

# The Effectiveness Analysis of the National Digital Literacy Movement SiBerkreasi Program in Indonesia

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**Abstract.** This study aims to analyze the effectiveness of the Digital Literacy National Movement (GNLD) SiBerkreasi Program in the digital democracy era in Indonesia. The National Movement for Digital Literacy (GNLD) SiBerkreasi is a program from the Ministry of Communication and Information that aims to tackle the spread of negative content and fake news in digital spaces. The research method used in this research is descriptive qualitative using N-Vivo 12plus in processing 12plus research data with crosstab analysis visualization and Item Clustered by Word Similarity. Sources of data for this research were obtained from literature studies of journals, online media, and play stores. This study uses five indicators 5 (five) theoretical indicators of program effectiveness measurement by Sutrisno, namely Program Understanding, Right on Target, On Time, Goals Achieved, and Change. The results of data processing show the highest intensity of achievement of the program effectiveness indicators, namely the program understanding indicator with an intensity of 26.00% then the right target indicator with an intensity of 25%, then the Program Achievement indicator with an intensity of 19%, the Real Change indicator is 16% and the indicator with the lowest intensity namely the timely indicator of 11%. The level of effectiveness of the National Digital Literacy Movement (GNLD) SiBerkreasi program greatly influences the level of availability of healthy spaces in the implementation of digital democracy in Indonesia.

## 1 Introduction

The digital revolution has had a significant impact on life and requires digital skills [1]. Globally the digital revolution has impacted changes in education and various other processes so it has also created new challenges related to overcoming societal inequalities in dealing with digital technology [2]. Along with the development of the digital revolution, the use of digital sophistication is also used as an innovation by political parties in communicating [3]. This shows that the digital revolution has also had an impact on the process of implementing democracy, which has come to be known as digital democracy [4]. Digital democracy or electronic democracy is a democratic revolution that has been accepted globally [5]. The use of digital technology in democracy increases people's participation and welfare in democracy

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[6]. The digital revolution makes it easy to express appreciation and suggestions so that in a democracy, people can participate from anywhere and at any time without being limited by space and time [7]. The Efforts made by the Digital Literacy National Movement (GNLD) SiBerkreasi are by socializing digital literacy to various sectors, especially education, by encouraging the inclusion of digital literacy materials into the formal curriculum. SiBerkreasi also encourages the public to actively participate and collaborate in spreading positive content via the internet and be more productive in the digital world.[8].

The Digital Literacy National Movement (GNLD) SiBerkreasi also conducts socialization related to digital literacy and prevents hoaxes and online gambling by holding digital literacy awareness events in collaboration with local governments and local communities, and also conducts socialization related to digital literacy skills using the SiBerKreasi application which can be downloaded on the Playstore [9]. These efforts are in line with the vision and mission of the Digital Literacy National Movement (GNLD) SiBerkreasi, namely educating the Indonesian people in the field of digital literacy by increasing Indonesia's digital literacy, spreading positive content massively and sustainably, encouraging the millennial generation to be able to create positive content in cyberspace productively [10].

The 2021 Digital Literacy Index Survey shows that the status of the community's digital literacy index is at 3.49 on a scale of 1-5 which is included in the moderate category. It can be said that not a few people are still not wise in using digital technology [11]. This digital literacy gap ultimately has an impact on the availability of a healthy and safe digital space in the implementation of digital democracy in Indonesia [12]. In tackling this, the Indonesian government, namely the Ministry of Communication and Information of the Republic of Indonesia made several efforts, namely establishing a digital literacy national movement, providing a website that functions to report hate tests, and issuing laws related to punishment for digital crimes such as spreading hoax information and harming other people [13]. To overcome the problem of digital literacy gaps, the spread of negative content and fake news in digital spaces that have an impact on the implementation of digital democracy in Indonesia, the Ministry of Communication and Information of the Republic of Indonesia established the Digital Literacy National Movement (GNLD) SiBerkreasi in 2017 [14]. The Digital Literacy National Movement (GNLD) SiBerkreasi is a movement program from the Ministry of Communication and Information that aims to tackle the spread of negative content and fake news in digital spaces based on 4 (four) pillars of digital literacy, namely digital skills, digital culture, digital ethics, and digital safety [11].

Through the Digital Literacy National Movement (GNLD) SiBerkreasi, the Ministry of Communication and Information of the Republic of Indonesia provides socialization of digital literacy in various sectors and encourages the public to be more active in participating in sharing positive and valid content in the digital world [15], [16] The National Movement for Digital Literacy (GNLD) SiBerkreasi is home to organizations dealing with digital literacy and has a central coordinator for the government-driven digital literacy agenda. This is because in its implementation the SiBerkreasi Digital Literacy National Movement (GNLD) is supported by 6 government agencies, 5 non-governmental organizations, 22 business entities (from companies to mass and digital media), and 42 civil society communities, which are involved in the national movement. To achieve goals, the SiBerkreasi National Digital Literacy Movement (GNLD) has 3 (three) activities in general, namely organizing events, research, and social media activities [15].

In previous research, it was explained that the Cybercreative Digital Literacy National Movement (GNLD) is a form of community empowerment in facing the digital revolution, from the analog world to the digital world. [17]. From the perspective of good governance, it is stated that the Cybercreative Digital Literacy Movement (GNLD) is tackling the problem of the digital literacy gap by trying to increase awareness and empower the community in

interacting in the digital world. [18], [19]. The National Movement for Digital Literacy (GNLD) SiBerkreasi also has a role in preventing radicalization with a soft approach carried out through a modified digital guidance program according to the needs of counter-radicalization to deal with acts of digital radicalism [20]. However, the implementation of the GNLD SiBerkreasi program reaped pros and cons from various parties. The pros consider that GNLD is a form of the government effort to increase people's digital literacy to increase the implementation of digital democracy in Indonesia [19]. Meanwhile, some opposing parties are of the view that this movement is an attempt by the government to lead public opinion to legitimize and silence voices that criticize government policies and see the large use of government budget funds in implementing the GNLD SiBerkreasi program. [18]. Based on the explanation of phenomena related to the literacy gap in the implementation of digital democracy and the government's efforts to improve digital literacy with the Digital Literacy Movement (GNLD) SiBerkreasi program, in this study, researchers will focus on looking at the effectiveness of the Digital Literacy National Movement (GNLD) SiBerkreasi program in the implementation of digital democracy in Indonesia which was analyzed based on 5 (five) indicators of the theory of measuring program effectiveness by Edy Sutrisno, namely Program Understanding, On Target, On Time, Goals Achieved and Real Change [21].

## **2 Research Method**

The research method used in this research is descriptive qualitative by utilizing the N-Vivo 12plus in processing research data [22]. Sources of data for this research were obtained from studies of journal literature, the SiberKreasi application, the SiberKreasi website, online media, and the play store. This study uses indicators of effectiveness according to 5 (five) indicators of the theory of measuring program effectiveness by Sutrisno, namely Program Understanding, On Target, On Time, Goals Achieved, and Real Change [21]. The data used in this study are from the SiBerkreasi official website, the SiBerkreas application play store, relevant scientific journals, online news from the mass media of the Ministry of Communication and Informatics, liputan 6, and detik.com. Data analysis used Nvivo 12plus software with crosstab visualization analysis and Items Clustered by Word Similarity. Data processing is done by capturing the mass media and then processing and coding manually.

## **3 Results and Discussion**

The results of data processing using the nvivo 12plus application crosstab query in this study resulted in data processing analysis as the following figure. Based on Figure 1, shows the intensity of the effectiveness of the National Digital Literacy Movement (GNLD) SiBerkreasi program based on the measurement of 5 (five) indicators of program effectiveness. The figure shows that the highest intensity of achievement of the program effectiveness indicators is the program understanding indicator with an intensity of 26.00%. The On Target indicator with an intensity of 25%. The Program Achievement indicator with an intensity of 19%. The Real Change indicator is 16% and the indicator with the intensity the lowest is the timely indicator of 11%.

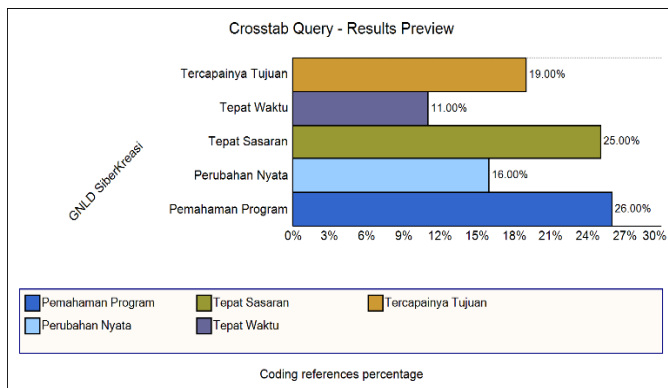


Fig.1. Crosstab Query Analysis

The explanation of each indicator based on the highest percentage intensity on the results of data processing using the nvivo 12 plus application crosstab query is as follows:

### 3.1 Program Understanding

The program understanding indicator in measuring the effectiveness of the National Digital Literacy Movement (GNLD) SiBerkreasi program looks at the extent to which the public understands the National Digital Literacy Movement (GNLD) SiberKreasi program. Based on Figure 1, the results of crosstab query data processing on Nvivo 12 plus show that the program understanding indicator has the highest intensity, namely 26%. The explanation of each form of socialization of the Digital Literacy Movement (GNLD) SiBerkreasi program is as follows:

#### 3.1.1 Website and Official Social Media of the Digital Literacy Movement (GNLD) SiBerkreasi Program

One of the efforts made in disseminating activities at the National Digital Literacy (GNLD) SiBerkreasi, the Ministry of Communication provides an official website and official social media from the National Movement for Digital Literacy (GNLD) SiBerkreasi. The pictures from the website and official social media of the Digital Literacy Movement (GNLD) SiBerkreasi program are as follows:

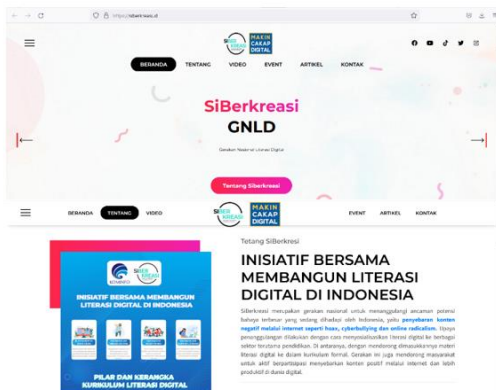


Fig.2. SiBerkreasi Official Website

The official website of SiBerkreasi <https://sibercreation.id/#> displays information related to the introduction of the National Movement for Digital Literacy (GNLD) SiBerkreasi, literacy videos, event information, and also articles discussing the relation to the National Movement for Digital Literacy (GNLD) SiBerkreasi program. In addition to the official website, socialization related to the National Digital Literacy Movement (GNLD) SiBerkreasi was also informed through the official social media of the National Digital Literacy Movement (GNLD) SiBerkreasi on the Tiktok account with 37.8 thousand followers, YouTube account with 23.3 thousand subscribers, Twitter account with 4,280 followers, Facebook account with 45 thousand followers and an Instagram account with 301k followers [15]. With socialization through the official website and social media, it will make it easier for the public to understand and find out about the Digital Literacy National Movement (GNLD) SiBerkreasi.

### *3.1.2 The SiBerkreasi application*

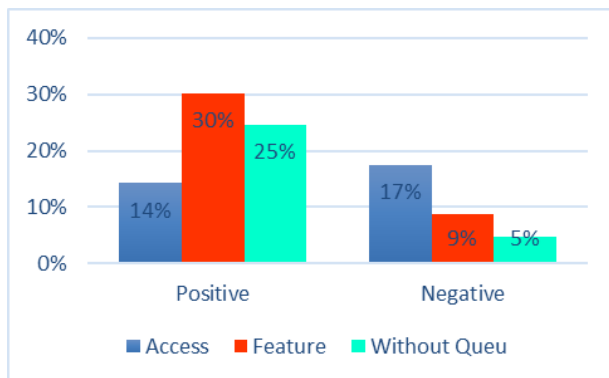
The presence of the SiBerkreasi Application is a form of government effort developed by the Ministry of Communication and Informatics of the Republic of Indonesia in socializing the Digital Literacy Movement (GNLD) SiBerkreasi to the community which aims as a form of effort to guide the community regarding digital literacy with a practical skill learning approach. The SiBerkreasi application was released in 2020 and can be downloaded by the public via the Play Store for Android users and the App Store for iPhone users. On the play store, it was recorded that the number of people who downloaded the SiBerkreasi application reached more than 10 thousand Indonesians who were Android users. This shows that the government's socialization efforts regarding the introduction and provision of understanding regarding the National Literacy Movement (GNLD) SiBerkreasi to the public have been achieved.

### *3.1.3 The SiBerkreasi Digital Literacy Chatbot*

The next effort made by the government, especially the Ministry of Communication and Information of the Republic of Indonesia in increasing public understanding regarding digital literacy through the National Literacy Movement (GNLD) SiBerkreasi is by launching the SiBerkreasi Digital Literacy Chatbot. The launch of the SiBerkreasi Digital Literacy Chatbot is based on press release no. 499/HM/KOMINFO/11/2022 on November 4, 2022. The SiBerkreasi Digital Literacy chatbot can be accessed via the WhatsApp platform at number 0811-105-99977

The launch of the SiBerkreasi Digital Literacy Chatbot is the result of a collaboration between the Ministry of Communication and Informatics with WhatsApp and ICT Watch, with the hope of being able to increase public understanding regarding digital literacy through the Digital Literacy National Movement (GNLD) SiBerkreasi.

However, the application of the SiBerkreasi application cannot be operated optimally by users of the SiBerkreasi application. This is based on the results of data processing using the Nvivo 12plus application from user positive and negative assessment data on the SiBerkreasi application on the Play Store in terms of access indicators, features, and without queues. The results of Nvivo 12plus data processing are as follows:



**Fig. 3.** Crosstab Query Analysis

The results of data processing using Nvivo 12plus in figure 3 above show that the user comment indicator related to access to the SiBerkreasi application in the play store has positive comments of 14% while negative comments are 17%, then the indicator for the feature section of the SiBerkreasi application gets 30% positive comments and comments negative 9%. Meanwhile, on the without queue indicator, the SiBerkreasi application received 25% positive comments and 5% negative comments. Based on the results of the Nvivo 12plus crosstab query data processing above, it shows that the access indicator for the SiBerkreasi application in the play store has negative comments with the highest percentage. The user complaint comments are as follows:

*“I just created an account and verified it but failed to log in with the wrong email/password. How about this, just made it impossible to mistype your email/password. Please make the application easier...”*- R.S SiBerkreasi Application Users

*“Why are you being asked to log in again, even though you first opened the application and logged in. the daily menu, the area is also not in the webinar search menu. I star first, KL is already final, just added more”* – A.F SiBerkreasi Application Users

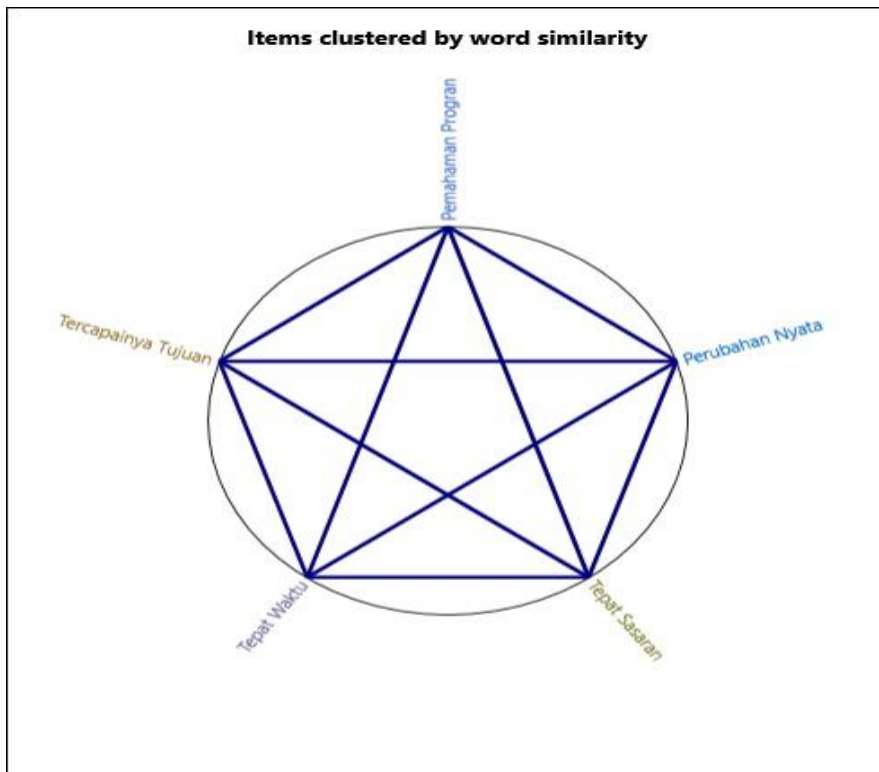
*“The application keeps loading even though the OTP has been entered. Lag. The admin on Insta lacks respect, they're just active, there's a problem solving turn, not in the lyrics”* - S.O SiBerkreasi Application Users

Data processing results show that the SiBerkreasi application, a government effort to promote the GNLD SiBerkreasi for enhancing public digital literacy, has not been fully optimal. The Ministry of Communication and Information needs to improve the application’s access quality to ensure it is effectively utilized by the SiBerkreasi user community to increase digital literacy understanding.

### 3.1.4 Right On Target

The right on target indicator is an indicator for measuring program effectiveness that looks at the extent to which a program is running according to the intended target. In measuring the effectiveness of the National Movement for Digital Literacy (GNLD) program, the results of the nvivo 12plus crosstab query data processing in Figure 1 shows that the right target indicator has an intensity of 25%. This is because the target in implementing the Digital Literacy Movement (GNLD) SiBerkreasi program is the community. Based on social media

data, the GNLD SiBerkreasi program reached over 12.6 million people in 2017 and conducted basic digital skills activities for 12.5 million people across Indonesia in 2021. The program's effectiveness, highlighted by a high intensity of on-target indicators, is supported by Nvivo 12plus data processing results clustered by coding similarity.



**Fig. 4.** Items clustered by coding similarity

The table of clustered by coding similarity in measuring the effectiveness of the Digital Literacy Movement (GNLD) SiBerkreasi program is as follows:

**Table 1.** Jaccard's coefficient of clustered by coding similarity

Code A	Code B	Jaccard's coefficient
<b>Right on target</b>	<b>Program Understanding</b>	<b>0.733418</b>
Achievement of Goals	Right on target	0.721992
Achievement of Goals	Program Understanding	0.647541
On time	Real Change	0.552894
Real Change	Program Understanding	0.529494
On time	Program Understanding	0.519578
Achievement of Goals	On time	0.519525
<b>Right on target</b>	<b>Real Change</b>	<b>0.516129</b>
On time	Right on target	0.467787
Achievement of Goals	Real Change	0.429619

Source: Nvivo 12plus, 2024

Based on the clustered data processing results, the right targeting indicator shows strong correlation with the program understanding indicator in measuring the effectiveness of the GNLD SiBerkreasi program, with a Jaccard's coefficient of 0.733418. Additionally, it correlates with the change indicator at a Jaccard's coefficient of 0.516129. This correlation indicates that the effectiveness of the GNLD SiBerkreasi program, measured by on-target indicators, is influenced by understanding the program. Higher program understanding intensities correlate with increased right targeting and real change indicators, emphasizing their interdependence in program effectiveness measurement.

### **3.2 Achievement of Goals**

Indicators of achieving goals measure the effectiveness of government programs in meeting their objectives. Using Nvivo 12plus, figure 1 shows that the National Digital Literacy Movement (GNLD) SiBerkreasi program achieved a 19% intensity in goal attainment. Social media data indicates GNLD SiBerkreasi by Kominfo is successful. It won the 2020 WSIS C4 Capacity Building Action Lines award, meeting 4 SDGs Goals: Quality Education. Evaluated by the ITU under the UN, the award underscores its competence, capacity, capability, and transparency, affirming goal achievement.

### **3.3 Real Change**

The real change indicator measures the effectiveness of the GNLD SiBerkreasi program by assessing post-implementation changes. A crosstab query shows the program has a 16% intensity, indicating a medium impact. This suggests that the GNLD SiBerkreasi program is well-implemented and positively affects digital literacy in Indonesia. This is based on national digital literacy data based on the Katadata Insight Center shows that the national digital literacy index is included in the moderate category with an index score of 3.49. The Digital Culture pillar generally gets the highest index score (3.90), while the Digital Safety pillar gets the lowest index score (3.10) [15]. This highlights the need for GNLD SiBerkreasi to enhance the quality of its digital literacy programs to achieve its goals and foster healthy digital democracy.

### **3.4 On time**

The timely indicator measures the extent to which the GNLD SiBerkreasi program is implemented on schedule. Nvivo 12plus data shows an 11% intensity, indicating that the program's webinars are conducted as planned. This is based on data processing data which shows the implementation of the webinar programs implemented by the Digital Literacy National Movement (GNLD) SiBerkreasi carried out on time according to a predetermined program implementation schedule. The GNLD SiBerkreasi program conducts timely activities such as webinars and publishing books tailored to societal needs. For instance, during election periods, it organized the #SemaiDamai Digital Literacy roadshow and published 31 digital literacy books to promote peaceful elections. These efforts demonstrate the program's responsiveness to current social conditions.



## 4 Conclusion

The conclusion of this research indicates that the Digital Literacy National Movement (GNLD) SiBerkreasi, spearheaded by the Ministry of Communication and Information, aims to combat the spread of negative content and fake news in digital spaces through four pillars: digital skills, digital culture, digital ethics, and digital safety. The National Digital Literacy Movement (GNLD) SiBerkreasi program contributes significantly to the availability of a healthy digital space for democracy in Indonesia through a comprehensive strategy. SiBerkreasi plays an important role as an agent in building community resilience against disinformation and promoting healthy democracy in the digital era.

Data processing results show that the effectiveness of the GNLD SiBerkreasi program is quite optimal. The program understanding indicator has the highest intensity at 26%, followed by the right target indicator at 25%, program achievement at 19%, real change at 16%, and timeliness at 11%. However, there is still a need to improve the quality of access to the SiBerkreasi application so that the user community can experience the program's impact more effectively. The effectiveness of GNLD SiBerkreasi program strongly impacts the availability of healthy digital spaces for democracy in Indonesia. This research aims to contribute to science and society, serve as a reference for further research, and improve the GNLD SiBerkreasi program's quality.

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