

Utilization of the Be My Eyes Application as a Communication Medium for Visually Impaired Individuals in Pertuni Yogyakarta

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Abstract

The development of the times requires all layers of society, including people with disabilities, to be able to use technology. Along with technological advancements and innovations, various applications have emerged, one of which is Be My Eyes, a technological innovation focused on visually impaired individuals. Be My Eyes is an application that facilitates communication between visually impaired users and the wider community. This prompted the researcher to explore how Be My Eyes is utilized as a communication medium for visually impaired members of Pertuni Yogyakarta. Using a constructivist paradigm and qualitative descriptive methods, the study aims to present interview results in a systematic and comprehensive manner. The research employs Computer-Mediated Communication (CMC) theory, focusing on Pertuni as the organization of visually impaired individuals being studied. Purposive sampling was used to determine the criteria for participants. Data collection techniques included observation, interviews, and documentation. The results indicate that the Be My Eyes application functions as a communication medium that assists Pertuni Yogyakarta members in interacting with one another, as well as with those outside the organization. Through video call services, the app helps explain images, distinguish colors, read labels/books, analyze surrounding objects, and supports various daily activities, enabling users to act independently and share information.

Keywords : Be My Eyes, Communication Media, Computer-Mediated Communication (CMC), visually impaired individuals, Pertuni.

INTRODUCTION

Humans are intertwined with technology, which evolves over time and alters life patterns (Daud et al., 2021). This means that technology significantly impacts human life, including those with disabilities. A disability refers to individuals who have physical or mental limitations that hinder their ability to perform activities effectively (Daryati et al., 2019). In Indonesia, there are 3.5 million people with disabilities including 207,087 individuals with visual impairments, 145,961 with hearing impairments, and 81,554 with speech impairments (Indonesian Ministry of Health, 2018). With the facts found, quoting from (Liputan6.com, 2022), that there are more than 2.5 billion people with visual disabilities need assistive technology, or applications that support communication. However, nearly one billion of them do not have access to these specialized tools. This makes it difficult for them to communicate. Appropriate technology-based assistive devices and alternative communication tools help people with disabilities interact and participate more effectively.

With advancements in technology, many innovations have emerged, one of which is "Be My Eyes." This application, launched on January 15, 2015, by Hans Jorgen Wiberg, offers various features that facilitate communication and interaction for individuals with visual impairments. Within 24 hours of its launch, the app attracted over 10,000 users. By December 2017, Be My Eyes was recognized as the Best App on Google Play in several categories, including "Most Innovative," "Best Daily Helper," and "Best Hidden Gem." Additionally, in May 2018, it received the Google Play Award for "Best Accessibility Award" (Be My Eyes, 2024). According to the author's analysis and observations, the app had one million downloads on the Google Play Store in 2024, with a rating of 4.5, indicating significant interest in its utilization.

The utilization of applications represents a form of communication media transmission supported by digital technology, embodying the principles of Computer-Mediated Communication (CMC) (Silvia et al., 2022). Theoretically, CMC involves the process of human communication through the use of two or more computers, engaging individuals in specific contexts to acquire information via computer media and the internet (Andrianto, 2022). This means that the internet has become one of the mediators for humans to

communicate and interact with each other. Therefore, cyberspace is always related to virtual communities, namely those who interact using computer technology (cyberspace-cyber community), because the interactions between them shape the space. In this study, researchers took the CMC theory to see how the Be My Eyes application can be a communication medium that helps visually impaired people with visual disabilities to carry out various activities in daily life to be used independently.

In this context, the availability of adequate facilities and services is essential for every community, including those with visual impairments. They are also deserving members of society who require proper support. With a substantial number of visually impaired individuals in Indonesia, particularly those aged 20 to 40, the organization “Persatuan Tunanetra Indonesia” (Pertuni) was established to support blind individuals in leading smart, independent, and productive lives (Pertuni, 2024). This organization has numerous branches across 34 provinces and 221 regencies/cities throughout Indonesia (<https://pertuni.or.id/>). The Pertuni website is a clear example of how the internet is able to support the creation of a communication medium that is a strong link to get information sources.

With the existence of an organization that menaungi Pertuni friends, researchers want to conduct a study that focuses on how the utilization of the Be My Eyes application, where there are two references that the author uses. The first research, by (Ahda et al., 2023) which examines the utilization of Google Classroom media for online learning for students with visual disabilities at Abdurrab University Pekanbaru. In this study, researchers made references to see how the utilization of digital media as a tool for visual disabilities. Furthermore, the second researcher, by (Narti, 2018) who examined the use of Whatsapp as a medium of communication between lecturers and students. The second study is a reference for researchers to see how a medium becomes a communication tool that is currently transmitting the world of technology.

From the data found during the observation, it is interesting to see how the utilization of an application as a communication medium. The focus of this research is to see how the utilization of the Be My Eyes Application, especially for friends with visual disabilities Pertuni Yogyakarta, to interact with others

and people outside the community without discrimination and stigma. Quoting from (Sindonews.com, 2013), Chairman of the Indonesian Blind Association (Pertuni) Ismail Prawira Kusuma said that the obstacle to achieving an active level of social life is the assumption that blindness is the same as illness. According to him, such an assumption is a barrier for visually impaired because it makes them considered weak, helpless and need to be pitied. Even doctors do not provide health certificates, thus minimizing the opportunity to work in certain places that require a health certificate. As a result, they prefer to remain silent and not interact. However, with the development of technology such as communication media applications, visually impaired people can become more independent. That is the focus of this research. The purpose of this research is to find out the utilization of Be My Eyes Application as a communication media for visually impaired , especially in Pertuni Yogyakarta.

METHODOLOGY

Paradigm is a way of looking at a research that is not only seen from the method, but also from the ontological and epistemological aspects (Pudrianisa, 2022). This research uses the constructivism paradigm, because according to (Sugrah, 2020) the paradigm studies something in real terms. Therefore, the constructivism paradigm is deemed appropriate as a qualitative foundation to view the social reality of blind disabilities. The method in this study uses qualitative with descriptive research. Where, qualitative is a method that is useful for answering research problems related to narrative data sourced from interviews, observations, and documentation (Novia & Alfida, 2022). The technique of determining the sources used purposive sampling by interviewing 3 informants with visual disabilities Pertuni Yogyakarta. This technique is suitable for use because it is a sampling technique based on certain considerations (Gaol & Rosito, 2023). The criteria are in the form of an age range of 20-40 years, with a minimum education level of SMA-S1, having experience using technology, and using the Be My Eyes Application for at least 1 year. Then the data was reduced, displayed, and presented in accordance with the research procedures. Descriptive data analysis model was used in this research.

RESULTS AND DISCUSSION

In this study, data were obtained about resource persons from Pertuni Yogyakarta as visually impaired who utilize Be My Eyes communication media. The first resource person (Taufiq, 26 years old) with a bachelor's degree in English is the Head of Pertuni's coaching communication network development and information technology. The second resource person (Anisa, 22 years old) with an undergraduate education in Islamic Counseling Guidance is a member of Pertuni. The third resource person (Bayu, 22 years old) with a Bachelor of Communication Science education is a Pertuni member. The resource person data will be displayed in Table 1 below.

Tabel 1. Research sources

No	Name	Age	Education	Job Description
1	Taufik Rahmadi Sitorus	26	S1 English	Student Informant 1
2	Anissa Widiastuti	22	S1-Guidance Counseling Islam	Student Informant 2
3	Bayu Aji Firmansyah	22	S1 Communication	Student Informant 3

Source: Processed by Researchers, 2024

RESULTS

Communication Media

According to (Sari, 2018), , advances in technology and communication media facilitate the delivery of information that greatly affects human life. Currently, communication media helps every individual, especially people with visual disabilities, to access and obtain information. Informants agree that the current communication media is very helpful for people with visual disabilities, Informaman 1 in a discussion conversation with researchers on August 12, 2024.

“At first I didn't know, but because I had difficulties, so I tried to find information and finally I used it to support finding work, etc. Then I shared it with Pertuni friends. Then I shared it with my Pertuni friends.” (Taufiq, August 12, 2024)

The same thing was also conveyed by informant 3 who explained that the utilization of the application is an effective communication medium to interact at this time.

“At first I was recommended when I took a computer course, so I just didn't try it, and it turned out to be really helpful..” (Anisa, August 12, 2024)

From the results of interviews with 2 informants explained that communication media is considered effective and plays an important role in the development of technology today, because a lot of information is easily accessed when using communication media assistance to find out information to support interaction, especially for friends with visual disabilities Pertuni Yogyakarta.

Be My Eyes

The Be My Eyes application functions as a communication medium that can help people with visual disabilities in their daily activities. This application facilitates interaction through the “Call a Volunteer” service. With this feature, visually impaired can connect with volunteers who are ready to provide visual assistance through real-time video calls. In addition, there is a “Be My AI” service, where users with visual disabilities can upload images to the application and this feature will automatically provide a description of the image (Be My Eyes, 2024). The Be My Eyes application is considered effective to use because it has various benefits which are justified by Informant 2, Anisa

“I often use this app to help me interact. For example, if I want to see the description of an image or photo, it's easier because the description is complete. Using the Be My AI feature, I also feel more independent because I don't need to ask other people.”

Informant 3, Bayu, also said the same thing that Be My Eyes is an application that helps in daily activities, one of which is for instructions in choosing books.

“Be My Eyes is really helpful. Usually when I am confused about a pile of books, there are five books for example, I use the video call feature service to ask for help from volunteers to find 1 book that I want to take.” (Bayu, August 12, 2024)

The same thing was also conveyed by informant 1 who explained that Be My Eyes is useful when visually impaired people need real-time volunteer assistance through video calls.

“In my opinion, Be My Eyes is very useful especially if we need real-time volunteer assistance. Through video calls, we can immediately get help, like when we are confused about choosing a shirt color. Even though it's simple, it helps those of us who can't see.”

From the results of interviews with 3 informants, they explained that Be My Eyes was considered effective and useful as a medium of communication for people with visual disabilities. The Be My Eyes application is easily accessible when visually impaired people need communication assistance, such as seeing image descriptions using the “Be My AI” feature. They can see something just by uploading a photo, and it will automatically be described in full to find out information. The “Call a Volunteer” feature can connect to volunteers, with one click, visually impaired can connect with all volunteers in the world who are ready to help with various obstacles experienced, such as finding stacks of books or reading labels. By utilizing the various features in this application, the visually impaired are much more independent in carrying out their daily activities.

Computer-Mediated Communication (CMC)

Computer-Mediated Communication (CMC) is the process of human communication through the use of two or more computers that involve humans in a certain context to learn information through computer and internet media (Andrianto, 2022). In addition, the global nature of the internet

makes access to information very easy (Indrawan et al., 2020). In detail, internet media communication in the process of use can be described as Computer-Mediated Communication (CMC) with the use of Be My Eyes as a digital communication medium, Elements in CMC Theory are divided into 3, Computer, Media and Communication.

CMC in the principle of communication is multifunctional, where communication can be used to influence, control, inform, find information and so on (Gora, 2019). This relates to the implementation of the “video call volunteer” feature on Be My Eyes which informs information or everything needed by Pertuni visually impaired . Next is Mediated, the general meaning of media is the process or means of something conveyed through its message. Therefore, communication is mediated through interaction with people. The intermediary in Be My Eyes is the media as a form of message or information delivery process from volunteers to visually impaired so that they get information related to something they want to know. Lastly, computers, almost all work and educational activities nowadays involve computers as work tools, and as a result, almost everything we do has something to do with computers. What's more, technological developments are bringing us closer to the kinds of face-to-face communication we've been using. It is in this way that computerization is driving so many areas of our lives. Likewise, people with disabilities, especially visually impaired , are dependent on computers or anything related to technology, such as smartphones. 1) Cyberspace is a globally connected, technologically supported reality that can be accessed with a smartphone. 2) Virtual communities exist more in the world of electronic communication than in the real world, such as the volunteer force that helps the visually impaired. 3) Interactivity is one of the most prevalent features of new media and has a special place on the internet. Through Be My Eyes, interactivity occurs between volunteers and the visually impaired in the process of communication and information exchange, in video calls. The existence of Computer-Mediated Communication (CMC), makes the world of communication experience great development and to be able to see how far communication media helps disabilities in carrying out daily activities properly. As said by the three informants that :

“If I didn't have the help of my smartphone and the internet, it would still be complicated for me to ask here and there, which would be a barrier to communication. But now it's easier because I can independently find out access to any information.”

Informant 2 also said the same thing, that with the existence of volunteers or virtual communities in the world of electronic communication, it helps visually impaired people to be able to get a variety of information.

“I use the volunteer video call feature for daily assistance when I need help choosing clothes, choosing makeup, choosing shoes, even when shopping in the market place, Be My Eyes volunteers are very helpful in accessing various things.”

Informant 3 also said the same thing, that technology is very embedded in daily life.

“Now I tend to need my smartphone around me more because I can easily read labels, study, find out new information and any help independently through communication media services that make it easier for us. Especially now that there is Be My Eyes, previously it was confusing to ask people for help because they were not always around us, now it is easy to need any help using the Be My Eyes application.”

From the results of interviews with the three informants, explaining that Computer-Mediated Communication (CMC) is a form of communication media transmission with the help of digital technology which is considered effective and useful as a medium of communication for blind disabilities today. With the existence of technology in the lives of people with visual disabilities, they can be more independent and develop in their own way, with a variety of different needs. As the help of smartphones and the internet currently helps Pertuni Yogyakarta's visually impaired to find access to information, the video call feature of volunteers who are ready to help choose clothes, choose makeup, choose shoes, even when shopping in the market place Be My Eyes volunteers really help access various things, visually impaired tend to need smartphones more because they can easily read labels, learn, find out new information independently through the communication media services

available today. Researchers felt that the information from the three informants was sufficient and answered all the questions and objectives in this study.

DISCUSSION

In this research, Be My Eyes can finally be utilized as a communication media for Pertuni Yogyakarta's visually impaired. The Be My Eyes application is a significant example of digital communication media designed to improve interaction and accessibility for people with visual disabilities. By utilizing technology, Be My Eyes not only functions as an assistive tool, but also as a platform that connects users with volunteers who are ready to provide real-time visual support. In the context of communication media, the app presents several important aspects that make it innovative and effective. The app facilitates interaction through video call services, which supports the needs of users. The app is considered effective because of the several features offered and also helps the visually impaired in various activities.

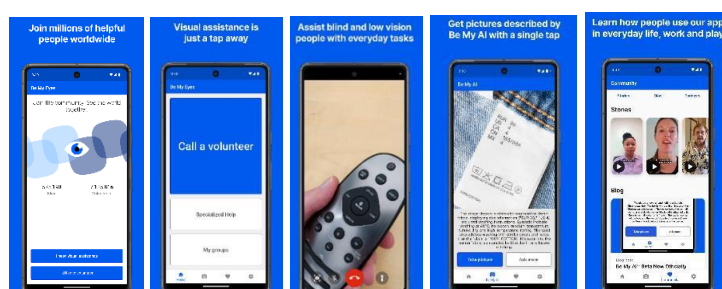


Image 1. Fitur Call a Volunteer (Source : Be My Eyes)

The first available feature of Be My Eyes is “Call a Volunteer” where visually impaired users can connect with volunteers who are ready to provide visual assistance through real-time video calls. This makes it easier for visually impaired people to get help whenever they need it. With one click, this feature can connect visually impaired with all volunteers in the world who are ready to help with various obstacles that visually impaired experience such as finding stacks of books, reading labels, choosing clothes, shopping, road directions and various daily activities. The second feature, “Be My AI”, allows visually impaired users to upload images to the app, and this feature will

automatically provide a description of the image. This feature also assists quickly and efficiently with visual content without the need to wait for volunteers. In addition, it can help visually impaired users with various daily activities, such as reading labels or books, describing images, identifying objects, navigating new environments, and empowering them to be more independent.

Thus, Be My Eyes was chosen by the visually impaired Pertuni Yogyakarta because it has various benefits, which were confirmed by the three informants. The informants revealed that by utilizing the various features contained in Be My Eyes, Pertuni Yogyakarta's visually impaired felt more independent in completing various daily activities. This shows that the Be My Eyes application is a medium that not only helps in communicating, but also serves as a source of information that is useful in developing the identity of the Visually Impaired. The relationship with the three elements of Computer- Mediated Communication (CMC) is very clear in the context of the results of this study. The three elements, computer, media, and communication contribute to how Be My Eyes creates a significant interactive experience for its users.

First, the computer element. Be My Eyes utilizes smartphones and computer devices as the main platform for accessibility. Users rely on these devices to connect with volunteers through the video call feature. As expressed by the informant, "If there was no help from smartphones and the internet, it would still be complicated for me to ask here and there." The advantage of the internet is that there are almost no time and space constraints. This statement shows that the presence of computer technology and the internet allows people with visual disabilities to access the information and assistance they need more easily. This is in line with the definition of CMC which states that communication can occur through the use of two or more computers, allowing individuals to interact directly despite being physically separated.

Second, the media element. Media in CMC serves as a means to convey messages. Be My Eyes acts as a communication medium that connects people with visual disabilities with volunteers through video calls and the "Be My AI" feature. It allows users to upload images and receive descriptions

automatically. Informant 2 stated, "I often use this app to help me interact, for example if I want to see the description of an image." This digital media not only conveys information, but also facilitates social interactions that enrich users' experiences, thus enhancing their independence.

Third, the communication element. CMC enables effective two-way interaction. In the context of Be My Eyes, communication between people with visual disabilities and volunteers occurs in real-time through video calls. This creates a more personalized and responsive interaction. As expressed by Bayu, "Usually when I'm confused about a stack of books, I use the video call feature service to ask for help from volunteers." This interaction not only provides visual assistance, but also strengthens the social connection and emotional support between users and volunteers. This shows that Be My Eyes is not just an assistive app, but also creates a supportive community network.

The findings in this study show that Computer-Mediated Communication (CMC) increases the independence and accessibility of information for people with visual disabilities. Interviews with informants revealed that the presence of smartphones and internet access has reduced communication barriers. This finding is in line with research by (Ahda et al., 2023) which shows that digital media, such as Google Classroom, enables visually impaired people to participate more independently in learning activities. The Be My Eyes app creates a similar pattern by allowing direct interaction through video calls, reducing barriers that previously existed. The first informant emphasized the importance of smartphones in accessing information, which was also evidenced by (Narti, 2018) in her research on the utilization of WhatsApp for effective communication between lecturers and students. This shows that choosing the right media, such as Be My Eyes, can increase the effectiveness of interactions for people with visual disabilities.

Previous research becomes a reference for researchers that in communicating it is necessary to choose the right communication media in order to create unidirectional and in line communication. Overall, the results of this study confirm that CMC, especially through the Be My Eyes application, has a significant positive impact on the lives of people with visual disabilities, increasing independence and creating the necessary community of support.

Without digital communication media, people with visual impairments and group members would find it very difficult to interact. The novelty of this research is that people with visual disabilities depend on applications to be able to communicate with fellow communities or outside the community. Because with the help of applications, visually impaired can carry out their daily activities.

CONCLUSION

The conclusion of this research shows that the Be My Eyes application is a communication medium that can be used to help visually impaired in Pertuni Yogyakarta. Not only communicating, this application also helps blind friends to explore their identity. That is what ultimately makes the Be My Eyes application effective for friends with visual disabilities. Through its innovative features, such as “Call a Volunteer”, a feature to call for help or connect with volunteers who provide visual assistance through real-time video calls, and “Be My AI,” which can describe images, identify objects, navigate new environments, and empower them to be more independent. Thus, the dependency between the Be My Eyes app and Pertuni's disability is very close. This is in line with the CMC concept that computers, media and communication are inseparable. Communication is multifunctional, which is where communication can be used to inform, seek information in line with the use of the “video call volunteer” feature on Be My Eyes which informs related information or everything that is needed by Pertuni blind disabilities. Next is Mediated, which is the process or means of something delivered through the message. The intermediary in Be My Eyes is the media as a form of process of delivering messages or information from volunteers to people with visual disabilities so that they get information. The last is Computer, almost all activities both work and education today involve computers, as well as people with disabilities, especially blind friends who depend on computers or everything related to technology such as smartphones. With smartphones and internet access, visually impaired can reduce communication barriers and be more independent in finding information. Suggestions for further research are expected to see how communication patterns between members in the Pertuni Yogyakarta member organization.

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