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Digital Literacy Profile of Indonesian Educational Technology Students in the Era of Digital Transformation

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ABSTRAK

Perkembangan teknologi digital menyebabkan dunia industri mengalami perubahan secara fundalmental yang dikenal dengan transformasi industri era digital. Salah satu masalah serius dalam dunia pendidikan terkait sumber daya yang dimiliki teknologi digital adalah kemampuan mengontrol melalui sitem algoritma. Tujuan penelitian ini yaitu untuk menganalisis dan memetakan profil mahasiswa Teknologi Pendidikan, terutama generasi Z, yang sekarang berada dalam lingkungan belajar yang semakin termediasi dan terdigitalisasi. Penelitian ini menggunakan pendekatan kuantitatif dengan jenis descriptive research. Metode sampling yang digunakan dalam penelitian ini ialah sampling total yang menetapkan seluruh populasi sebagai sampel penelitian. Metode pengumpulan data menggunakan kuesioner. Instrumen pengumpulan data dengan lembar kuesioner. Teknik analisis data menggunakan analisis deskriptif kualitatif dan kuantitatif. Hasil penelitian menunjukkan tiga kategori kompetensi literasi digital mahasiswa Teknologi Pendidikan Indonesia, yaitu daya komunikatif, daya seleksi, dan dan kreasi berbasis digital. Daya komunikasi terkait dengan elemen social networking, transliteracy, managing identity, dan self broadcasting. Kompetensi literasi digital terkait dengan daya komunikatif, ternyata masuk dalam kategori sangat baik, demikian pula daya seleksi terhadap berbagai konten digital sebagaimana yang mereka akses pada media berbasis internet juga sangat baik. Akan tetapi untuk kompetensi literasi digital terkait dengan daya kreasi masih dalam kategori baik cenderung cukup baik.

ABSTRACT

The development of digital technology has led to fundamental changes in the industrial world, known as the industrial transformation of the digital era. One of the serious challenges in education regarding digital technology resources is the ability to control them through algorithmic systems. This research aims to analyze and map the profile of Educational Technology students, particularly Generation Z, who are now in an increasingly mediated and digitalized learning environment. The research employs a quantitative approach with a descriptive research design. The sampling method used is total sampling, where the entire population is selected as the research sample. Data collection is conducted using a questionnaire as the instrument. The data analysis techniques include both qualitative and quantitative descriptive analysis. The research findings reveal three categories of digital literacy competencies among Indonesian Educational Technology students: communicative power, selective power, and digital-based creation. Communicative power relates to elements such as social networking, transliteracy, identity management, and self-broadcasting. The digital literacy competency related to communicative skills is categorized as very good, as is the ability to select various digital content when accessing internet-based media. However, the digital literacy competency related to creative power is in the good category, tending towards quite good.

1. INTRODUCTION

Educational Technology as a scientific discipline continues to develop following changes in society. Therefore, when society continues to develop in what is known as the era of digital transformation as it is today, educational technology also continues to adapt both as a theoretical study and practice in problematizing and at the same time finding learning solutions (Faliyandra, 2020; Firmadani, 2020). The world continues to move rapidly as society enters the era of digital transformation. One of the factors determining the fast-paced, complex, unpredictable and difficult to predict world movement is thanks to

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the development of science and technology (Salsabila et al., 2021; Widodo et al., 2020). The development of digital-based technology is now so fast and massive that it has penetrated various aspects of life, bringing about big and fundamental changes (Fadhilah, 2019; Nisa', 2020; Salsabila et al., 2021; Widodo et al., 2020). The development of digital technology has caused the industrial world to experience fundamental changes known as the industrial transformation of the digital era (Hidayati et al., 2022; Khoirroni et al., 2023; Qodr et al., 2021). The world is now changing from an offline society to an online society with its various characters changing fundamentally. Indonesia, although it is not yet clear what position it will take in welcoming this new era, inevitably has to accept the fact that the presence of the digital transformation era is a fact that cannot be avoided. Along with the acceleration of changes in society as a result of digital-based technological innovation in the world of education, what is most problematic is the presence of Artificial Intelligence (AI), which is popularly known as artificial intelligence (Bertram et al., 2021; Mambu et al., 2023). The development of this new technology has been widely discussed around the world since the United States company OpenAI released a generative AI chatbot called "ChatGPT" in 2022 (Bertram et al., 2021; Mambu et al., 2023; Rusmiyanto et al., 2023). Indonesia then enthusiastically consumed the presence of AI. Reactions to the presence of AI certainly vary, there are pros and cons, and even cause controversy, especially in the world of education. Those who object to it argue that the presence of AI could threaten the existence of students as active subjects (Muhammad Yahya et al., 2023; Siahaan et al., 2020). However, technology is not neutral, so it can easily be used to control humans for certain interests.

One of the serious problems in the world of education regarding the resources possessed by digital technology is the ability to control them through algorithmic systems (Pee et al., 2019; Pratikno, 2017). Thus, the presence of the digital era also brings the risk of students being increasingly controlled by technology, so that efforts to make students active subjects become increasingly constrained. Even though educational technology is interdisciplinary, it places greater emphasis on the importance of facilitating learning. As the influence of constructivist learning theories, educational technology began to shift from an emphasis on instructional design to learning facilitation (Ahmadi et al., 2017; Hendratmoko et al., 2018). This means that technology no longer controls learning, but technology facilitates learning. On the other hand, the presence of the digital era also presents serious problems, especially related to the increasingly important role of social media in various aspects of life, including the world of education (Akbar & Noviani, 2019; Fikri et al., 2021; Primasari et al., 2021). One of these serious problems is the increasing prevalence of disinformation on social media today (Hasir & Sohrah, 2021; Sestiani & Muhid, 2022). Disinformation is a child of the post-truth era. There are three situations that cause the post-truth era to be warmly welcomed by society. First, a form of devaluation of truth occurs as a result of political narratives spreading demagogy. Second, many people or groups feel comfortable with the information they have selected. Third, the mass media places greater emphasis on sensation so that only new, spectacular and sensational news is worthy of being called worthy news. This tendency fosters hoax attacks.

Based on these various empirical facts, it is becoming increasingly urgent to increase digital literacy among students, including university students. Therefore, it is interesting to see how the profile of Educational Technology students is related to digital literacy issues. One of the characteristics of being a lifelong learner is that you must be able to act as a digital citizen who always strives to find the right solution for every problem faced (Magdalena et al., 2020; Salsabila et al., 2021; Triwidiya, 2021). As a movement that aims to help the process of empowering students/learners through integrating technology in learning. This is possible because a lifelong learner is someone who is tenacious in facing challenges (Cindrakarsih, 2020; Maritsa et al., 2021). A lifelong learner is always ready to improve his skills as a workforce in the digital world because he has the ability to access, analyze and use digital resources.

Based on this statement, digital literacy does not only relate to skills in using digital technology technically (Makarova & Makarova, 2018; Rizaldi et al., 2020). However, it includes the use of technology in collecting, interpreting and selecting information, as well as expressing information and ideas regarding a subject in a particular field of practice as well (Liza & Andriyanti, 2020; Putri et al., 2020). Apart from that, digital literacy also concerns the utilization of the potential of digital technology, especially internet networks, which enable social interaction between users so that each user can communicate and share information within it. The increasingly open flow of information is caused by the development of digital technology, especially the existence of the internet network. In addition, there are potential benefits for individuals to connect with other users, thereby establishing connections between users who have similar areas of practice. Based on this urgency, there has been no study regarding the state of digital literacy possessed by students of the Educational Technology study program class of 2022 as a relatively new group of students whose characteristics have not yet been identified. The aim of this research is to analyze and map the profile of Educational Technology students, especially generation Z, who are now in an increasingly mediated and digitalized learning environment. This profile map is useful for Educational Technology educational institutions that continue to strive to develop digital literacy competencies among students. The higher digital literacy, the more Educational Technology students will be able to be actively involved in

finding solutions, exploring, thinking creatively, and using digital technology intelligently and responsibly.

2. METHOD

This research employs a quantitative approach with a descriptive research design, making it suitable for revealing the prevalence of problems, opinions, academic achievements, and other phenomena in the population under study. The sampling method used in this research is total sampling, where the entire population is selected as the research sample. This approach is intended to minimize errors and provide a more accurate depiction of the digital literacy profile of Educational Technology students, particularly the class of 2022. To obtain the necessary data, questionnaires were distributed to the research sample. The questionnaire used is a closed-ended type, with a scale of 1-4, distributed via Google Forms. Each item includes both positive and negative statements, with the scoring system outlined in the following table. The questionnaire contains a series of statements related to the variables being measured. The variables assessed in this study pertain to the 9 elements of digital literacy, as conceptualized by Steve Wheeler. The research instrument grid for this study is presented in Table 1.

Table 1. The Research Instrument Grid

Element	Indicator
Social Networking	Efforts to connect and filter relevant users.
	Ethics in social networking.
Transliteracy	Utilization in collecting and sharing content.
	Digital media preferences that are comfortable in providing and obtaining information.
	Ability to communicate across multiple platforms and devices.
Maintaining Privacy	Efforts to prevent cyber crime.
Managing Identity	Identity representation on each platform.
Creating content	The habit of creating content by utilizing digital technology.
Organizing and Sharing Content	The ability to organize content that has been created so that it is easily found by other users.
Reusing/repurposing Content	Reusing content from the internet.
	Copyright protection awareness.
Filtering and Selecting Content	Ability to search for and respond to content.
Self - broadcasting	Utilization of the internet in building personal branding.

The instrument used in this research has also passed the construct validity process. Construct Validity itself means that an instrument can measure symptoms as defined (Sugiyono, 2019). In this research, it was determined that digital literacy consists of nine elements which are the theory of Steve Wheeler. Each element of digital literacy takes the form of various indicators that will be measured to measure digital literacy. Then, in the process of testing construct validity, instrument experts are involved. After the questionnaire is distributed to the sample, the data needed for the research will be obtained. To interpret the data that has been obtained, the data is then analyzed quantitatively. The data obtained will be calculated in the form of a percentage of the average score obtained by the entire sample against the maximum score based on items, indicators, elements and overall. After the data is converted into a percentage of the average score obtained by the entire sample as a result, then the data will be interpreted based on the category table obtained from the categorization process. Categorization aims to place respondents into tiered groups. In this research, four levels were determined, namely Very Good, Good, Poor and Poor. The technique used to analyze data is qualitative and quantitative descriptive analysis.

3. RESULT AND DISCUSSION

Result

This research analyzes the digital literacy competencies of Indonesian Education Technology students using Wheeler's literacy scheme. There are nine elements of digital literacy, namely social networking, transliteracy, maintaining privacy, managing identity, creating content, organizing and sharing content, reusing/repurposing content, filtering and selecting content, and Self Broadcasting. Based on Wheeler's scheme of digital literacy elements, this research found three categories of digital literacy competencies for Indonesian Education Technology students, namely communicative power, selection power, and digital-based creation. Communication power is related to elements of social networking,

transliteracy, managing identity, and self-broadcasting. The power of selection is related to the digital literacy elements of maintaining privacy, reusing/repurposing content, filtering and selecting content. Meanwhile, creative power is related to the digital literacy elements of creating content, organizing and sharing content. In detail, the three categories of digital literacy competency of Indonesian Education Technology students can be described as follows.

The first, communicative data**.** In looking at the communicative power of Indonesian Education Technology students, it will be measured by the high or low level of digital literacy competency related to the elements of social networking, transliteracy, managing identity, and self-broadcasting, the detailed achievements of which are as follows. First, Social Networking Elements. The Social Networking element consists of two indicators, namely "Efforts to connect and filter relevant users" and "Ethics in social networking". In the indicator "Efforts to connect and filter relevant users", respondents obtained a score of 74.31% or were categorized in the "Good" category. In this indicator, there are several items that were highlighted by researchers because they got unequal score results, namely in items 1 and 2. The score with the highest value in this indicator is item number 1, namely "I try to connect/make friends on the internet with other users who are active. in fields related to my work as well as in the academic field of Educational Technology" which obtained a score of 81.39%. These results show that they have utilized the internet very well in connecting with other users, especially other users who are engaged in the same field of work or in the same academic field of Educational Technology. By establishing this relationship, researchers see that there are increasing opportunities for respondents to share information and collaborate between respondents and other users.

The lowest score in this indicator is item number 2, namely "When I want to connect/make friends with other users of social media, I am reluctant to pay attention to whether what they share is related to my field of work or the academic field of educational technology" which received a score of 63.61% . These results make researchers argue that respondents need to increase awareness in viewing things shared by other users before connecting with them in order to increase the relevance of exposure to information received by respondents, so that it can be useful both for the work activities of each respondent and their field. academics, especially Educational Technology. In the "Ethics in social networking" indicator, respondents obtained a score of 88.80% or were categorized in the "Very Good" category. In this indicator, there is one item with the lowest value, namely item 6, namely "When interacting on the internet, I use polite words" which reached a value of 83.61%. Based on these results, researchers hope that respondents need to increase the use of polite words in social networking on the internet so that good relationships can be established between respondents and other users on the internet. Based on the data obtained, it can be concluded that the digital literacy condition of students in the Education Technology study program class of 2022 in the Social Networking element has an average score percentage of 80.52% or is in the "Very Good" category.

Second, the Transliteracy Element. The Transliteracy element consists of three indicators, namely "Utilization in collecting and sharing content", "Preference for digital media that is comfortable in providing and obtaining information", and "Ability to communicate via various platforms and devices". In the "Utilization in collecting and sharing content" indicator, respondents obtained a score of 74.31% or were categorized in the "Good" category. In this indicator, there are two items that get a relatively lower score than the other items, namely items 10 and 11. In item 10, namely "I am used to distributing my academic assignments to fellow UNJ Educational Technology students class of 2022" which only achieved score of 66.39%, researchers urge respondents not to send the results of academic assignments, especially those related to the results of answers to certain assignments. If this is done, there is concern that there will be fraud in fulfilling academic assignments carried out by students. This can result in the respondents' ideas being stolen due to copying, narrowing the potential for creativity and understanding of students who copy them, and making it difficult for lecturers to evaluate learning outcomes.

In item 11, namely "I am used to expressing my opinion through status/tweets/writing on social media" which only reached a score of 66.94%, the researcher believes that respondents need to be more active in spreading opinions on certain topics both related to their field of work, academics, as well as other fields because it can open up discussions regarding a topic being discussed. However, respondents must also organize their opinions expressed using polite language and also provide opinions with clear rationale. In the indicator "Preference for digital media that is comfortable in providing and obtaining information", respondents obtained a score of 87.22% or categorized as "Very Good". In this indicator, the item that received the lowest results was item 12, namely "I know the form of content that is most comfortable for me to share information" which achieved a score of 84.44%. In the results, the researchers appealed to respondents to know more about the most comfortable form of content to share information and start putting it into practice. This is done so that respondents can continue to learn more deeply about the topic from the information. Apart from that, by creating content about this information you can also develop soft

skills (such as knowledge, communication skills, critical thinking, etc.) and hard skills in creating certain forms of content.

In the "Ethics in social networking" indicator, respondents obtained a score of 88.80% or were categorized in the "Very Good" category. Based on the data obtained, it can be concluded that the digital literacy condition of students in the Education Technology study program class of 2022 in the Transliteracy element has an average score percentage of 80.52% or is in the "Very Good" category. Indicator item 16, namely "I am used to joining groups/communities regarding fields related to my work or the academic field of Educational Technology on various social media" is the item with the lowest score, reaching only 65.56%. Based on these results, the researcher urges respondents to be more active by joining communities or groups related to the field of work or related to the academic field of educational technology because it will open up opportunities for respondents to gain collective intelligence from discussions discussed in the community or group so that it can trigger informal learning process from respondents.

Second, Managing Identity Elements. The Managing Identity element consists of one indicator, namely "Identity representation on each platform". In this indicator as well as overall in the Managing Identity element, a score of 80.05% was obtained or in the "Very Good" category. In this element, there is one statement item whose score is much lower than the other items, namely item 28 which reads "I often discuss things outside my professional field on my formal social media platforms." Item 28 only reaches a value of 62.22%. Based on this data, the researcher believes that discussing matters outside the respondent's professional field cannot build the respondent's reputation regarding the profession they pursue. Moreover, if the matter discussed is not related to career or is out of context, then this could tarnish the respondent's reputation. Third, Self Broadcasting Elements. The Self Broadcasting element only consists of one indicator, namely "Use of the internet in building personal branding". On this indicator as well as on all elements of Self Broadcasting, respondents achieved a score of 64.41% or included in the "Good" category. The item highlighted by researchers in this study is item 47 which reads "I create content and regularly share it on the internet". This item only achieved a score of 51.39%, so the researchers considered it not good enough to create content regularly and distribute it on the internet. With these results, researchers appeal to respondents to increase productivity in creating content on the internet so that the individual respondent's reputation is built regarding the respondent's skills and ideas.

The second, selection power. The digital literacy competency of Indonesian Education Technology students related to the elements of maintaining privacy, reusing/repurposing content, filtering and selecting content is in the very good category. This proves that their selection power for various digital media content is very adequate, which can be described in detail below. First, the Privacy Maintaining Element. The Maintaining Privacy element only consists of one indicator, namely "Efforts to ward off cybercrime". In this indicator, overall the Maintaining Privacy element obtained a score of 82.92% or was categorized in the "Very Good" category. In this element, item number 22, namely "I often visit websites whose security is questionable," reached a value of 64.44%. Based on these results, researchers urge respondents to be more sensitive to the security of the websites they visit so that cyber crimes such as hacking, carding, viruses entering the devices used, and other risks can endanger respondents' privacy.

Second, the Reusing/Repurposing Content Element. The Reusing/Repurposing Content element consists of two indicators, namely "Reusing content from the internet" and "Awareness of copyright protection". In the indicator "Reuse of content from the internet" a score of 76.81% was obtained or categorized in the "Very Good" category. This indicator is represented by two items, namely "I am used to using ready-made content for academic and other purposes" which reached a score of 75.56% and "I can create new content by mixing some ready-made/raw content that has been spread around. internet to create new content both regarding academic fields and my interests" which reached a score of 78.06%. These two items show data that respondents have used the internet to reuse content from the internet, either in the form of finished content, or raw content which will then be used as material for finished content. According to researchers, respondents' ability to utilize content that has been spread on the internet will make some of the work carried out by students easier. However, this must be done by the respondent also taking into account the applicable copyright.

In the "Copyright protection awareness" indicator, respondents obtained a score of 83.15% or were categorized in the "Very Good" category. In this indicator, there is one item with a relatively higher value than the other items with a value of 85.56%, namely item 40 which reads "I avoid using content illegally and violating copyright licenses." %. Based on these results, it shows that respondents have very good awareness of protecting other people's copyright, especially in avoiding illegal use of content that would violate copyright. According to researchers, this awareness is one of the provisions for respondents to prepare themselves for a career. By having awareness of copyright protection, respondents can avoid copyright violations which could ensnare the respondent legally and threaten the respondent's career in the future. Third, Elements of Filtering and Selecting Content. The Filtering and Selecting Content element consists of one indicator, namely "Ability to search for and respond to content". In this indicator as well as

in the entire Filtering and Selecting Content element, respondents got a score of 78.33% or included in the "Very Good" category. In this element there is an item highlighted by the researcher, namely item 43 which reaches a score of 70.00% and is the lowest compared to other items in the same element. These results indicate that respondents need to be more careful in responding to information that comes from sources whose credibility has not been proven, because the truth of the information obtained is not necessarily valid, which can give rise to disinformation and misinformation.

The third, Creative Power**.** The creative power of Indonesian Education Technology students in their involvement with various internet-based media content is related to digital literacy elements of creating content, organizing and sharing content. Some indicators of this creative power are seen in the ability to create learning content by utilizing digital technology, and the ability to organize content so that it is easily found by users. In contrast to the very good communication power and selection power, the creative power of Indonesian Educational Technology students is only in the good category, and can even be said to tend to be only quite good. In detail, the creative abilities of Indonesian Educational Technology students can be seen as follows. First, Elements of Creating Content. The Creating Content element consists of one indicator, namely "The habit of creating content by utilizing digital technology". In this indicator as well as in all elements of Creating Content, respondents got a score of 70.19% or included in the "Good" category. As for item 30, namely "I am used to creating digital content regarding my field of work or the field of educational technology" which received the lowest score of all items in the Creating Content element with a score of 61.11%. Based on this data, the researcher believes that respondents need to improve their habits in creating good content regarding the field of educational technology. Researchers think this is because by creating content, respondents can interact more with the topics of content regarding the Educational Technology field of study that they want to create, resulting in a deeper learning process. Apart from that, by creating content, respondents can contribute to sharing knowledge with other users, as well as the respondent's own portfolio so that they build a reputation in order to build personal branding.

Second, the Organizing and Sharing Content Element. The Organizing and Sharing Content element only consists of one indicator, namely "The ability to organize content that has been created so that it is easily found by other users". In this indicator as well as in all elements of Organizing and Sharing Content, respondents reached a score of 74.14% or were included in the "Good" category. The item that has the lowest score compared to other items in this element is item 33 which says "I distribute digital content I create on the internet" and item 34 namely "I try to make the content I create consumed by many people". These two items both reached a value of 71.94%. Based on this data, the researcher believes that the two statements in these two items need to be improved so that respondents can contribute more to the wider audience by disseminating information through this content so that it is useful for the audience. Moreover, the respondents are prospective educational technologists whose mission is to facilitate learning and improve performance.

Discussion

Based on the data as presented above, the digital literacy competence in the communicative power category of Indonesian Educational Technology students is at very good achievement. The high communicative power based on the internet or in the online community is related to the characteristics of generation Z. The educational technology students who were respondents to this research demographically belong to generation Z, namely those born in the 1997-2012 period. This generation practically does not know the era when communication was still mostly done face to face, but is more familiar with internet-based mediated communication (Farahiba, 2018; Rezka & Hamzah, 2021). Generation Z plays an active role in the era of digital transformation, even the totality of their daily activities cannot be separated from the internet. Generation Z, in its intellectual development, is very dependent on digital technology (Farahiba, 2018; Rezka & Hamzah, 2021; Subandowo, 2017). Generation Z Indonesian Educational Technology students are intensively exposed to digital technology in their learning process. Therefore, it is not surprising that Indonesian Educational Technology students in the generation Z category have skills in communicating based on digital technology. On average, they have the ability to build adequate social networks when communicating via various social media (Firamadhina & Krisnani, 2020; Hasan Lubis & Darwis Dasopang, 2020). The massive use of the internet and the rapid development of digital technology in learning has encouraged the development of various digital-based learning pedagogies.

Paying attention to the data description above, shows that the digital literacy competence of Indonesian Education Technology students can be said to be very good. The indicators appear to be the ability to maintain privacy, reuse of various content from the internet, and the ability to filter and select very good content. This means that the selection power of Indonesian Education Technology students towards various content from the internet which provides so much information is very adequate. This fact is different from the perception that is developing in society that Generation Z lacks critical thinking about internet content (Rastati, 2018; Siswanto et al., 2019). There is a kind of stereotypical view of generation Z

that is developing in society, that the logical implication of the increasing exposure to internet-based media towards generation Z is that they are unable to think critically (Junjunan, 2019; Rastati, 2018; Siswanto et al., 2019; Wijoyo et al., 2020). The flood of information available in internet-based media has led to mediated communication, making people conditioned to only read information tracks, thereby reducing interest in information that is reflective and discursive. However, such a view does not apply to Indonesian Educational Technology students. Learning materials related to digital literacy are also quite widely available in the lecture process, because in the educational technology study program curriculum documents, more and more courses are adapting to the era of digital transformation. In fact, digital literacy material provides many dimensions to various courses that are not specifically about digital literacy. On the basis of all this, this has more or less created a new awareness among Educational Technology students of the importance of being critical and selective towards various internet-based media content.

Based on the data presented above, it can be said that the creative power of Indonesian Education Technology students in creating digital learning content still tends to be inadequate. This fact shows that the high level of exposure and use of digital information in daily activities is not directly proportional to the creative ability to create internet-based digital content. In other words, the high consumption of digital information is not always directly proportional to the ability to produce digital content. This fact can also be said that the ability to download is more adequate than the ability to upload learning content, so that the position of Indonesian Educational Technology students is still more as objects of information exposure than as subjects who are actively involved in content production in the digital era. In the era of digital transformation, learning that aims only at forming technical abilities and skills is no longer sufficient to form outcomes that can become subjects in the aspect of content production (Asari et al., 2019; Ginanjar et al., 2019; Kurnia & Astuti, 2017).

Educational Technology students in the era of digital transformation no longer just have the skills to use digital technology, but also need to develop the ability to argue, brainstorm, reflect and ask questions critically, which are important for developing imagination. The era of digital transformation is an era of imagination, no longer just rational, and it can only be created through deep learning (Kurnianingsih et al., 2017; Wulandari et al., 2021). Based on the findings of this research, the recommendation proposed is that in the future the Indonesian Educational Technology Study Program prioritizes the lecture process at the deep learning level rather than surface learning. Deep learning needs to give dimension to every course, so that students have the ability to imagine adequately as demanded by the era of digital transformation which is also known as the era of imagination.

4. CONCLUSION

Based on the results of the data analysis, it was concluded that three typologies of educational technology students' digital literacy competencies were identified: communicative power, selective power, and creative power. The digital literacy competency related to communicative skills is in the very good category, as is the ability to select various digital content when accessing internet-based media. However, the digital literacy competency related to creative power is in the good category, tending towards quite good.

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