Soft skills profile of critical thinking ability for culinary arts students in online learning

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ABSTRACT

The ability to think critically has become a demand in the 21st century. This paper describes how culinary arts students' soft skills ownership profile after participating in online learning through the communication media application used. This study is survey research, processed by quantitative description. The research subjects were the culinary arts study program students with diploma 4 and bachelor's degrees, Department of Food and Clothing Engineering, Faculty of Engineering, Universitas Negeri Yogyakarta. The population of this study is all students who are part of ongoing online learning. Samples were taken at simple random. The data collection technique used a questionnaire via google form; the goal was affordability from the aspect of place and time. The study focuses on mastering soft skills in learning and innovation skills, especially critical thinking and problem-solving. The survey results show that Catering lecturers widely use online media, such as the Google Meet application, Google Classroom, and Be-Smart. More than half of the soft skills profiles displayed by culinary arts students show critical thinking behaviors (61%). The behavior of critical thinking soft skills that is quite prominent is the ability to think rationally, consider well to solve problems and be able to make creative solutions to tasks found during learning. Online learning implies that it is necessary to increase human resources, especially lecturers, in optimizing online media applications. Students need support in the form of triggers and the preparation of learning tools that can awaken critical thinking skills.

INTRODUCTION

Learning in the network (online) has long been known in education, although its previous use was minimal. The use of online learning was initially only for special classes that were remote, so teachers very rarely used it in their teaching activities. Moreover, online learning requires teachers ' information technology ability and relatively expensive facilities and infrastructure. Teaching materials that teachers will deliver must be designed in various forms and recommended in digital form so that they accommodate the independent or individual learning of students (Darmansyah, 2020). This is in line with the Internet connection, which is an essential requirement during the implementation of online learning. At the same time, not all regions in Indonesia can be reached with a good Internet connection. Expanding the Internet network is one solution, but we are also faced with the high cost of investing in Base Transceiver Stations (BTS) and the high price of repeaters that require special permits before use (Asiba, 2021).

The Coronavirus disease 2019 (Covid-19) is disturbing worldwide, especially in Indonesia; this is because Covid-19 has paralyzed various sectors such as the economy, tourism, trade, and investment. The Covid-19 pandemic since the end of 2019 has forced teachers and their various supporting components to carry out online learning because health factors are important factors that must be prioritized. The implementation of online learning, which was accelerated due to the coronavirus, certainly changed all habits in learning activities. The interaction that previously could be done freely is now starting to be limited (Bojović et al., 2020). Learning activities carried out face-to-face are now evolving through online learning. Online learning was chosen because it is considered the best solution so that the learning and teaching process during this pandemic can still run without endangering students and teachers/lecturers (Seli et al., 2021).

Online learning during the Covid-19 pandemic is not always detrimental but also has several advantages in its application. Some of the benefits of online learning are the flexibility of time and place so that the implementation of learning does not require students and teachers to gather in the same place. Differences in location, time, and distance are common to communicating and learning interactively with students, so online learning is a suitable alternative. Students can access learning media whenever and as much as they need to be understood (Aziz & McKenzie, 2020).

On the other hand, the demands of vocational graduates must be to the needs of the world of work. Activities in vocational groups must always be oriented towards strengthening competence so that vocational education graduates can show that they are competent according to their fields and levels. The Director-General of Vocational Education has determined that vocational education learning must equip students with various skills as personal development assets. In the strategic plan of the Ministry of Education and Culture Directorate General of Vocational Education (2020), it is stated that the skills that must be trained and mastered include life and career skills, skills in learning and innovation, and skills in utilizing information, media, and technology. This stipulation binds all vocational higher education institutions, including vocational education, attached to universities. Therefore, vocational education must create learning that allows graduates with high skills and knowledge (high skill & know-how).

Based on this, through this research, we want to see the profile of soft skills ownership on the critical thinking ability to cater to students after online learning is implemented for three semesters. This is very useful for improving learning activities toward 21st-century skills. Learning, in a broad sense, is an obligation, competency development, and a process not bound by place and time in which there are activities to get, understand, remember, and use information (Yokoyama & Miwa, 2020). Learning is knowledge acquired by systematic study, gaining knowledge of a subject or skill due to reflection, experience, or instruction (Bragg et al., 2021).

Rossman and Rallis (2012) further explain that learning emphasizes an active process in which students passively receive information and knowledge and actively apply various types received. So far, we are familiar with the most commonly known learning taxonomy, Bloom's Taxonomy. Bloom's Taxonomy provides assessment criteria for learning outcomes that can be classified into three domains: cognitive, affective, and psychomotor. The cognitive domain refers to intellectual abilities that include knowledge with six levels, from easy to difficult. The effective field relates to feelings, emotions, and behaviors. The psychomotor domain refers to skills (Baran & Jones, 2020).

Learning has gone through several stages ranging from conventional or face-to-face learning to learning with the help of communication and information technology, better known as online learning. Online learning utilizes information and communication technology (ICT) and continues to develop (Da Silva & Behar, 2020). Online learning has transformed the everyday student experience and created virtual campuses and classrooms. Technologies widely used in this era of online learning include tablets, smartphones, interactive whiteboards, social media platforms, professional broadcasting communication equipment, augmented and virtual reality, and various other learning software programs that contribute to this digital learning era.

A modern online-based learning system is also supported by learning formats in the form of text, audio, video, and interactive 3D materials. Flexibility is the main benefit of implementing online learning. Online learning can be done in the office, at home, and even in various places with an Internet connection. Comerchero (2006) explain that the application of online learning also

encourages students to be more responsible for the learning they take or participate in. When learning success is obtained, it will build self-knowledge and self-confidence in students.

According to Arkorful and Abaidoo (2015), online learning provides advantages in the form of flexibility in time and place; increasing access to knowledge and information; building interaction with more students and minimizing student fear; implementation, which tends to be cost-effective; and helps for overcoming staff, facility, and technical limitations. However, behind some of these advantages, there are disadvantages of online learning, including the lack of optimal interaction process, students' understanding and interpretation being less effective, lack of communication skills, a challenge to control fraud, plagiarism opportunities, the loss of the role of institutional socialization and learning facilitators, and that not all disciplines are compatible with online learning.

Soft skills are defined as non-technical skills that do not depend on abstract reasoning and are loaded with interpersonal and intrapersonal skills (Hurrell, 2016). Soft skills become an essential thing that students must own. One of the weaknesses of vocational education graduates is due to changes in quality that have been oriented only to hard skills and are not accompanied by the development of soft skills, which are very much needed by business and industrial sectors. Soft skills play a very important role in a person's success in life (Prihatiningsih, 2018). Soft skills are needed in the world of work, where this ability will be able to help individuals to apply the knowledge gained while in college in the world of work (Manara, 2014).

Mastery of soft skills will ensure that one does his or her job with high quality (Sharma & Sharma, 2010). Mastery of hard skills coupled with integrated soft skills enables students to adapt to organizational culture, take the initiative, and contribute to organizational success (Kinsella & Waite, 2021). Critical thinking and problem-solving skills are essential in learning in the 21st century. In critical thinking, Heard et al. (2020) explain that it takes the ability to recognize a problem and then find a way or solution that can be used to solve problems. In detail, critical thinking requires the ability to collect information, interpret data, assess existing evidence, evaluate, and then draw conclusions. Critical thinking skills are higher-order thinking skills in solving problems systematically. "Critical thinking is thinking that uses its mind to solve a problem by first understanding the problem, expressing an opinion or argument clearly, being able to detect it from various points of view and conclude the existing problems" (Fatmawati et al., 2014).

According to Sulaiman et al. in Changwong et al. (2018), preparing students to be able to think critically is one of the main goals of many professional universities. In addition, critical thinking skill is also one of the skills that are sought after by most employers. Critical thinking skill is the ability to reason, build concepts, and develop logical thinking. Students can synthesize, assess, and reflect on things such as ideas and assumptions with rational reasons (Hamidah, 2017). This ability is essential when students are involved in solving various problems. Students must be able to find the issues and formulate creative solutions to problems encountered (Dadakhon & Sabohat, 2022). In online learning, lecturers can create topics, or students discover the topics when interacting with assignments.

Critical thinking also includes three main elements: effectiveness, novelty, and self-direction. It is effective because it avoids general traps or views on one side only so that it ignores evidence and cannot present evidence to support a statement (Willingham, 2008). Keynes reinforces this statement in Zakiah and Lestari (2019), in which he states that the purpose of critical thinking is to maintain an objective position. Where will an argument weigh all sides and then analyze its weaknesses and strengths? Therefore, it is also necessary to actively look for all sides of an idea so that it can support a statement to be conveyed.

Students who develop critical thinking skills will benefit academically and succeed in the world of work. Through necessary thinking skills, students will broaden their perspective of various things and improve their ability to navigate essential decisions in the learning process and their careers (Murawski, 2012). Critical thinking is one of the high-level skills that is an indicator of the success of the learning objectives students must achieve. Critical thinking skills must be developed consistently in the learning process so that students can manage the learning process independently and improve their thinking skills (Thalib et al., 2017).

RESEARCH METHOD

This research is survey research, processed by quantitative description. The research subjects are Diploma 4 and undergraduate students of the Culinary Arts Program of the Department of Food and Fashion Engineering, Faculty of Engineering, Universitas Negeri Yogyakarta. This population determination is based on the fact that all students are part of online learning, which is currently enforced. The research sample was established using the simple random sampling technique. During online learning, students had a variety of theoretical and practical learning experiences. They completed structured tasks independently and in discussion groups, journal and book studies, presentations, questions and answers, culinary practices, and surveys.

The data collection used a questionnaire with Google Forms, by the conditions of the Covid-19 pandemic, and taken at a particular time only to be affordable in time and place. This research focuses on the mastery of soft skills in soft skills learning and innovation skills, especially critical thinking and problem-solving skills. The soft skills rubric for necessary thinking skills as a response instrument uses the following six categories, as seen in Table 1.

Table 1. Response Category

Response	Explanation
Not like me	Illustrating that the mastery of the described soft skills has not yet appeared
A little bit similar to me	Illustrating that the mastery of soft skills is not as described
A little closer to me	Illustrating that the mastery of soft skills is somewhat close to the description
Sometimes like me	Illustrating that the mastery of the described soft skills is still unstable or not yet stable
I do it almost often	Illustrating that the mastery of soft skills is close to the description, although it is not consistent
I always do	Illustrating that the mastery of the described soft skills has become part of daily behaviour

Soft skills profile data were analyzed quantitatively according to the strengths and weaknesses of soft skills resulting from online learning activities. Soft skills profile is strong if students can describe mastery in categories "I almost often do and always do." Besides, it is categorized as a weakness.

FINDINGS AND DISCUSSION

Online Media Used

Online activities that have been carried out so far have been conducted based on responses from various respondents. Based on the data in Table 2, the media most frequently used by lecturers is Google Meet (39.9%), followed by Google Classroom (26.22%) and Be-Smart (25.14%). Of course, the selection of online media is based on an agreement between lecturers and students on the use of this application with various disadvantages and advantages. Google Meet, distance, and time are acceptable. The capacity can reach 100 to 250 people, with multiple features that help interaction in learning.

Table 2. Online Media Used

No.	Online Media	F	%
1	Google Meet	73	39.9
2	Google Classroom	48	26.22
3	Be-Smart UNY	46	25.14
4	Zoom Meeting	7	3.82
5	WhatsApp	7	3.82
6	YouTube	2	1.1
	Total	183	100

Furthermore, Google Classroom is an online mixed-learning application. It aims to help lecturers and students organize classes and communicate with students without being tied to class schedules. The utilization of Google Classroom can be multiplatform through computers and mobile devices (Alim et al., 2019; Sabran & Sabara, 2018). Be-Smart is an interactive electronic learning media via the Internet intended for students and lecturers at Universitas Negeri Yogyakarta. The application was built to facilitate the relationship between lecturers and students in teaching and learning activities and to follow the development of learning technology. Be-smart was created using the Modular Object-Oriented Dynamic Learning Environment (MOODLE) (Abubakari et al., 2021), a world-famous software package to develop Internet electronic learning media (LPMT Fenomena, 2013).

Ownership Profile Soft Skills of Critical Thinking Ability

Critical thinking and problem-solving skills are important in learning in the 21st century (Carlgren, 2013). In detail, critical thinking skills require the ability to collect information, interpret data, assess existing evidence, and evaluate and then draw conclusions (Heard et al., 2020). Critical thinking is also thinking using the mind to solve problems by first understanding, presenting arguments, and detecting bias from various points of view so that conclusions can be drawn (Fatmawati et al., 2014; Mursidik et al., 2015). Soft skills ownership profile on critical thinking ability can be seen in Figure 1.
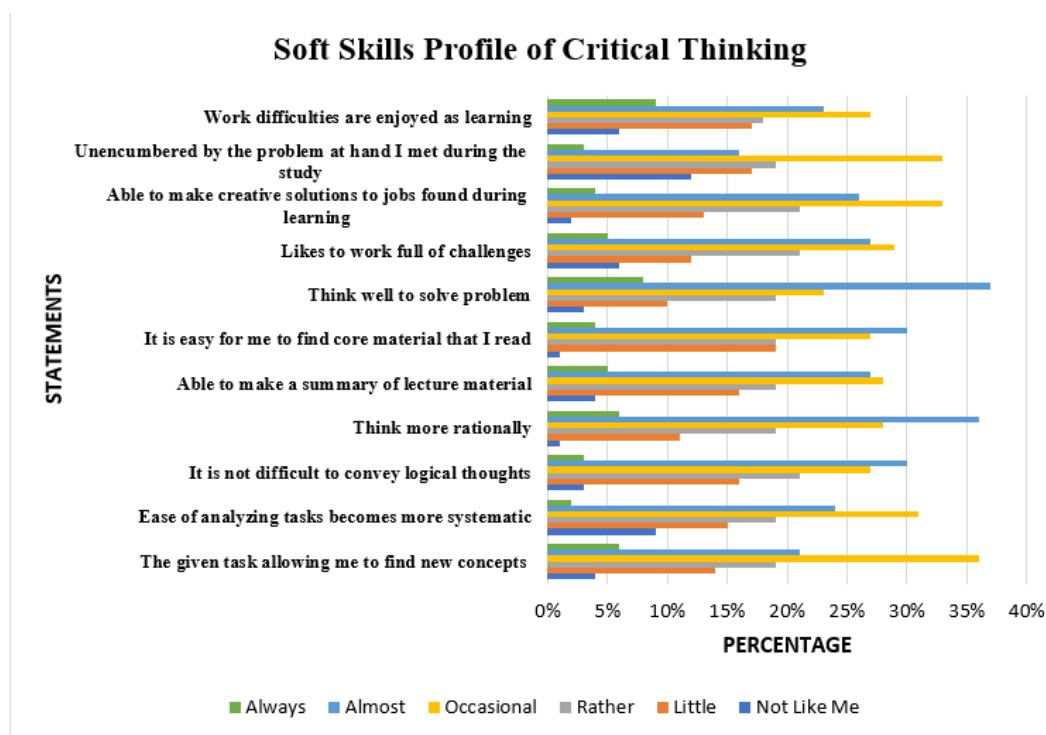

Figure 1. Soft Skills Profile of Critical Thinking

Based on Figure 1, in the "almost like me" category, the three highest percentages are "think well to solve problems" (37%), "think more rationally" (36%), "it is not difficult to convey logical thoughts" (30%), and "it is easy for me to find core material that I read" (30%). In the 'occasional like me' category, the three highest percentages in a row are statements with the given task "allowing me to find new concepts" (36%), able to make creative solutions to jobs found during learning (33%), and "unencumbered by the problem at hand," "I met during the study" (33%). Overall ownership of soft skills still shows "sometimes like me," with an average achievement of 29%, as as shown in Figure 2.

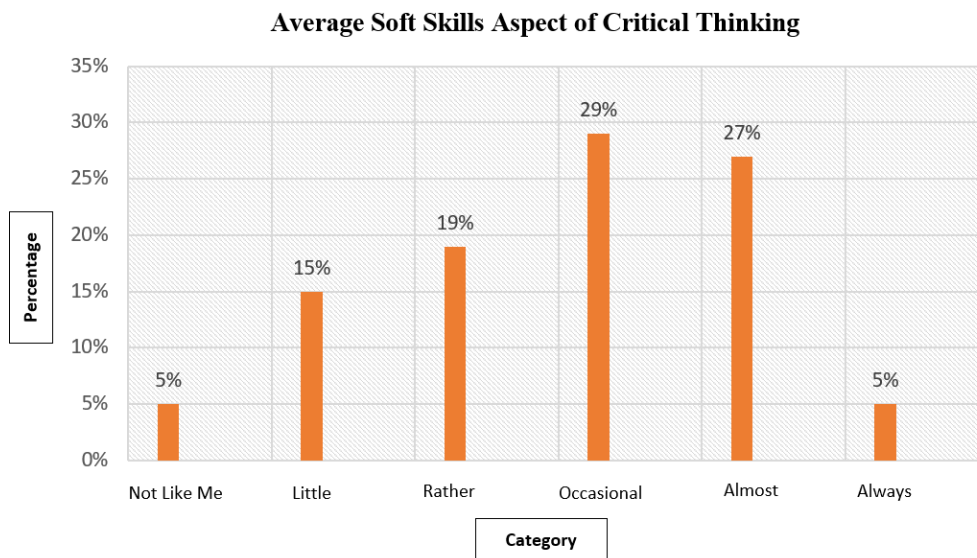**Average Soft Skills Aspect of Critical Thinking**

Figure 2. Average Soft Skills Aspect of Critical Thinking

Figure 1 shows that although students are trained to think critically, not all show their critical thinking skills. This situation indicates that online learning needs to support students in the form of triggers so that they can practice critical thinking. With this average, it shows that there are still 39% of students whose soft skills have yet to emerge in the essential aspect of thinking.

The distribution in Figure 2 shows aspects of soft skills, with the tendency of the data to the right being more significant than that to the left, where the curve to the right shows some elements of soft skills "sometimes," "almost," and "somewhat like me." When added up, it reaches 61%, while the soft skills aspect of critical thinking that leans to the left shows "a bit," "a little," and "not like me" is tiny, reaching 39%. Thus the description of the soft skills aspect of online learning in the part of critical thinking ability shows a tendency to the right, namely "sometimes," "almost," and "somewhat like me." Furthermore, an overview of the mastery of critical thinking skills on each item can be seen in the following Figure 3.

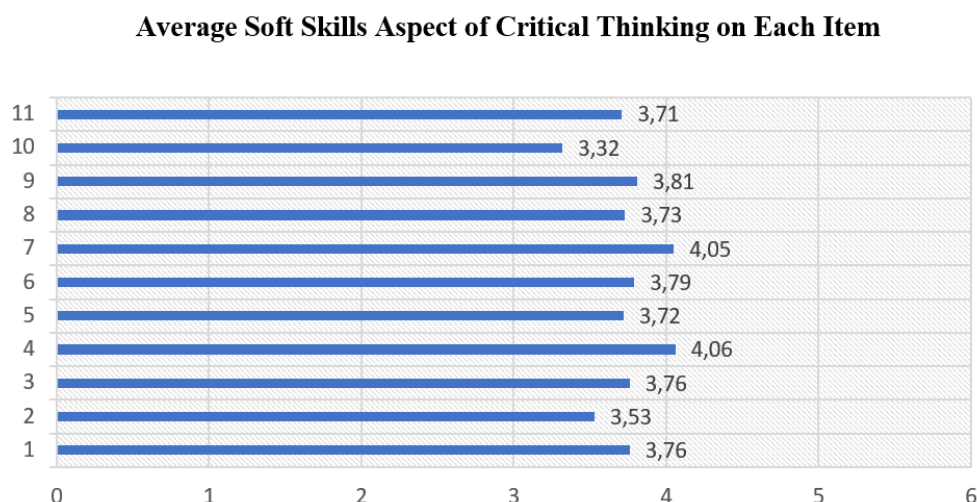**Average Soft Skills Aspect of Critical Thinking on Each Item**

Figure 3. Average Soft Skills Aspect of Critical Thinking on Each Item

The profile of soft skills in critical thinking is seen from the average score of the highest rank on the item "can reason" or in statement number four (4.06), the second "can think well to solve problems" or statement number seven (4.05) and the third "can make creative solutions to tasks found

during learning" or statement number nine (3.81). The overall average value reached 3.75 in the "sometimes like me" and "almost like me" categories. Overall, the average achievement of the soft skill profile on critical thinking skills only reaches 61%.

CONCLUSION

Based on their background, theory, and data processing, culinary arts lecturers widely use online media: the Google Meet application, Google classroom, and Be-Smart. This media is used in teaching because it is considered effective in bridging the interaction of lecturers and students since it has features that support the teaching-learning process. The profile of soft skills displayed by Culinary Arts students has more than half (61%) showing critical thinking behaviors, while the distribution is in groups "like me" (29%), "almost like me" (27%), and "always like me" (5%). The behavior of critical thinking soft skills that is quite prominent is the ability to reason, think well to solve problems and make creative solutions to tasks found during learning. Based on the research results and existing conclusions, the absorption and use of technology and information in learning are diverse. Therefore, it is necessary to increase the ability of lecturers to optimize the features in this application program, for example, evaluation activities, assignment assignments, discussions, quizzes, and assessments. Online learning has been able to equip students with critical thinking. However, it is not optimal; this situation indicates that online learning needs support through triggers or the preparation of learning tools that can awaken critical thinking skills.

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