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Overview of visual literacy and facility support in higher education-case of Indonesia and Malaysia

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ABSTRACT

Visual literacy is a skill that is owned by someone as a form of visual communication. Visual literacy skills are crucial to learn, especially for university students to receive and translate objects more quickly in order to improve and increase their learning achievements. The main objective of this study was identified and discuss the relationship between the understanding of visual literacy of students and university teachers in Indonesia and Malaysia to the learning media used and the use of university facilities. This study employed qualitative research, using purposive sampling method. Six respondents who were students and lecturers from the State University of Semarang (UNNES), Indonesia and Universiti Teknologi Mara (UiTM), Kelantan, Malaysia participated in this study. The results of the study indicated that Indonesian and Malaysian respondents had visual literacy knowledge, although there were differences in visual interest and duration. The results further showed that in visual terms, Indonesian respondents tended to prioritize quantity, while Malaysian respondents prioritized quality. In addition, the use of learning media for Indonesian respondents tended to be less varied than that of Malaysian respondents. The results also found that the campuses in both countries provided supporting facilities. Indonesian respondents however have not used it well, while Malaysian respondents indicated that they use campus facilities to learn visual literacy. The aim of this study is to contribute to the process of improving visual literacy learning in Indonesia and Malaysia and further adding to the body of knowledge.

1. Introduction

Visual literacy is defined as a skill that owned by someone as a form of visual communication, on social media, text messages, blogs, and others [1]. There were two main components embodied in visual literacy: the ability to understand visual images and the ability to create or use images as a means of expression and communication [2]. Visual literacy skills are important to learn in accordance with the study of Burmark [3] because it assists students in the learning process in terms

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of receiving and translating objects faster so it will increase learning achievement. Although visual literacy skills are centered on visual appearance [4], according to Pratiwi *et al.,* [5] visual literacy is still a part of literacy. There are studies that discuss literacy at the international level, one of which is carried out by the Organization for Economic Co-operation and Development through the Program for International Student Assessment (PISA). PISA results show that Indonesia's literacy rating is below that of other ASEAN countries, one of which is Malaysia. Indonesia is ranked 72nd, while Malaysia is ranked 56th. In addition, research related to visual literacy in two neighboring countries in the Southeast Asia region, especially Indonesia and Malaysia, has also been widely carried out. In achieving the first objective in this work, previous works from prominent researchers were reviewed and the data [6]. In Indonesia, research on visual literacy was carried out by Fatah [7] who studied the behavior of visual literacy among comic lovers in Surabaya, Indonesia. Muhaemin and Yunus [8] discusses the importance of visual literacy as an effort to understand Indonesian local art education. Another study conducted by Restami, Antarajaya, and Sugiani [9] regarding improving visual literacy skills and learning outcomes through the development of mobile learning-based learning media. Apart from Indonesia, research on visual literacy was also conducted in Malaysia. Research conducted by Sintian and Kiting [10] discusses the effect of digital literacy skills on language learning in Sabah Middle Schools, Malaysia. In addition, there is research by Mujamah and Shariffudin [11] which examines the feelings attached to visual methods in science learning.

Someone's basic knowledge is the basic thing used in assessing an object, it affects the understanding of visual literacy for each individual who is different. Understanding visual images may take place in two sentences [2]. The first to understand a sign, an image, or a graphic representation through basic perceptual standards of what they see to acquire meaning from the perceptual vision. The second may refer to the ability to view critically the images in terms of how the image creator manipulates them [12]. The interaction that takes place in a communication process in visual form involves many aspects and system symbols which often have multiple meanings. Its understanding does not only involve the existence of the object as it is, but also involves other aspects such as the meaning of metaphors that can influence its meaning in a communication process [13]. It is undeniable that the visual literacy climate has not yet been formed, which has an impact on the ignorance of how students are responsible for the work they create. It is not enough just to display and witness the work for a limited period of time. Collaborative learning can be focused on supporting successful learning [14]. The existence of works within a limited period of presentation must be able to provoke a culture of reading and writing, as well as creating a space for dialogue that complements each other [15]. Over time, the notion of visual literacy has also changed its meaning which is currently used in the highest level of education in the form of reading, writing, thinking, and visual learning [4]. Innovative technology can be a practical solution to modernize traditional educational environments [16]. Basic knowledge of visual literacy can be facilitated by reading experiences through currently developing technologies such as easily accessible digital books [17]. One of the things that can help students understand visual literacy is the provision of integrated teachers regarding visual literacy so that later they can help students understand, develop and improve their understanding of visual literacy skills [18-20].

The rapid development of digital technology has a significant impact and it is not merely felt by the general public, but also the educational environment. Technological developments, especially internet services, make it easy for students and academics to access educational content using personal devices [21]. Pupils/students who grew up with digital technology, have a strong digital interest and prefer images over text [22]. Based on research by Youngok Choi [23] and Matusiak [24], students tend to focus more on image search behavior on Google images, web or certain applications than on using images. That way, learning activities must be carried out interactively, innovatively,

with character and fun to suit the interests and talents of students [25]. Cultivating literacy in the academic is intended to develop a visual literacy culture to increase students' appreciation of their work to achieve the quality of learning that is reflected in a process [15]. Applications in the use of digital images in academic environments are also relatively new and often multidisciplinary [26]. This ultimately encourages the educational environment to implement visual literacy learning in order to increase student engagement and increase students' interest in learning [27].

Further, learning media is also needed that facilitates the realization of a good understanding of visual literacy. Visual literacy skills are supported by the learning media used. The media used in understanding visual literacy is in line with the technology that developed at that time [28]. The core principles of media literacy education, according to The National Association for Media Literacy Education (NAMLE), include active inquiry and critical thinking, must include all forms of media, build and reinforce skills for learners of all ages, and develop informed, reflective, and engaged participants, among others [29]. The learning method used as a learning medium needs continuous renewal to realize the desired educational plan, it is necessary to transform learning media adjustments from what was previously in effect [30]. Visual generation is a term that emerged in the digital era due to the large number of people who use images as a medium of learning, this is reinforced by the increasing number of research and publications about it [31]. The utilization of technological advances as a learning medium is expected to be established as a mandatory skill possessed by students, because it has the potential to support the process of understanding visual literacy.

Visual literacy is also starting to enter the university environment. Visual education is only realized after universities still have maintained text in print media as the main learning tool [32]. Visual literacy skills are often found and discussed in universities, especially in the fields of art, philosophy, architecture, communication, education, and media [33]. Physical and non-physical facilities in the campus environment also support the creation of visual literacy skills [13]. The curriculum applied to educational units is prepared by considering the differences in visual abilities possessed by each student [34]. Visual literacy is closely related to learning activities because it is an activity carried out by students to achieve learning and educational goals. With a variety of learning methods, visual literacy becomes an activity that supports students to understand quickly with the sense of sight and produce their own unique creativity [35]. The teacher's role as a teacher is the main key to creating interesting learning, because it is very necessary to attract students to understand educational material [36].

Many studies examined visual literacy, such as by Chanlin, LJ stating that animation and visual presentations in multimedia provide flexibility to utilize students' scientific knowledge and cognitive styles [31]. Chanlin focused on reporting the use of two different types of visual control treatment, namely self-control and system coercion, among students who have different cognitive styles, namely Field Independent and Field Dependent. Previous study conducted by Duchak, O. discussed the meaning of visual literacy, types of visual assessment, and challenges of visual literacy, as well as proved that visual literacy is indeed important for learning and teaching in educational practice. The results showed the influence of visual literacy in improving learning outcomes with varying degrees of success [37]. However, previous research has not discussed knowledge about visual literacy and its relationship to facilities. In this case, facilities include campus support and learning media. Finally, this study will also compare previous aspects between Indonesian and Malaysian universities that have not been carried out by previous studies. On the other hand, the use of the impact of learning media in the form of digital media must also be studied more deeply in order to find the most effective learning media. One of the digital media is social media which has been proven to be able to increase student motivation in achieving learning goals [53]. Efforts to compare existing learning

methods in Indonesia and Malaysia also aim to obtain references for effective learning methods to improve visual literacy skills. Visual literacy problems in the campus environment can have an impact on the final results obtained by students. This happens if the level of visual literacy is low, it will have a negative impact on learning achievement in college. On the other hand, if students' visual literacy skills are high, learning outcomes will increase. Seeing these conditions, universities as places of learning are expected to be able to provide support in the form of facilities to students to improve their visual literacy skills. This requires special attention for university employees and lecturers to facilitate students through university facilities and learning media used during learning.

2. Methodology

This study used qualitative research by describing the data that has been obtained [38]. The aim of this study was to find out the relationship between visual literacy understanding of students and teachers at UNNES and UiTM Kelantan Malaysia to the facilities provided by the campus and the learning media used. This study also used a purposive sampling method [39], in which six respondents were selected as students and teachers from UNNES Indonesia and UiTM Kelantan Malaysia who met the criteria as visual literacy learners. Student respondents are students majoring in fine arts or graphic design who have studied a lot of visual literacy. In addition to students, lecturers were also selected as respondents because they taught visual literacy courses, where teachers were required to study and find out visual literacy information, which will be presented to students as learning materials.

The data collection technique used was a survey of 150 student respondents and in-depth interviews conducted in November 2021 with an interview duration of 20 to 30 minutes. Interviews with the six respondents were structured in several ways, for UNNES teachers were conducted face-to-face and the Whatsapp application, while interviews with UiTM teachers, UiTM students, and UNNES students were conducted online through the Zoom meeting application. Questions in the interview were undertaken to find out the extent to which the respondent's level of understanding of visual literacy was based on interests, media used and facilities obtained from campus. The researcher created several of the question indicators based on Anderson *et al.,* [40] and Alter [41].

3. Findings

3.1 Basic Knowledge of Visual Literacy

Barbot *et al.,* [42] defines visual literacy as a unified skill that is used to determine the meaning in visual products. Visual literacy is the ability to interpret, use, and create visual media to improve processes, decision making, communication, and learning [43]. The process of visual literacy starts from the eyes as the senses used to see objects for the first time. Then the processing is continued by the brain which will translate the appearance of the object in the form of a visual image or image as well as information in the form of warning messages, appeals, and other messages. The following is an analysis of the results of researchers' interviews with respondents regarding the basic knowledge of visual literacy which is then presented in Figure 1 and Table 1:

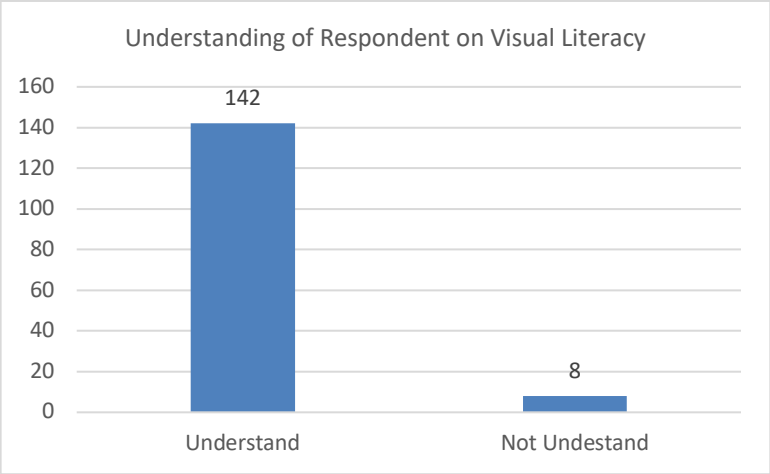


Fig. 1. The basic knowledge of the informants regarding visual literacy.

Table 1
Understanding of respondent on visual literacy

Indonesia		
Respondent	Definition (understand/not understand)	Benefit of Visual Literacy
Respondent 1	Understand.	As the reference in working, to find the difference of the existed work, or comparing the best.
Respondent 3	Not understand	Helping the learning of art and design field which its main media is visual design, strongly helpful to understand the material.
Respondent 4	Understand	To communicate something through a picture.
Malaysia		
Respondent	Description	
Respondent 2	Understand	Capable of making a good design with good message too.
Respondent 5	Understand	Creating some art work with meaningful message.
Respondent 6	Not understand	To do some art work or research related to art and design.

3.1.1 Indonesia

Figure 1 and Table 1 shows the definition of visual literacy presented by respondent 3 and respondent 4, as students broadly agree with Barbot *et al.,* [42] namely the ability to read, understand, and create a visualization or picture of an object. In other words, visual literacy can be concluded as reading and communicating images. Visual literacy is very important for students to help the process of understanding learning materials, especially for students in the fields of art and design. Visual literacy also helps students to communicate images to others. Respondent 1, who acts as a teacher adds the definition of visual literacy as an understanding of references and procedures related to visual works. Visual literacy will provide benefits for teachers and students, especially in their work. Then respondent 1 categorizes visual literacy into 3 stages, namely searching for forms through keywords, curiosity, and references from previous visual works.

3.1.2 Malaysia

Table 1 also shows that the three respondents have basic skills in understanding visual literacy. This can be seen from the definition of visual literacy that they express. Broadly speaking, respondent

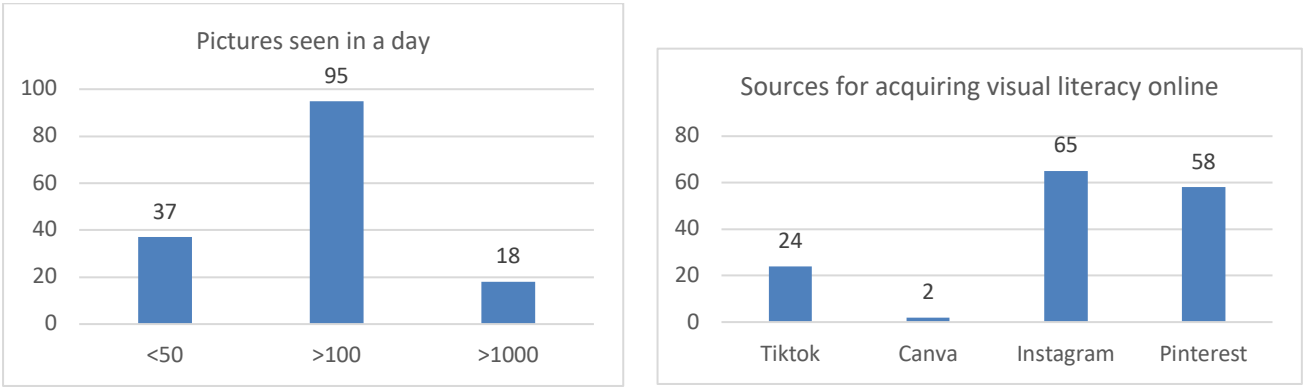
5 and respondent 6, UiTM students define visual literacy as the ability to interpret information or messages contained in a visual image or graphic. Then respondent 2, who is a UiTM teacher, perfected the definition of visual literacy as the ability to recognize and understand ideas from images such as photos, posters, billboards, or advertisements so that they can get messages from images and communicate several messages through images. The three respondents from UiTM also agreed that visual literacy is closely related to students, especially those who take major in art and design as a basic ability to interpret and create works of art and design well.

3.2 Interest

In the research conducted by Lundy and Stephens [18], visual literacy is very necessary for students and also teachers. Various sources from social media such as Facebook, Instagram, Twitter can be platforms that present various images as visual media messages. Today, social media is widely accessed by various groups. The messages conveyed are interpreted differently by each individual, because each individual's understanding of the visual literacy of an object is not the same.

3.2.1 Indonesia

Figure 2 and Table 2 shows several visual models that the three respondents often see on a daily basis. The answers from the three respondents were not the same, but all three of them mentioned visible action as a visual model that is rarely seen in everyday life. This table also shows, in a day there are differences in the images seen by students and teachers, the images seen come from various sources, both offline and online. The average number of visual models seen by Indonesian respondents in a day can reach 300 images. There is also a difference in the length of time used when exploring the object of the image. For respondent 1 as a teacher it only takes less than a minute, while for respondent 3 and respondent 4 as a student it takes longer, which is a dozen minutes. So the total average duration of visual observation for Indonesian respondents is around 6 to 7 minutes. In the digital era like now, there are various online sites that provide images that are easy to access, so that they can help students and lecturers to increase their visual literacy skills.



(a) (b)

Fig. 2. (a) The number of images viewed by the informants in one day. (b) The sources used by the informants to obtain visual literacy

Table 2
Interests in visual models and duration of respondents' observations

Indonesia					
Respondent	Order of visual model	Pictures seen in a day	Average	Time when seeing the liked picture	Average
Respondent 1	Object, images, media, message, Symbol, visible action.	> 1000	376	10 seconds	6 - 7 minutes
Respondent 3	Symbol, media, object, message and the last visible action.	30		5 minutes	
Respondent 4	Image, Message, Media, Object, Symbol, Visible Action.	100		15 minutes	
Malaysia					
Respondent	Order of visual model	Pictures seen in a day	Average	Time when seeing liked pictures	Average
Respondent 2	Picture, Symbol, Object, Message, visible action, media.	20	50	1 minute	25 minutes
Respondent 5	Picture, Symbol, media, Message, Object, visible action.	>100		10-15 minutes	
Respondent 6	Picture, media, Symbol, Message, visible action, and Object.	30		1 hour	

3.2.2 Malaysia

Table 2 also indicates that the three Malaysian respondents most often view images as a type of visual that they encounter in their daily lives. Furthermore, the order of visual types among the three respondents consisting of one UiTM teacher and two UiTM students is not the same. Images are the most viewed part because they are very close to life today, especially in the digital era. Images can be accessed on various online and offline sites. For the average visual model observation of Malaysian respondents, only 50 visual models. There are differences in the number of pictures and the time span used by teachers and students when viewing pictures, such as respondent 5 and respondent 6 above from 30 pictures, while respondent 2 only has 20 pictures. If this is included in the average duration of visual viewing, it is only 25 minutes. The pictures they see are in accordance with the field of art they enjoy. They admit that the pictures they see are mostly sourced from online sites such as Instagram, Pinterest, and Google.

3.3 Instructional Media

Teaching visually helps develop the students' creativity, and thus, opens new learning possibilities. In a previous study, Mixer *et al.,* [44] describes the use of visual literacy as an alternative to improve student learning. The use of visual literacy is said to be very effective in helping students understand, especially during distance learning (online). Cowen [45] states that visual media make concepts more accessible to students and enhance lateral recall of information. Learning will be more effective if it is presented in PowerPoint slides and discussion boards that can be accessed by students during learning. Images enhance memory, which benefits the learning process. Image-based learning helps in expressing thoughts and opinions, which are often provoked or inspired by visual clues [46]. The development of learning systems is very much needed, especially for digital natives. Effective learning will affect student learning outcomes in the form of soft skills and hard skills. The

following Figure 3, Figure 4 and Table 3 show device usage for visual literacy learning for students and teachers, as well as their supporting applications:

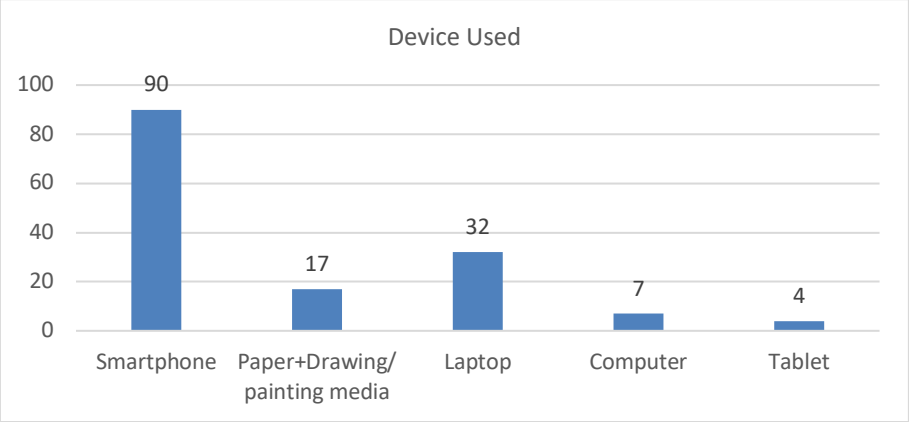


Fig. 3. The device usage for visual literacy learning for students and teachers

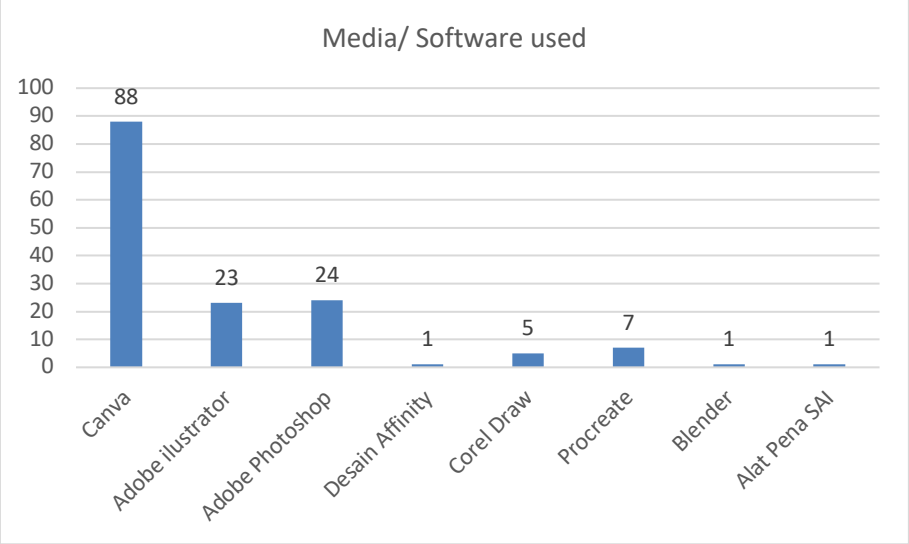


Fig. 4. The media / software used by informants to create images

Table 3
Learning media used by respondents

Indonesia			
Respondent	Source of Visual Literacy	Device to make the work	Media / Software used
Respondent 1	6	Laptop	Affinity designer, affinity photo, blender
Respondent 3	5	Paper, Laptop	Photoshop
Respondent 4	4	Laptop	Corel Draw, Photoshop
Malaysia			
Respondent	Source of Visual Literacy	Device to make the work	Media / Software used
Respondent 2	4	iPad, Phone and stylus pen	Photoshop, Adobe Illustrator, Procreate.
Respondent 5	2	Computer, Laptop, iPad	SAI Pen Tool, Photoshop and Adobe Illustrator.
Respondent 6	3	Laptop, Smartphone	Adobe Illustrator, Adobe Photoshop.

3.3.1 Indonesia

Table 3 shows that in the learning process, the three UNNES respondents had four to six sources of visual literacy. In addition, the use of devices from the three respondents was almost the same, namely both using laptops, only respondent 3 also still used paper. The three respondents are also supported by various media or software applications which tend to be the same. They visualize what they are thinking into scribbles.

3.3.2 Malaysia

Table 3 also shows that the sources of visual literacy for Malaysian respondents are only between 2 and 4. However, for the use of devices when developing visual literacy skills through design work, the three UiTM respondents are very diverse, including computers, laptops, iPads, and smartphones. In addition, the digital media used when working comes from various application software such as the SAI Pen Tool, Photoshop, Adobe Illustrator, and Procreate. Respondent 5 and respondent 6 also revealed that they prefer to draw using digital media rather than manual media.

3.4 Campus Support
3.4.1. Indonesia

Table 4 shows that UNNES has a library as one of the campus facilities that can support the creation of good visual literacy for students. However, the existence of the library on campus has not been used properly. According to respondent 1, if the library is considered more complicated, then they prefer to use the internet to find references as an alternative. In addition, according to respondent 3, not all majors have libraries, so students must visit the central library on campus. Not only the library, the campus also provides a multimedia laboratory as a means of supporting the delivery of learning, especially practicum courses to make it more optimal. However, according to the three respondents, the existence of the laboratory has not been fully utilized by students due to the pandemic. Then, the campus also supports students in visual literacy by providing curriculum in related subjects. However, according to two respondents, they are still considered lacking in detail and depth in their delivery.

3.4.2 Malaysia

Table 4 also shows that the UiTM campus provides support to teachers and students to help increase their visual literacy skills. This is indicated by the availability of campus facilities that can be easily accessed by teachers and students. The first facility provided by UiTM related to visual literacy is a library. However, according to the three respondents, during the pandemic, library access was shifted to online. The second campus support is indicated by the existence of two multimedia laboratories for teachers and students majoring in art and design. However, due to the pandemic, access to the multimedia laboratory has become limited. In fact, as stated by respondent 6, he has not used the laboratory at all because of online lectures. In addition to the existence of a library and multimedia laboratory as a means of supporting visual literacy, the curriculum at UiTM greatly supports visual literacy skills, especially for students through scheduled courses.

Table 4
Availability of facilities and their use

Indonesia				
Respondent	Campus Support	Availability (Yes/No)	Using Facility (Yes/No)	Description
Respondent 1	Library	Yes	No	More complicated than internet
	Multimedia Laboratory	Yes	No	Before pandemic it was not used, previously for teaching and study center.
	Curriculum	Yes	Yes	Planning is less good, support by making visual work with different them.
Respondent 3	Library	Yes	No	Not always used because of time and place limitation.
	Multimedia Laboratory	Yes	No	Not used yet.
	Curriculum	Yes	Yes	Visual identity, typography, and practice course.
Respondent 4	Library	Yes	No	There is no art major yet.
	Multimedia Laboratory	Yes	No	Never use other alternative in the form of studio.
	Curriculum	Yes	Yes	The materials delievered were less detail.
Malaysia				
Respondent	Campus Support	Availability (Yes/No)	Using Facility (Yes/No)	Description
Respondent 2	Library	Yes	Yes	During pandemic, the access to the library is a little bit limited, and moved to online library.
	Multimedia Laboratory	Yes	No	Could not access when pandemic.
	Curriculum	Yes	Yes	-
Respondent 5	Library	Yes	Yes	Could not access library directly during pandemic, online only.
	Multimedia Laboratory	Yes	No	Could borrow some digital devices such as laptop in the library.
	Curriculum	Yes	Yes	Not really like it
Respondent 6	Library	Yes	Yes	Could be accessed online
	Multimedia Laboratory	Yes	No	Never use it because of the class schedule was online
	Curriculum	Yes	Yes	-

4. Discussions

According to Heinich *et al.,* [47] visual literacy is the ability to understand and interpret visual messages in images. The ability and understanding depends on the cognitive abilities of each individual [48]. According to Bekti [49], cognition fulfills all forms of recognition, including observing, seeing, paying attention, giving, guessing, imagining, estimating, guessing and judging. Cognitive aspects cannot run alone but need to be controlled or regulated. Visuals can be an option as a tool to stimulate the process. Regarding its function in cognitive development, visuals have a fairly important function in the development of thinking processes [50]. But not only that, the educational environment can also play a role and optimize visual literacy skills, especially for students, by applying

practices to the learning process and adequate facilities [46]. Based on Table 5, Indonesian and Malaysian respondents in general already have basic knowledge of visual literacy. In addition, all respondents can also explain visual literacy well, although for Malaysian respondents it tends to be smaller in scope. In daily life, respondents' interest is more often in using pictures as a medium of visual communication. This can be seen from the visual model observed in a day and the number of pictures they see. However, there are differences between Indonesian and Malaysian respondents in the number and duration of viewing images. In the pictures which they see, most of them come from social media. By using digital devices such as laptops or mobile phones and various selected software, respondents increase their visual literacy skills personally. However, respondents also agree that the campus has a role for teachers and students to increase their visual literacy skills through the facilities provided, such as a library, multimedia laboratory, and several scheduled courses. Although according to Indonesian respondents, this has not been utilized optimally.

Table 5
Availability of facilities and their use

Country	Result				
Indonesia	Basic Knowledge	Respondent understands and could explain specifically the basic of visual literacy.			Indonesian respondents understand visual literacy with quite many visual interest even though their seeing duration was shorter and Device Usage – Media Usage were less varied. The facility availability given by campus were not used maximally yet.
	Interest	Visual Model	Number of Picture	Seeing Duration	
		Tend to be varied and same.	Seeing more visuals in a day.	Duration to see tends to be shorter.	
	Learning Media	Visual Source	Device Usage	Media Usage	
		Mentioning more visual sources.	Device Usage is less varied.	Using less varied media.	
	Campus Support	Facility	Availability	Usage	
		There are building facility and curriculum.	Respondent admitted the availability.	Respondents do not use it maximally yet.	
Malaysia	Basic Knowledge	Respondents understand and explain visual literacy understanding, but in the same scope.			Malaysian respondents also understand visual literacy, even though their visual interest was fewer but seeing duration tends to be longer. Students and instructors maximized well the device usage – media usage and they used supporting facilities provided by campus.
	Interest	Visual Model	Number of Picture	Seeing Duration	
		Tend to be less varied but the same.	Seeing fewer visual in a day.	Duration to see tends to be longer.	
	Learning Media	Visual Source	Device Usage	Media Usage	
		Mentioning fewer Visual Source.	Device usage is more varied.	Using varied media.	
	Campus Support	Facility	Availability	Usage	
		There were facilities such as building and curriculum.	Respondents also admitted the availability.	Respondents have used it quite well.	

The basic knowledge of visual literacy that students have in the realm of art education provides space for critical thinking [51]. In conveying the understanding regarding basic knowledge of visual literacy, Indonesian respondents stated specifically and in depth, in contrast to Malaysian respondents who stated in a narrower context and tended to be the same. Malaysian respondents

said that art students must have the ability to interpret images and convey them in different visuals. This is in line with what was conveyed by Sidhartani [13] if visual literacy does not only help someone capture messages conveyed through visual objects, but also in conveying, and creating these messages through a work.

The process of observing and then analyzing images by someone begins with the senses of the eye, then the feelings that are felt appear. This repeatedly becomes a person's habit so that it turns into an interest. Judging from their daily habits, Indonesian and Malaysian respondents tend to have the same interest in visual models. Even so, the number of visual models seen in a day tends to be different. Indonesian respondents can see more visual models than Malaysian respondents. However, the time spent observing the visual model, Malaysian respondents was much longer than Indonesian respondents. It can be concluded that Malaysian respondents prioritize quality, while Indonesian respondents prioritize quantity. All respondents agreed that the visual models seen were mostly sourced from sites or online applications due to technological advances. The rapidity of technology directly affects a person's interest in the process of observing, and is supported by research by Eutsler [17] asserts that easily accessible technological facilities affect the habits and interests of visual literacy.

For facing the 21st century, it is a must for students to equip visual literacy skills through learning media [52]. The use of technology must be in accordance with the educational needs of today [53]. In using tools and media, Indonesian and Malaysian respondents conveyed things that tended to be different. Malaysian respondents are more diverse in using tools and media, while Indonesian respondents are more limited and less varied. However, for the visual literacy process, respondents agreed to prioritize devices supported by digital software/applications. Hapsari *et al.,* [54] in his research strengthens the conclusions of the respondents with the results that the majority of art students tend to have visual and interactive learning styles that are close to digital devices and supported by internet access.

According to Jatmika [55], one of the supporting aspects that influence the success of visual literacy learning in the educational environment is adequate facilities and infrastructure. These facilities can be in the form of buildings and organized curriculum. The availability of this infrastructure is evidenced by the existence of public facilities such as libraries, laboratories and subjects that have been held at UNNES and UiTM according to the answers of Indonesian and Malaysian respondents. Even so, the Indonesian respondents admitted that they still have not used the building facilities to the fullest. Not only that, the curriculum that is already running is still considered less than optimal, even though it has been felt by all respondents. Kędra and Zakevičiūtė [46] argue that campuses must still support the virtual literacy learning process in the curriculum used.

4.1 Barriers to Facility Utilization

Students in Indonesia, especially from Semarang State University (UNNES), face several barriers that affect the utilization of campus facilities designed to support their visual literacy. According to Heinich *et al.,* [47], the availability of adequate learning facilities is very important to support the development of effective visual literacy. However, some students have not utilized the facility optimally. One of the main obstacles is limited access and time. Before the COVID-19 pandemic, although facilities such as multimedia laboratories and libraries were available, their use was often regulated by a certain schedule that did not always suit students' needs. Students with busy lecture schedules or other obligations often find it difficult to utilize these facilities. This condition was further exacerbated during the pandemic when physical restrictions made access to laboratories very

limited. Therefore, students had to rely on personal devices that may not be powerful enough to support complex visual design tasks.

In addition to limited access, the lack of socialization and information on how to utilize campus facilities is also a significant obstacle for Indonesian students. Many students felt that information on laboratories and libraries was not conveyed effectively, hence the students were reluctant to use the facilities. Alternatively, students often use online resources considered more practical, although the information quality obtained may not be equivalent to academic references available in campus libraries. This preference reflects the growing pattern of digital media use among students which ultimately reduces the optimal utilization of campus facilities.

Meanwhile, students in Malaysia, especially from Universiti Teknologi Mara (UiTM) Kelantan, have utilized campus facilities integrated into their routines despite also facing similar challenges during the pandemic. The campus library provides online access that allows students to continue to search for references during physical restrictions. Malaysian students are accustomed to using various devices, such as computers, laptops, iPads, and smartphones, as well as digital applications such as Adobe Illustrator and Photoshop, which support their learning process. Eutsler [17] emphasized that easily accessible technology can accelerate the learning process and improve visual literacy skills, especially in the ever-evolving digital era. This habit reflects the use of integrated technology in their learning as part of their daily academic approach.

However, although digital facilities help Malaysian students stay connected to learning materials, they still face challenges in physically accessing multimedia laboratories, especially during the pandemic. These constraints affect the opportunity for hands-on learning with specialized equipment that cannot be fully replaced by personal devices. However, technology-based curriculum and digital facilities remain important pillars in their learning process. The differences in the use of these facilities indicate the importance of effective communication strategies and adequate information provision in both Indonesia and Malaysia. This aims to ensure that all facilities can be optimally utilized to support students' visual literacy.

6. Conclusions

Visual literacy is the ability that owned by someone for understanding and interpreting visual messages in images. This study helped highlight the translation of messages on visual objects, in the learning process of students and teachers. These abilities arise naturally based on the basic knowledge and understanding they acquired over time. The cognitive level of each individual also produces different interpretations. However, the habit and frequency of visual interaction based on visual interest can also generate and increase visual knowledge. Not only that, visual literacy skills can be supported from the use of interactive and varied learning media according to the times, as well as the educational environment by providing adequate facilities.

The results of this study indicate that all students and teachers understand visual literacy subjectively with different understandings. There are several factors behind this, starting from the basic knowledge of each individual, interest in visual models and the length of time in visual interaction, the use of media in the learning process, as well as support for the educational environment, especially campuses. The results of this study also concluded that Indonesian respondents tend to prioritize quantity on interest and duration of visual viewing, while Malaysian respondents prioritize quality. However, for the use of devices - media, Indonesian students tend to be less varied and have not made good use of the facilities provided by the campus, in contrast to Malaysian respondents who make good use of them. This research is limited to assessing visual literacy skills based on the understanding of students and teachers that can be improved from the

media used and the support facilities provided by the campus. It is hoped that this research can contribute to the process of improving visual literacy learning in Indonesia and Malaysia by providing campus facilities and adequate learning media.

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