

Literature Study: The Urgency of Soft Skills in Virtual Learning

Bayu Ariwibowo¹, Henny Prasetyani², Atika³, Adi Marlis⁴

{bayuariwibowo778@ivet.ac.id¹, prasetyani.hp@gmail.com², atikaft@mail.unnes.ac.id³,
adimarlis123456@gmail.com}

Universitas Ivet¹, Universitas Ivet², Universitas Negeri Semarang³, Universitas Ivet⁴

Abstract: The 4.0 industrial era education is required to organize virtual learning. One determinant of learning success is soft skills, but only a few research studies examine the urgency of soft skills in virtual learning. This study aims to examine the urgency of the soft skills students need in virtual learning and determine what aspects of soft skills students need to have in virtual learning. This research was carried out using the literature study method. The steps were to determine the topic, collect library materials based on the topic, analyze library materials, and provide conclusions. The results of the study showed that soft skills are needed for students when carrying out virtual learning. The aspects of soft skills that students need to have in this 4.0 industrial era are (1) collaboration; (2) digital literacy; (3) communication; (4) creativity; (5) independent learning; (6) cognitive development; and (7) critical thinking skills.

Keywords: Urgency of Soft Skills, Virtual Learning, Pandemic Covid-19.

1 Introduction

Merdeka Belajar (the freedom to learn or learning freedom) is a form of learning that aims to create an innovative, non-restrictive learning culture, and is in line with the needs of students [1]. *Merdeka Belajar* in Indonesia emerged along with the start of the 4.0 industrial era and the 5.0 society era. The impact of this era is the learning development that is integrated with the virtual world. Many Learning Management Systems (LMS) are created by programmers, companies, or educational institutions to facilitate the implementation of virtual learning. The application feels even more useful when there is a mass disaster experienced by residents in all corners of the world, namely the COVID-19 pandemic.

Indirectly, the COVID-19 pandemic has provided its stimulus for implementing the *Merdeka Belajar* concept in this 4.0 industrial era because students must learn from home by utilizing technology. In line with what was conveyed by the Secretary-General of the Ministry of Education and Culture, who stated that the COVID-19 pandemic provided a stimulus in accelerating the implementation of learning because teachers must be ready with technology for student services, one of which is by utilizing LMS [2]. The COVID-19 pandemic has changed conventional or face-to-face learning that has been applied so far and transformed into virtual learning. Various challenges occur in the world of education. One of the most felt is IT

adaptation and attitude assessment for students. In contrast to conventional learning, assessing attitudes towards students can be seen directly, but it is different in virtual learning. This underlies that educators have an important role in building students' soft skills through virtual learning.

Nowadays, virtual learning is indeed very helpful, but it is also not free from shortcomings. A study stated that the learning carried out by the virtual teacher still faced obstacles because not all students can quickly adapt to virtual classes [3]. Research conducted at STIKES Buleleng also obtained similar results: the ineffectiveness of virtual learning at the institution. It was proven by the percentage of the effectiveness of the implementation of online learning was only 51.32% [4]. The obvious difference between direct learning and virtual learning is distributing practical skills. Thus, it is necessary to create an accessible platform by following technological developments and innovations [5]. In Nigeria, many public universities could not switch to virtual learning for many reasons, such as adapting technology in the learning process to the education crisis. There are 1.6 billion children and adolescents who have dropped out of school in 161 countries [6]. In virtual learning, both teachers and students must involve themselves in a virtual learning environment (VLE), which is set up like a real learning environment. This is what underlies the world of education to make adaptations to start getting used to the use of technology in learning.

The effectiveness of learning cannot be separated from several factors: technical and non-technical [7]. When it is viewed from the educator's perspective, technical factors can be overcome by adjusting adequate facilities and infrastructure, visual teaching training, material delivery techniques, and how to manage students to focus on learning. From the side of students as learners, these problems can be overcome by providing guidance or training before starting to use the media, setting the rules for carrying out learning, and providing infrastructure services. The more difficult problem lies in non-technical factors, both in terms of educators and students. The problems that often arise in virtual learning are the indiscipline of educators or students in entering LMS classrooms, about students not being serious when participating in learning, inactivity of students or educators in carrying out discussions synchronously or asynchronously, synchronously turning off videos during learning, turning on the microphone when the speaker or those who are invited to speak are talking, and so on [8]. This is certainly something new for educators or students in the implementation of virtual learning. These non-technical factors are more directed at indicators of attitude, inculcation of values, discipline, respect, which are included in the realm of soft skills.

2 Research urgency

Nowadays, much educational research discusses soft skills, but the research only occurs for conditions in the real world. There is a need for research on soft skills in virtual learning because, in current conditions, most education is carried out virtually. As a first step, there is a need for research on the urgency of soft skills in implementing virtual learning. The goal was to examine whether soft skills were really needed in implementing virtual learning and determine the aspects needed to be examined more deeply related to their urgency.

The urgency of the research is shown in **Figure 1**.

3 Research methods

This research was carried out using the literature study method. A literature study is a series of activities in collecting library data, reading, taking notes, and processing research materials [9]. This research was carried out by collecting library materials from books, textbooks, journals, scientific articles, and literature reviews related to soft skills and virtual learning. The data were then analyzed as a basis for determining the urgency of soft skills in virtual learning.

The analytical steps carried out in this research were to: (1) read abstracts from previous research related to soft skills and virtual learning; (2) analyze and provide an assessment of whether the research results are linear with the research objectives; (3) record important information in each literature reviewed; (4) conduct a discussion of finding important information about the urgency of soft skills in virtual learning; (5) provide conclusions about the urgency of soft skills in virtual learning that have been analyzed.

The analytical steps are shown in **Figure 2**.

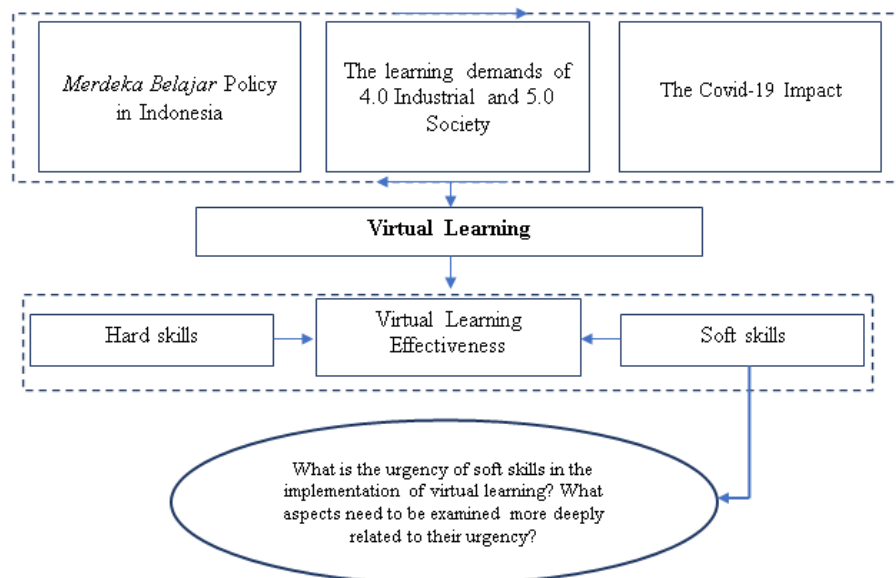


Fig. 1. Research urgency.

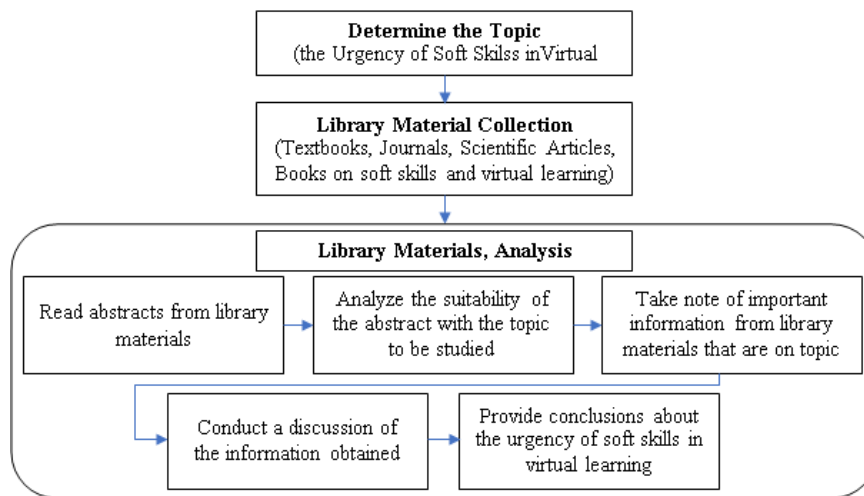


Fig. 2. Analytical step.

4 Result and discussion

Soft skills are life skills, both for oneself, in groups, society, and God [10]. Having soft skills allows a person's presence in the community to be noticed and appreciated more. Soft skills include communication skills, emotional skills, language skills, group skills, ethics and morals, manners, and spiritual skills. It can be concluded that soft skills are one of the biggest factors that determine a person's success because good soft skills can help someone get used to solving various kinds of problems at work, in society, and education.

SMK (Vocational High School) is expected to answer the challenges of the 4.0 industrial revolution and have a great opportunity to produce the graduates needed in this era if they are successful in participating in the revitalization program[11]. The success of implementing the revitalization of SMK cannot be separated from the education program, which is based on nine principles of 21st-century skills, namely: (1) making relevant learning; (2) teaching with discipline; (3) developing lower and higher thinking skills to encourage understanding in different contexts; (4) encouraging the transfer of learning; (5) improve meta-cognition; (6) correcting misunderstandings directly; (7) promote teamwork; (8) utilize technology to encourage learning; (9) improve students' creativity. This study showed that to achieve success in increasing the ability to face the 4.0 industrial revolution, the nine principles of teaching in the 21st century was needed to be implemented. From all of the nine criteria, it can be concluded that soft skills dominated the skills aspect, namely at points 2, 3, 4, 5, 6, 7, and 9; the rest lead to hard skills related to technology. Thus, this study considered the soft skills of educators to have an enormous influence on the success of schools in the 4.0 industrial era.

Soft skills that an educator must possess are (1) self-discipline; (2) responsibility; (3) enthusiasm for work; (4) problem-solving ability; (5) collaboration; (6) communication; (7) personality; (8) social attitudes; (9) critical thinking; (10) creative and innovative thinking; (11) belief; and (12) self-motivation [12]. The study in this book also showed that soft skills are needed by students.

Teaching soft skills to students allows them to be fluent in learning. This is motivated by a disciplined attitude, enthusiasm for work, responsibility, collaboration, personality, and critical thinking, which are the determining factors for students' success in learning.

The research showed that the age and students' religious beliefs did not significantly affect their soft skills development [13]. This research showed that the learning method and student-centered learning had the most influence on success. Learner-centered learning methods require students to have good soft skills, so it can be concluded that soft skills greatly affect the success of students in learning. This literature study showed that the soft skills needed in the 21st century include: (1) collaboration; (2) digital literacy; (3) communication; (4) creativity; (5) independent learning; (6) cognitive development; and (7) critical thinking skills.

Education in the 4.0 era aims to prepare human resources who are creative and in line with current demands where the world is facing a digital-based industrial revolution [14]. The 4.0 Education encourages a new revolution in the world of education, which is not limited to the general ritual of learning in the classroom. The 4.0 education is limited to the classroom and an educational challenge in the digital era. The question in this research was whether schools would be able to face the challenges of digitalization. Digital-based education in Indonesia has been developed in the form of start-ups or applications that contain the same content as the needs of students at school. Various start-ups, such as Quipper Video, Zenius, and Ruang Guru, have become digital education developers in Indonesia. The similarity of the three start-ups is the transfer of the students' learning space and time is not limited. The problem faced now is the effectiveness of digital learning. Many problems arose when learning was carried out online; one of the problems that needed to be overcome was the students' soft skills factor. Learning from home requires students to have high learning awareness because teachers cannot directly monitor students' learning activities at home. Aspects of collaboration, digital literacy, communication, creativity, independent learning, cognitive development, and critical thinking skills were needed by the students, especially in this 21st-century digitalization era. These aspects of soft skills were believed to be very influential in the success of students in the 21st century.

Other research showed that the success of online learning was largely determined by learning independence. Several factors influenced independent learning, one of which is achievement motivation [15]. The results showed that there was a positive and significant relationship between achievement motivation and learning independence, with a large correlation coefficient of 0.702. Meanwhile, the coefficient of determination test results showed that achievement motivation was a predictor of learning independence by 0.490 or 49%. The important thing that needs to be underlined in this study is that learning independence was one of the realms of soft skills. This shows that soft skills for virtual learning are needed so that students can still succeed even though they study using virtual methods.

This Covid-19 pandemic period forces learning to be carried out virtually. A study had been conducted to find problem points about student absorption of educational lectures using online methods in terms of internal and external factors [16]. The research used the descriptive method. The sample used was 67 respondents. The findings showed that students who were unwell while attending lectures were less interested in educational courses. This is an internal factor that could affect student absorption, but students' strong belief in passing courses makes this factor as a factor that is not inhibiting student power. Meanwhile, external factors are factors that affect the absorption of students taking educational courses with the online method in the midst of the covid-19 pandemic. In this case, the students' confidence factor in passing was the biggest factor

in the success of virtual learning. This brings us back again to the soft skills aspect that affected the success of students in learning during the Covid-19 pandemic.

Further discussion of the urgency of soft skills in virtual learning can be seen in Table 1.

Table 1. The Urgency of Soft Skills in Virtual Learning

Author (s)	Year	Literature
Burbekova, S.,	2021	The new requirement in the world of education is the mastery of IT. A more detailed focus is the development of soft skills for prospective professionals. Soft skills that are expected include communication skills, team-building, and leadership [17]
Bruce, J	2017	The formula for building a competency that is not only resistant to climate change but also transforms and innovates is soft skills; specifically, interpersonal skills, the ability to manage and control the emotions, communication skills, leadership, adaptability, and problem solving are critical [18]
Ginting, H., Mahiranissa, A., Bekti, R. and Febriansyah, H	2020	65% of the Outing Team Building Training focused on soft skills training, including teamwork, communication, ethical responsibility, and leadership. These soft skills are believed to impact participants in doing various things in their field of work. [19]
Dung, D.T.H.	2020	Two of the most critical problems in virtual learning are revealed, namely technological adaptation and the lack of social skills among students in a virtual learning environment [20]
Torres Martín, C., Acal, C., El Honrani, M. and Mingorance Estrada, Á.C.	2021	The challenge in virtual learning as a result of the COVID-19 pandemic is to increase student focus, active participation, motivation, and problem-solving skills. [21]
Kurbakova, S., Volkova, Z. and Kurbakov, A.	2020	99% of interviewees (Russian State Social University and Moscow Aviation Institute (University) included 147 students (98 from the Russian State Social University and 49 from the Moscow Aviation Institute (University) provided information that IT experts are needed to develop virtual learning strategies and tactics so that students can achieve their competencies by appropriate methods such as problem-solving or collaboration [22]
Sreehari, P.	2020	Investigating the perceptions of students on online learning during the Covid-19 lockdown shows that students are not interested in online learning; they consider this learning difficult due to network and bandwidth problems. They choose 30% online learning, 70% with face-to-face learning. It can be concluded that educators need to make a proportion of integration in the classroom with online methods[23]

Of all the literature used as a reference, the results of the study showed that soft skills were very much needed in virtual learning because soft skills are one of the biggest factors that determine a person's success. In the world of education, too, the soft skills of educators and students will have a big influence on the success of schools in the 4.0 industrial era where learning collaborates with virtual methods, disciplined attitude, enthusiasm for work, responsibility, collaboration, personality, and critical thinking are some of the determining factors for the success of participants (learners) in learning. The results of the literature concluded that virtual

learning soft skills consisted of seven aspects. This aspect was taken based on the study of the softest skills from the literature obtained. The seven aspects of soft skills were considered based on the results of the study of the implementation of virtual learning from 2019 to 2020. Especially in this 21st century, soft skills aspects needed by students are (1) collaboration; (2) digital literacy; (3) communication; (4) creativity; (5) independent learning; (6) cognitive development; and (7) critical thinking skills.

5 Conclusion

The results of the literature study showed that:

1. Soft skills were needed for students when carrying out virtual learning.
2. Soft skills that need to be improved to support virtual learning in this 4.0 industrial era are (1) collaboration; (2) digital literacy; (3) communication; (4) creativity; (5) independent learning; (6) cognitive development; and (7) critical thinking skills.

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