

# Online Learning Readiness in English for Medical Purposes Setting: An Assessment on Department of Nutrition Science Students

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## ABSTRACT

The practice of online learning has been widely known for its benefits and effectiveness in an ideal setting. However, the case of the COVID-19 pandemic causes some pushed changes in language classrooms, including the sudden implementation of online learning. "Student readiness" for online learning in the English for Medical Purpose context, as well as their views of the major components of online learning are the focus of this research. The data were based on the questionnaire distributed to the students taking the English for Nutritionist course. The data analysis was performed quantitatively to obtain the results regarding the students' readiness and perceptions. The 71 students participating in this study perceived online learning as a chance to implement their technological literacy and a challenging learning approach. Although some improvements are needed, the overall results suggest that the students are more than at the expected level of readiness to learn English online.

**Keywords:** *English for Medical Purposes, Online Learning, Students' Readiness.*

## 1. INTRODUCTION

The Indonesian government revealed the first verified cases of Covid-19 at the beginning of March 2020. At that time, the government tried to convince the people that Covid-19 was not a severe threat to Indonesia. They also claimed that Indonesia is ready to prevent and fight the spread of SARS-CoV-2 by preparing more than 100 hospitals equipped with proper and standardized isolation rooms [1]. However, by April 2020, WHO [2] reported that the cases of Covid-19 spread massively, reaching 34 provinces in Indonesia, resulting in 10,118 confirmed cases and 792 total deaths in less than two months. It was getting worse since transmission modes causing Covid-19 can be from droplet and airborne. This situation then greatly affected many sectors, including education. There was a sudden and pushed change in teaching and learning activity to prioritize everyone's health and safety. Classical face-to-face learning had to be transformed into online learning.

This pushed change also took place in the Nutrition Science Department of Faculty of Medicine, Universitas Brawijaya (FMUB). As the faculty is concerned with health practice, online learning had not gotten a considerable proportion compared to classical teaching

since the students were required to perform direct practical training. However, there seemed to be no safer alternative than implementing total online learning right at that moment. All courses and practical training had to be conducted online, including the English for Medical Purposes (EMP) course. In the middle of the semester, the remaining meetings were supposed to be turned into virtual meetings. This sudden change did not allow the department to prepare the faculty for online learning. The virtual classes were conducted without any consideration of students' readiness.

Theoretically, the practice of online learning has been widely embraced by many educators and educational institutions since years ago. The term "online learning" is used interchangeably with "distance learning", "e-learning", "virtual learning", etc. However, the definition of online learning varies between experts. Carliner [3] and Dhull and Sakshi [4] described online learning as simply the teaching activity and provision of materials involving a set of technology accessible through a computer. According to Benson [5], "online learning" is a more advanced kind of remote learning that expands educational options for non-traditional learners. Singh and Thurman [6] provide a more well-known definition of "online learning". They conducted a thorough review

of “online learning” terminology from 1988 to 2018. Then, they defined *online learning* as the teaching and learning activity that takes place through the use of the internet in an asynchronous setting in which students interact with instructors and fellow students on their own and do not need to be physically present. In the context of this study, online learning covers both synchronous and asynchronous settings engaging the students in the learning activity through video teleconferencing software and a cloud-based learning management system.

In an ideal environment, online learning offers many benefits for its users. The first benefit explored by many practitioners is accessibility and flexibility [4], [7]–[10]. Online learning enables the instructors and students to engage in a set of learning activities without being physically present in traditional classrooms if they have the resources and the know-how to put technology to use. Other benefits mentioned by experts are developing technological skills, giving equal learning opportunities, improving student-tutor interaction, and reducing the program's cost. Specifically, Kilpatrick and Bound [11] investigated the advantages of online learning for individuals and groups in different parts of Australia. They found that “online learning” offers opportunities that lead to occupations and work opportunities that might otherwise require them to move away from home or be impossible to afford. Other students who had little or no computer literacy in their late teens and early twenties developed their abilities by utilizing different computer applications and the internet. Finally, students who responded well to “online learning” improved their problem-solving skills and increased their self-confidence. These new abilities boosted self-assurance. However, those benefits might not be perceived for every student, department, faculty, university, or country. Thus, it is necessary to assess an institution or an individual's preparation for online learning to ensure that its actual benefits are applicable in various settings.

In general, online learning readiness refers to all stakeholders' mental and physical preparedness for an online learning process. Previous researchers developed some alternative ways to measure readiness, especially students' readiness. Hung, et al. [12] created a self-directed learning readiness scale to evaluate students' ability to work with online resources, willingness for learning, self-confidence with computers and the Internet, and confidence in online communication. In contrast, an extensive examination on the “online learning readiness” of Turkish university students, according to Akaslan and Law [13], places a strong emphasis on three major factors: “readiness, acceptance, and training”, as seen in Figure 1. The research involved students in the area of electricity. The students were found to be “sufficiently ready” for online learning based on a 78-item questionnaire. The adaptation version using a similar instrument was then performed by Unal, Alir and Soydal [14]. They narrowed down the items into 39

online learning-related items emphasizing five components: “availability of technology, use of technology, self-confidence, acceptance, and training.” The present study is aimed at finding out how well prepared the students were and what they thought about online learning, especially those in the English for Medical Purposes course. This current study was led with the following research questions:

1. Are the students of the Department of Nutrition Science of FMUB ready to learn English online?
2. What are the students' perceptions about the “availability of technology, use of technology, self-confidence, acceptance, and training”?



Figure 1. A model for measuring “students readiness”

## 2. METHOD

At the end of the semester, the researchers asked the students joining English for Nutritionist to participate in this study. The participants in this research were 71 students of the Department of Nutrition Science taking the English course. In order to answer both of the research questions, the adapted questionnaire from Unal, Alir and Irem [14] was employed. The students filled out the questionnaire within one week via Google Docs. This current study falls into quantitative research since the data were collected from a structured online learning readiness questionnaire and scale. The data obtained were quantitatively examined. The majority of the research was focused on descriptive statistics such as mean scores and standard deviations. Each item's and component's mean scores were calculated by using Microsoft Excel software. The level of online learning readiness was assessed based on the mean score. In short, a higher mean score indicates a higher level of online learning. The five-point Likert scale questionnaire had 39 items related to learning English online, divided into five components: “availability of technology, use of technology, self-confidence, acceptance, and training.”

The overall mean of each component was then compared to the online learning readiness scale from Aydin and Tasci [15]. The Likert-scale questions were classified from 1 to 5, with 1 indicating the least readiness and 5 indicating the most readiness. Because the alternatives were scored as 1, 2, 3, 4, or 5, the mean score of 3.40 can be recognized as the expected level of online

learning preparedness. It is because a five-point scale includes four intervals and five categories, and the ratio  $4 / 5 = 0.8$  [15]. A similar scale was also employed in previous research by Akaslan & Law [13] and Unal, Alir and Irem [14]. Both of those studies indicated that the student readiness was at the expected level. The adopted scale can be seen in Figure 2.

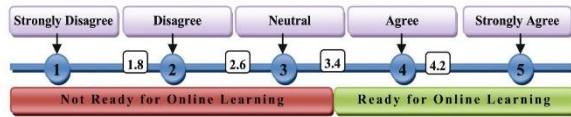


Figure 2. An assessment model for measuring readiness for learning English online

### 3. FINDINGS AND DISCUSSION

#### 3.1. Readiness for Online Learning

As aforementioned, the assessment on learning English online in this research setting was composed of five components covering “availability of technology, use of technology, self-confidence, acceptance, and training”. In order to know the difference of each component, the mean scores are presented in Table 1.

Table 1. Mean scores for online learning components

Component	$\bar{X}$	SD
Availability of Technology	4.0	0.1
Use of Technology	4.0	0.2
Self-confidence	4.1	0.2
Acceptance	3.0	0.1
Training	3.4	0.0
<b>Overall Mean</b>	<b>3.7</b>	<b>0.1</b>

The mean scores were obtained from questionnaire tabulation employing five-point Likert-type responses. The lowest mean score was from the acceptance component showing 3.0, while the highest was self-confidence indicating 4.1. There were similar scores for the availability of technology and use of technology—both of the components indicating 4.0. Meanwhile, the training components obtained 3.4. The overall mean score for all components was 3.7. The obtained scores should be compared with the assessment model to know the implications. Referring to the assessment model by Aydin and Tasci [15], the expected score to define readiness in online learning is 3.4. Figure 3 shows the comparison of the mean score for each component to the projected degree of readiness.

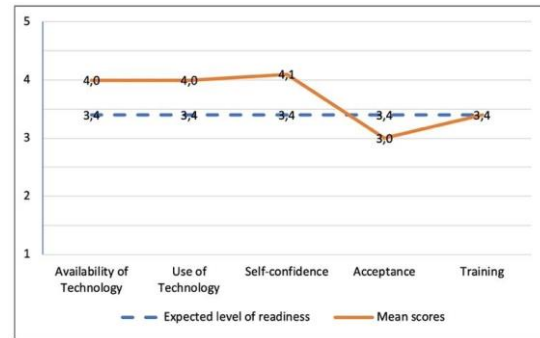


Figure 3. Mean Scores for Online Learning Components

Based on the result depicted in Figure 3, three online learning components consisting of self-confidence ( $\bar{X}=4.1$ ), availability of technology ( $\bar{X}=4.0$ ), and use of technology ( $\bar{X}=4.0$ ) were higher than the projected degree of readiness (3.4). The mean score of the training component was right at the expected level of 3.4. In contrast, the only component that did not meet the expected level was acceptance ( $\bar{X}=3.0$ ). However, the overall mean of all components ( $\bar{X}=3.7$ ) was higher than the expected level of readiness. These results mean that the students seem ready to learn English online, although there is still a need to improve some aspects such as acceptance and training.

#### 3.2. Perception about Availability of Technology

The students were asked about the technological support for online learning in this component, including devices, networks, and internet connection. The overall mean for this component was 4.0. The highest item score was the hardware facilities owned by the students (I.1,  $\bar{X}=4.4$ ), while the lowest was the internet stability factor (I.4,  $\bar{X}=3.6$ ). Overall, the students are ready to learn English online since they have appropriate access to technology. As presumed by the writer, the low scores tend to be from the internet factor. Although the students have sophisticated devices, it will not help much when the internet is not reliable. It can be seen from the score difference between Items I.1, 2, 5 and I. 3,4,5. They admit that they have proper technology but not adequate internet access. Since the students are from different parts of Indonesia, it is unlikely to have the same speed, stability, and connection. During the online period, the writer often got notifications from students mentioning that they could not join the lesson on time or could not join at all due to internet problems. Even though the overall availability of technology is more than the expected level, it still needs improvement.

**Table 2.** Findings in Availability of Technology

Description	Items	Statement	$\bar{X}$
Availability of Technology	I.1	The hardware facilities are enough.	4.4
	I.2	The software facilities are enough.	4.3
	I.3	The speed of the internet access is satisfactory.	3.8
	I.4	The stability of the internet access is satisfactory.	3.6
	I.5	I have access to computer whenever I need.	4.3
	I.6	I can connect internet whenever I need.	3.8
<b>Availability of Technology</b>			<b>4.0</b>

Availability of technology becomes a formidable challenge for the lecturers because providing a decent network, internet, and connection is beyond their control. What the lecturers can do is adjusting their activities to suit the students' condition. For example, teaching specific skills in English for Medical Purposes is quite tricky, and that task will be more arduous when it comes online. In order to deliver the material effectively, the lecturers should design more engaging and interactive activities using various software or applications. However, proper consideration is still needed since the students do not have equal access to technology. Administering quizzes or exercise via Quizziz may seem overwhelming, but it will be a problem for those who do not have a stable internet connection. The students might lose some points because the questions or instructions do not load properly on their devices. Exploring various learning software or applications with the topic or teaching material is required to make online learning more impactful. However, the students' availability of technology should be taken into account appropriately.

**3.3. Perception about Use of Technology**

In the use of technology, the mean scores ranged from 2.8 to 4.5. Five items had the same score with  $\bar{X}$ = 4.5. Those were the uses of internet as information source, software, instant messaging, learning management system, and online forums and chat. At the same time, the lowest score was from the use of Web 2.0 tools to share information ( $\bar{X}$ = 2.8). The overall score for the use of technology was above the expected level ( $\bar{X}$ = 4.0), meaning that the students are ready to learn English online since they are proficient users of technology. The students perceived that they did not face serious problems in dealing with using technology. Most of them access the internet on a daily basis to look for information related to their assignments via mobile technologies. They also use specific softwares and applications to discuss certain issues, do tasks, and save and share data. Even if there are also some items below the expected level (I. 8 and I. 13), it does not mean that they cannot use them. It is uncommon to use e-mail as the primary communication tool with lecturers and classmates in this research setting. E-mail is mainly used when the students submit specific projects or have formal correspondences. In a less formal setting, the students prefer to contact their lecturers via instant messaging such as WhatsApp or

Telegram. Then, they often use Line to discuss and chat with their classmates since that application has more sophisticated features than others. They can use the Open Chat feature to discuss English-related tasks with the more expansive students' community. The use of Web 2.0 tools is another uncommon thing for the students. They choose to share information via instant messaging or collaborate directly in file hosting services.

**Table 3.** Findings in Use of Technology

Description	Items	Statement	$\bar{X}$	SD
Use of Technology	I.7	I use internet as information source.	4.5	0.6
	I.8	I use e-mail as the main communication tool with my lecturers and classmates.	3.1	1.1
	I.9	I use office software (e.g. M.S. PowerPoint, Word, Excel).	4.5	0.6
	I.10	I use social network sites (e.g. Facebook, Twitter).	4.3	0.7
	I.11	I use specific software (e.g. Duolingo, Fluent-U, Online Dictionary).	3.4	1.0
	I.12	I use instant messaging (e.g. WhatsApp, Telegram, Line).	4.5	0.6
	I.13	I use Web 2.0 tools (e.g. Blog, wiki) to share information.	2.8	1.1
	I.14	I use file hosting services (e.g. Google Documents, Dropbox).	3.9	1.0
	I.15	I use learning management systems (e.g. Blackboard, Moodle).	4.5	0.5
	I.16	I use online forums and chat to communicate with my colleagues.	4.5	0.5
	I.17	I use mobile technologies (e.g. Smartphone, Tablet) to connect internet.	4.3	0.7
<b>Use of Technology</b>			<b>4.0</b>	<b>0.2</b>

Students' efficacy in using technology can be helpful yet challenging for the lecturers. When the students can utilize various technology products, they can keep up with online learning quickly. However, the lecturers should also improve their technological literacy since it develops rapidly. The use of technology in an EMP course will be the added value to the lesson. The lecturers can combine the technology to be used in asynchronous and synchronous classes. For example, lecturers can promote online collaborative writing via file hosting services such as Google Docs. Technology can also facilitate the development of receptive and productive EMP skills, which are essential for the students during their study period and future careers in the medical field.

**3.4. Perception about Self-confidence**

The confidence of the students in the utilization of technology was also examined to determine how ready they were for online learning. In the self-confidence component, twelve items were given to the students. As seen in Table 4, there was no single item below the expected level of readiness ( $\bar{X}$ = 3.4). The mean score for each item ranged from 3.4 to 4.5, and the overall score for this component was 4.1, which made it higher than the expected level of readiness. This finding can be interpreted that most students are confident about their ability to use technology to support online learning. The highest score of self-confidence component was related to the students' ability to use Office software and search engine ( $\bar{X}$ = 4.5). The students do not have significant difficulties using software and search engines since they had used them long before the pandemic. Most of the assignments and examinations in this research setting are no longer paper pen activities. Beside search engines, the students are also able to utilize the website and other

technology facilities appropriately. The use of a learning management system does not seem to be a problem for the students. Before the implementation of online learning, EMP course has used a cloud-based learning management system to manage assignments.

**Table 4. Findings in Self-confidence**

Description	Items	Statement	X	SD
Self-confidence	I.18	I have information about what online learning is.	3.9	0.7
	I.19	I have the skills to operate a computer.	4.4	0.5
	I.20	I am able to use office software for content delivery and demonstration (e.g. M.S. Power Point, Word, Excel).	4.5	0.5
	I.21	I am able to use web browsers (e.g. Safari, Google Chrome).	4.4	0.5
	I.22	I am able to use search engines (e.g. Google, Yahoo).	4.5	0.6
	I.23	I can troubleshoot most problems associated with using a computer.	3.5	0.9
	I.24	I can use digital file management tools (e.g. deleting or renaming a file on my computer).	4.3	0.8
	I.25	I am able to do my English homework by using electronic technology facilities.	4.4	0.6
	I.26	I have enough time to prepare my English homework by using electronic technology facilities.	3.8	0.8
	I.27	I am able to use learning management systems (e.g. Blackboard, Moodle).	4.4	0.6
	I.28	I believe that online learning is easy to use.	3.4	0.9
	I.29	I feel that I am ready for learning English online.	3.4	0.9
	<b>Self Confidence</b>			<b>4.1</b>

Some improvement is, however, still needed in terms of encouraging students to participate and be ready during online learning. Encouragement can be done by explaining how online learning will be. The students should be well informed if the lecturers want to use specific software or learning management systems. If possible, a set of manuals on how to utilize the technology can be provided to prevent or solve a technical problem. Before ensuring the students' confidence in online learning, the lecturers must be ready and prepared with many teaching scenarios. If the students' confidence is at the expected level, the lecturers will have more alternative ways to improve the quality of the EMP course.

**3.5. Perception about Acceptance**

The students were asked to give their perceptions of online learning acceptance by filling out seven related items. Almost all of the mean scores for the seven items were below the expected level ( $\bar{X} = 3.4$ ). The only item which was slightly above the expected level of readiness was students' willingness to start learning English online (I.30=  $\bar{X} = 3.5$ ). Meanwhile, the lowest score was related to the effectiveness of learning English online (I. 36,  $\bar{X} = 2.5$ ). The overall mean from the acceptance component was below the expected level of readiness ( $\bar{X} = 3.0$ ). Thus, it can be clearly interpreted that the students have not accepted the comprehensive implementation of online learning yet. They have not shown a positive attitude towards learning English online because they think it will hinder knowledge transfer and interactions. Based on Table 5, there is a contrasting perception between students' willingness to start learning English online ( $\bar{X} = 3.5$ ) and students' support in online learning implementation ( $\bar{X} = 2.8$ ). In a positive way, the students are attracted to learn English online. However, they still need more time to accept the comprehensive implementation of online learning, especially in the EMP course. Although they believe that learning English

online will improve the quality of education, they still doubt the effectiveness of online learning.

**Table 5. Findings in Acceptance**

Description	Items	Statement	X	SD
Acceptance	I.30	I am keen to start learning English online.	3.5	0.8
	I.31	I believe that learning English online can enhance the quality of education.	3.2	0.9
	I.32	I believe that learning English online can increase my productivity.	3.1	1.0
	I.33	I believe that learning English online is more effectively than the traditional classroom-based approach.	2.5	0.9
	I.34	I believe that learning English online enables learners and instructor to communicate and interact better with one another.	2.6	0.9
	I.35	I believe that learning English online have benefits for education.	3.0	0.8
	I.36	I support implementation of learning English online in my department.	2.8	1.0
<b>Acceptance</b>			<b>3.0</b>	<b>0.1</b>

As mentioned in the Introduction, one of the benefits of implementing online learning is the ease of student-tutor interactions. In fact, the participants in this research feel that they have limited interactions and communication. A thorough evaluation should be made to increase students' acceptance in learning English online. Lecturers are required to find an alternative to interact better with students. Online learning does offer flexibility and accessibility, but it does not mean that the course can accommodate many students at the same time. When the class is big, the interactions and communication between lecturers and their students will be affected. It must be burdensome for lecturers to pay attention to each of the students. Coordination between the department and the lecturers is strongly needed since it relates to the department's policy.

**3.6. Perception about Training**

Regarding the training components, the scores of Item 37 ( $\bar{X} = 3.3$ ) and 39 ( $\bar{X} = 3.3$ ) were still slightly below the expected level of readiness ( $\bar{X} = 3.4$ ). The highest mean score was for the item related to training for lecturers ( $\bar{X} = 3.5$ ). The overall mean for the training component was 3.4, which made it similar to the expected level of readiness. As described in Table 6, the students still think that they need more training on online learning. Comprehensive online learning implementation is still relatively new for most students. Thus, they have a keen interest in further training on online learning. However, the students have a different opinion about lecturers' training. They think that the lecturers already have the capability to teach English online. Few improvements on training aspects are still needed for both of the students and lecturers.

**Table 6. Findings in Training**

Description	Items	Statement	X	SD
Training	I.37	I need training on online learning.	3.3	0.8
	I.38	My lecturers need training on online learning.	3.5	0.7
	I.39	My classmates need training on online learning.	3.3	0.7
<b>Training</b>			<b>3.4</b>	<b>0.0</b>

**4. CONCLUSIONS AND SUGGESTIONS**

Since a comprehensive implementation of EMP online learning is relatively new for the department, a proper assessment of students' readiness is required.

Based on the assessment performed by the researcher, the students of the Department of Nutrition Science of FMUB are ready to learn English online. Some improvements in various utilization of technology, students' awareness of online learning benefits, and training can be made to increase the readiness level. The only component below the expected level of readiness was acceptance. It means that both the department and lecturers should encourage the students about the ease and the effective use of online learning in EMP courses. The students should understand that having an online EMP course can significantly contribute to their language mastery and open the broader career prospect. A more extensive online learning readiness in English for Medical Purposes can be done by considering other variables or components. There is also a possibility to compare the students' readiness from the different levels or grades of students.

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