, & Nieminen, 2016; Verswijvel, Heirman, Hardies, & Walrave, 2018; Wu et al., 2015).

According to Kosinski et al. (2015), if the next criteria are fulfilled using public Facebook profile data, it does not warrant respondents' permission. These considerations include: (1) it is fair to suggest that the individuals purposefully made the information public; (2) data are anonymized upon collection and no efforts are being made to de-anonymize them; (3) there seems to be no contact or interaction with the individuals in the study; and (5) no detail that can be traced back to a particular person, such as demographic characteristics and text or other material samples, is to be disclosed or used to explain the study's findings. User-generated text on Facebook, which can be supported by photos, videos, or emoticons, can be used to communicate subjective information not usually seen in traditional communications (Franz et al., 2019).

Studies on organisations, such as charity groups (Lucas, 2017) or political groups (Leigh, 2018), may be conducted by obtaining and assessing pages and group contents. In this study, the content analysis was conducted by reviewing and analyzing the communicative trends that took place on the DB Facebook pages. The content analysis is used to support the interview, especially for the purpose of triangulation. The analyses followed the theme analysis procedure by highlighting on the identified respective subjects or topics based on the number of quotes observed the DB Facebook Pages.

Literature Review

Facebook as Data Collection

The use of social media as a data source is a relatively new phenomena. Since these studies are quite multifaceted, it is hard to find a comprehensive and up-to-date articles that use this method. At the same time, we felt the need to frame collected papers within a more solid and well-known analytical framework.

Performing research on current events without taking into account the impact and use of social networking sites on modern communications would be unreasonable. With the emergence of social media, there has never been a better time to comprehend the informants in a study. The widespread use and accessibility of social networks (SNSs) in recent decades has unlocked the way to a plethora of subjective descriptions. Since beginning of the twenty first century, academics' interest in exploiting social media data has grown with so many social scientists recognizing the usefulness of digital content (Lazer et al., 2009). Barnes (2014), for example, used Facebook status updates to observe and record the experiences of college students. The status updates, according to Barnes, also offered data for a research on students' transition learning opportunities.

The quantity of research that collects data from Facebook and analyses it using content analysis is still minimal, but it is expanding. Baker (2013) discovered that social media sites were useful for conducting a longitudinal research. As part of the study investigating the reading and writing patterns of selected students transitioning from high school to university studies, she employed content analysis of Facebook status updates. Baker utilized Facebook to connect with her informants as they shifted from their high school to different universities across several geographical borders. Baker continued using a content analysis of status updates supplied by her informants to improve her investigation. Though My (2020) did not examine Facebook status update content, they did investigate the content type and media type of postings used to engage Facebook users on their brand page in order to better understand how to communicate with their followers. My (2020) discovered that by combining consumer engagement with interactivity elements, she was able to create a strong brand post. University students are expressing their student life on Facebook, according to Jenkins, Lyons, Bridgstock, and Carr (2012) and Raza et al. (2020). Selwyn (2012) utilized the data to predict how Facebook data may be used to explain informants' opinions of university in later studies. Selwyn proposes there is a loophole in the research where SNSs are left to only be SNSs after analysing the literature on the theoretical perspective of research into SNSs. To put it differently, education research has typically focused on how to use social media to improve university experiences instead than what is being communicated about the experience on social media.

Why Facebook?

Using Facebook as a data collection method was a great move. There are a variety of reasons why Facebook can draw the interest of researchers.

First, Facebook activities (including engaging with others, exchanging interests, and making status updates) will leave traces of real, measurable data in their wake. As a nutshell, the environment throws up plenty of new opportunities for analyzing human behaviour, which has traditionally relied on difficult-to-measure activities (such as network building) (Wilson, Gosling, & Graham, 2012). Researchers are usually criticized for neglecting to explore real behaviour, instead relying on theoretical or subjective self-reports of action and attitude, whereas behaviour proof posted on Facebook provides a credible source of observable traces (Baumeister, Vohs, & Funder, 2007; Furr, 2009). It is significant to mention that Facebook is a dynamic archive of human interaction, with information being broadcast on a regular basis. As we can see, Facebook is widely used by a variety of social groups and in a variety of places, making it a powerful source of information on human behaviour with environmental credibility that is difficult to substitute like most research design. Researchers can obtain data from Facebook's platform by using data gathered about the platform's users' characteristics (such as sex, age, and preferences). Acquiring face-to-face access to a group of medical doctors in the context of a researcher study, getting personal access to doctor's volunteer in virtual health community was difficult. It is critical to build a trusted relationship where one can perform an interview, particularly if it's done on a volunteer basis outside of the workplace. During the sampling process, it was discovered that doctors in medical fields are more unlikely to participate in the study, probably because a lack of time due to work commitments. Using Facebook as a secondary source of data collection got around this issue. Thus, issues that have long intrigued researchers' concern, including how people meet, how social networks expand, as well as how people express their personalities, can now be investigated in this new setting. According to the findings of the Grow et al. (2021) study, Facebook's platform may be useful to perform social research when further measures are taken to determine the reliability of the features being studied. They utilized standard evaluation metrics, such as classification accuracy, precision, recall, and the F1 score, to measure the reliability of Facebook's user category.

Second, Facebook's incredible success makes it a subject worth of investigation in itself. Facebook has attracted the attention of researchers because, in addition to representing established social processes, it is also inventing new ones by transforming how huge numbers of people connect and share information. Some authors perceive social media platforms as distinctly different from the real world (Mihailidis, 2014), but this is a false distinction; social media platforms have become an integral part of many people's daily lives in advanced communities, and their real and virtual worlds have become, at best, somewhat blended (Bodker, 2016; Page et al., 2016). As a result, if researchers want to completely understand modern social life, they should tap at social media networks. Since Facebook has been the most influential social networking site, it is a perfect place to start exploring into the trends, reasons, and implications of the social processes associated with its use.

Third, the emergence of social media networks has both positive and negative consequences for society, which must be closely studied. Issues related to security and information disclosure offset the advantages of Facebook, such as the fostering of social links. Since Facebook becomes more embedded into contemporary societies, it is important to observe and analyze the platform's profound effects on society.

Background on the study

Online volunteers (OV) used information and communication technologies (ICT) such as technological platforms (e.g. the Internet access) and devices (e.g. smartphones, computers, tablets) to perform their work purposes as well as volunteering purposes tasks. Doctors volunteering online through virtual health community (VHC) has facilitated their functions as they are not tied to specific locations (at home or in the office) and times (during or after office hours), hence increasing the flexibility of their engagement. However, past research has identified that the widespread use of ICT in a broad range of life aspect especially among employees may blur the boundaries between work and family domains (De Wet & Koekemoer, 2016) and potentially increases work-family conflict (Olson-Buchanan, Boswell, & Morgan, 2016). Principally, for doctors volunteering online who are tied to the 'nature' of their work, conflict may occur when they find it difficult to fulfil the different responsibilities with different priorities. An example of VHCs is the DoktorBudak (DB) project run by group of pediatricians and pediatric-related specialists working in Malaysia government and private hospitals, which supports children's health.

Data Collection for the study

This study used qualitative single case study research design and methodology. Data were gathered from three different sources; interviews, document reviews, and observing messages from the social media tools (the Facebook). The use of multiple sources of data allows the researcher to gather various historical, attitudinal, and behavioral issues. In addition, the multiple sources of data served as evidences in the development of converging lines of inquiry, known as triangulation (Yin, 2013). The primary technique of data collection method was the in-depth interview, in particular, the semi-structured interview.

The Research Instrument

The study's research instrument was a semi-structured interview, which allowed the researcher to deviate from a pre-determined set of questions. An interview protocol that consists of five main parts are prepared according to research objectives and designed before the actual interview session. In the context of this study, the research instrument is designed focusing on informant experiences in managing the border between work and family as well as the strategies they used in maintaining the border. The questions in the interview protocol were adapted from previous related studies such as those on work-family management, work-related technology use and volunteering work by Clark (2000), Erden, Von Krogh and Kim (2012), Janet

(2000), Nippert-Eng (2008), Othman (2013) and Ramos et al. (2015). The first part of the protocol consisted of introductory questions to confirm that the informants met the criteria that had already been defined for participating in the study. These questions were about the demographic of informants, which include name, marital status, occupations, organization, phone number and e-mail address. The second part were additional questions mainly for informants to provide brief information related to their work and family. The third part of the questions comprised of open-ended questions for the informants to reveal about their involvement, passion, and reason. The fifth part was about the challenges that informants experienced in managing their work and family while volunteering online. Finally, the interview questions were concluded by asking informants to share the challenges in using the Information and Communication Technology (ICT) to accommodate both work and family activities. In order to test the suitability of the questions, pilot interview was conducted with small group of members from the DoktorBudak virtual health community. The pilot interview was performed to address any problems that could lead to misunderstandings on the posted questions. Therefore, based on the pilot study, the questionnaire was improved, particularly by modifying or rephrasing repeated questions.

Observing Messages from the Facebook

The aim of this article is to discuss how Facebook can be used as a secondary data collection method. The decision to analyze the Facebook page was driven by the fact that it is the most popular social media site with their most readers. We informed the founder to get consent to collect data from the Facebook earlier before starting the interview session so that researcher could have sufficient time to understand the informant's experience being an online volunteering doctor. The collected data and information were used to elucidate further the meaning of the informants' responses. Since the Facebook page is public, researchers was able to view the Facebook data without any restriction.

The timeline for this analysis was between July 2016 and December 2017. Status updates, posts, and comments on the Facebook wall were reviewed for the content analysis. A total of 83 postings and 843 comments were included in the study. Users interacted on the Facebook page in two ways: first, the administrator could write on the wall; and second, the public could respond or provide comments to the Facebook page administrator's postings. Every posting in this study was categorized based on the suggestion made by Luarn et.al (2015), where the content of social media was classified into four main types: informational, social, entertainment, and remuneration.

Informational posts are intended to provide users with useful information while also encouraging interaction. A posting in this category may be where the administrator publishes new articles or other health-related material. This category also included posts by the DB administrator about the television or radio broadcast talk show invitation. *Social posts* are primarily intended to increase user engagement by inviting users to a particular event that has been shared by administrator. Postings provides sufficient meaning for obtaining user feedback on a topic. An online or offline health event that invites followers to participate is an example of

a post in this category. The majority of the social media posts on the DB Facebook page is in the form of posters and videos. *Entertainment posts* aim to impress social media followers in order to establish a connection with them through likes, shares, and comments. In other words, the higher the amount of entertaining content, as compared to posts with no entertainment elements, the more likely a brand would be revisited. *Remuneration posts* contain discounts, special offers and promotional offers. The aim of this type of content is to support the image of a brand and its products/services. To analyze the observation of Facebook pages, a standard content analysis table was created.

Other than categorizing postings by admin Facebook pages, the number of 'Like' button used by user was also observed. Between July 2016 and December 2016, there were 4766 "Like" on all admin posts, while 4493 "Like" were provided between January and November 2017. The 'Like' button allows users to show their support for newly posted postings without having to leave a remark. Everyone can see how people respond to Facebook posts by 'liking' them. The researcher, on the other hand, is unable to reveal who made the posts because the Facebook page administrator might be any member of the DB team. The researcher was able to monitor numerous interactions on the DB Facebook page in some way.

The researcher was also able to find out about offline events organised or attended by members of the DB teams. The data gathered reveals more about the ways in which informants communicate and the environment in which they interact (e.g. virtual or physical world). This allows for a better understanding of the interactions between the two spaces.

Data Analysis for the Study

Content analysis is used to analyze the Facebook data. According to Bryman (2008), content analysis is a method conducted to analyze documents, texts, and other various media. Besides published material, artworks, photos, diagrams, sounds, symbols, icons and perhaps even statistical records could also be used as material for content analysis (Krippendorff, 2004). Content analysis considers an amount of qualitative material and seeks to identify basic common threads and meanings which represented patterns or themes (Patton, 2015). The process of patterns and themes seeking is also known as pattern analysis or theme analysis. In this study, the content analysis was conducted by reviewing and analyzing the communicative trends that took place on the DB Facebook pages. The researcher used a passive analysis method (Franz, Marsh, Chen, & Teo, 2019) on Facebook whereby the information patterns and the interactions among users were observed.

The content analysis consist of six steps: (1) formulation of the research question or objectives, (2) selection of communication content and sample (3) developing content categories, (4) finalizing units of analysis, (5) preparing a coding schedule, pilot testing and checking inter coder reliabilities, (6) analyzing the collected data; which are based on the recommendation by Stempel (1989). In the first step, the analysis focuses on the content elements that are crucial to the study by providing a specific statement about the research problem or objective. The identification of the subject was addressed by analyzing the relevant communication material. The next step is to identify relevant communication material to address the research question,

as well as to decide the time frame that will be covered. The total number of posts, user comments, shares, likes, and the number of posts that occur on weekdays were manually collected to determine DB informant "engagement" in the Facebook platform. In the third step, the content categories were clearly defined boundaries within which the categories of data are coded for evaluation. They were derived from the research question and are included in the past literatures and associated studies. In step four, the unit of analysis for this study was DB Facebook posts. After reading the posts several times, the type of postings were discovered. Besides, the number of comments, shares and 'likes' also were used as part of the units of analysis for the study. Next step is the process of developing the coding schedule. For an early coding, main concepts in previous research were used. The data were manually coded and verified by one of the supervisors. Finally, the collected data was analyzed.

The results from the content analysis were then correlated to the responses of the interviews to address the research questions. The content analysis is used to support the interview, especially for the purpose of triangulation.

Conclusion

The use of Facebook as a data gathering tool is an emerging field in qualitative research because of the digital type of data and the volume of information accessible. Still, depending on the research aims and techniques, data may be analyzed quantitatively or qualitatively. Content analysis associated with manual coding of large datasets is particularly challenging due to the large volume of data involved. Researchers who use social media sites as a data source for their studies should develop a broad understanding of the platforms from both a cultural and technical standpoint. Becoming a part of the sites' groups could provide researcher with the fundamental platform experience. This is indeed necessary both for qualitative methods which demand some understanding of the environment as well as for quantitative methods. In contrast, regarding data analysis, a researcher's background is indeed important. Although the study areas are identical, the analytic viewpoint can differ greatly.

User-generated text on Facebook, which can be supported by photos, videos, or emoticons, can be used to communicate subjective information not usually seen in traditional communications (Franz et al., 2019). The broad implication of the present study is that Facebook may be used to benefit not only university students, but also any researcher seeking for some informal learning about the informant's world and a feasible alternative to traditional methods. Facebook's widespread use, combined with the convenience with which data can be collected over the Internet, makes it an attractive platform for social research. Most importantly, the Facebook status allows researchers to collect more data based on the number of discussions among informants that occurred 24 hours a day, seven days a week.

This study takes the usage of social media data one step further and uses it as evidence for framing informant's experiences, concluding that Facebook is a valuable source of experiential descriptions of human lives. The findings suggest that not only are social networking sites an integral aspect of informant lives, but they also have the potential to be used in a number of

future studies, either qualitative or quantitative. Although social networking site research is widely accepted, it has significant limitations in terms of whether or not the results obtained through this platform can be generalized to a larger population. This could be the emphasis of future research.

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