A Need Analysis for E-Learning Development: Issues in the Implementation of Technology-Enhanced Language Learning (TELL)

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Abstract. The covid-19 pandemic leaves educators around the globe with no choice other than to shift from in-class learning mode to online learning mode. This is a promising situation, as online learning become a new custom in many countries education systems, bringing solutions to the difficulty of students' mobility during and post-pandemic. However, the adaptation to a new learning mode always encounters many challenges, in various aspects, including challenges faced at the university level in Indonesia. English language learning is no exception. This research, therefore, was intended to explore the issues concerning the implementation of Technology-Enhanced Language Learning (TELL) in an English Education Department in Indonesia. A qualitative approach was employed utilizing surveys and a focus group discussion involving the English Education lecturers and students. The results of the research, based on the surveys, showed that the obstacles in a good online learning environment were mostly technical which resulted in poor interactions that occurred in the classroom. Despite that, in the focus group discussion, participants believed that online learning was still needed in the post-pandemic time through the blended-learning method for richer learning experiences, especially by utilizing the Learning Management System (LMS) that was already available at the university. In terms of technology, regarding this new shift, the participants expect the learning media to be user-friendly, follow the working system of the human brain and body, and can facilitate learning needs. Moreover, special training on utilizing the media was also reportedly needed.

Keywords: Technology-Enhanced Language Learning (TELL) · Learning Management System (LMS) · online learning envuronment

1 Introduction

Teaching and learning have evolved in many ways, including the need for adaptation to changing natures of students according to the era they live in. In the 21st century, foreign language teachers are confronted with the challenge of how to teach the digital native [1]. The focus is no longer on grammar, memorization, and learning from rote,

but rather on using language and cultural knowledge as a means to connect to others around the globe [1].

This research responds to the latest policy of the Ministry of Research and Higher Education regarding curriculum preparation that directs the world of higher education to adopt more trends and target the mastery of skills needed to face the Industrial Revolution 4.0. The press release on the Kemenristekdikti website launched a curriculum preparation guide on its official website (https://belmawa.ristekdikti.go.id) on July 25, 2019, confirming the direction of changing ICT integration policies in higher education as a form of state response in ensuring the suitability of higher education with global development. Although the policy guidelines for the preparation of this curriculum are new the integration of ICT is not something new.

More than a decade ago the Indonesian government has provided direction on distance learning in line with the rapid development of technology through the Decree of the Minister of National Education of the Republic of Indonesia No. 107/U/2001 concerning the Implementation of the Distance Higher Education Program which was later refined by the Regulation of the Minister of Education and Culture No. 24 of 2012 concerning the Implementation of Distance Higher Education (BJJ). The policy objective of formulating higher education curriculum in the Industrial Revolution 4.0 era is no longer talking about the implementation of distance learning, but leading to students' mobility [2], a demand of today where students no longer have to be in the classroom to study so that they can learn. Use time more effectively.

The term Industrial Revolution 4.0. This was first introduced by a German, Klaus Schwab in his book The Fourth Industrial Revolution [3]. This revolution refers to the drastic and massive changes made by mankind in producing goods and services. One of the important instruments that distinguish this industrial revolution from previous versions of the industrial revolution is the internet. The internet makes all objects connected and allows them to be accessed anytime and anywhere in the form of information. This is termed the Internet of Things (IoT). IoT can connect humans with humans, humans with objects, and objects with objects [4].

Changes in human behavior as above do not only occur in the fields of economy and trade, but also in the field of education because the internet has become an element that is difficult to separate from humans who live in this era. This makes the challenges faced by higher education increase. The target of mastering literacy skills is now developing into data literacy, technological literacy, and human literacy with noble character based on religious understanding [5]. Practitioners and academics of higher education need to reformulate the direction and form of education so that graduates can adapt and compete in this era of disruption. This new type of literacy is certainly intertwined with the learning approach that should be used.

English Language Teacher Education (ELTE) Department as a department that prepares graduates to become prospective English teachers has serious concerns regarding the above problems. This is a case in an English Language Teacher Education (ELTE) Department at a university in West Java, Indonesia. The profile of graduates is now starting to increase from those who only master learning methodologies and deepening of English material to have the ability to master technology and its use in teaching English. This aspiration is stated in the vision of the Department, which is "to become

an excellent and leading English Language Teacher Education (ELTE) Department by 2025 in the field of information and communication technology-based English teaching methodologies." To answer the challenges of the times and realize the vision of the Department, blended learning was chosen as a learning approach to be applied in the Department.

Virtual classroom as part of blended learning allows learning to take place without going face-to-face in class (distance learning). However, for the development and implementation of this system, resources and a thorough study are needed so that this learning system can achieve success. In line with this, major development research was carried out to identify problems and issues in learning at the English Language Teacher Education (ELTE) Department of the university as well as conducting a literature review related to learning English independently and collaboratively in ICT media.

2 Literature Review

2.1 E-Learning in English Learning in Indonesia

The claim that online-based learning has many advantages has been expressed in many studies, especially in the area of teaching English as a foreign language. However, the limitations of the study based on the context of the learning application were not mentioned much. The needs of each institution and learner are different and of course determine the policies for using different platforms, activities, tasks, and evaluations.

Among those who have claimed the success of using E-learning in teaching English stated that Edmodo can be integrated with the Genre Based Approach (GBA) in teaching writing [6]. Each cycle in the GBA can be accommodated through Edmodo. In addition, Edmodo can make students more interactive and involved in learning through the Note menu feature. Students admit that Edmodo is quite easy to operate, and this platform can motivate them to write. However, there are still obstacles to the implementation of this e-learning platform, ranging from technical obstacles such as the absence of internet access, and incompatibility between this platform and hardware to psychological obstacles such as lack of student interest and students' difficulties in understanding how the learning platform works.

Another study confirms the success of E-learning using Quipper in the Teaching English for Foreign Learners (TEFL) context [7]. The results of his research show that Quipper is quite affordable for teaching EFL and more importantly Quipper can fulfill three basic needs of Computer-Assisted Language Learning (CALL) learning which makes it a potential to be used as a tool in teaching EFL.

In addition, Google Apps for Education (GAFE) has also been approved to be successful to teach students writing [8]. The GAFE features he uses include Gmail, Google Drive, Google Docs, Google Hangout, and Google Classroom. Apart from being free, GAFE is also able to make it easier for lecturers to give assignments and provide feedback on student writing.

The use of ICT in teaching English is a form of progress that should be appreciated and put to good use. However, in its application, there are still problems that often arise, including (1) the problem of lack of access such as the absence of an internet network, electricity, and other supporting infrastructure; (2) the problem of availability of software

especially the paid ones; (3) the issue of nurture effects on the existing curriculum; (4) the problem of lack of user ability and knowledge; and (5) attitudes towards the use of ICT [9]. Missing from the current research is the identification of requirements of TELL, which is fundamental for developing successful TELL and CALL.

Indonesia has long had a legal umbrella for the implementation of distance learning, namely the Decree of the Minister of National Education of the Republic of Indonesia No. 107/U/2001 concerning the Implementation of the Distance Higher Education Program which was later refined by the Regulation of the Minister of Education and Culture No. 24 of 2012 concerning the Implementation of Distance Higher Education (PJJ). In response to this, the government has made many efforts to ground E-learning in Indonesia. In 2010 the Ministry of National Education in collaboration with INHERENT and Jardiknas, SEAMOLEC, Pustekkom, and the Regional Government developed a national E-learning learning which is then implemented in several universities, vocational schools, and related industries in the form of the Distance Education Program (PJJ) [10]. To assist educational institutions in implementing the PJJ in the same year the government provided several guidelines, including (1) Guidelines for the Development of Electronic Modules, (2) Guidelines for Development of Non-Print Teaching Materials (Audio, Video, and CAI), (3) Guidelines for Development of Web-Based Teaching Materials, (4) Question Development Guide, (5) Tutorial Toolkit Development Guide, and (6) Program Evaluation Development and Implementation Guide.

2.2 E-Learning Theory Framework

The term E-learning itself is sometimes referred to by different terms, such as online learning, virtual classroom, and virtual learning. These terms refer to a learning concept that does not involve face-to-face contact in a classroom facilitated by ICT [11]. The teaching materials in E-learning and conventional learning are the same, only that they are integrated into an ICT-based Learning Management System (LMS). E-learning has several characteristics including (a) presenting material through viewing in the form of text, audio, video, or a combination of these elements, (b) teaching materials are presented in small pieces or short duration if in the form of video, (c) learning implemented at an adjustable speed and teaching materials can be accessed non-linearly, (d) usually interactions between lecturers and students occur asynchronously except using chat or videoconferencing facilities, and (e) discussions take place textually and only apply on the internal website or online application so that students need to login first [10].

Meanwhile, what is meant by blended learning is learning that combines face-to-face learning with e-learning. Morsound states that with blended learning students are stimulated to gain new knowledge by connecting their previous knowledge (prior knowledge) and experience (constructivism) with context-based learning (situated learning) [6].

2.3 Content Dimension and Pedagogical Dimension of E-Learning Development

One of the most recent reviews on the principles of Technology-Enhanced Language Learning (TELL) and Computer-Assisted Language Learning (CALL) was conducted by Mustaqimah, Nashruddin, and Hidayat [12]. The review includes several key literatures, namely Warschauer [13], Kuhlthau, Maniotes, and Caspari [14], Lian [15], Thomas,

Reinders, and Warschaueur [16], Lian and Pertiwi [17], Lian and Sussex [18], and Lian [19]. In their review, the principles of computer-assisted language learning are categorized into two important components, namely the content dimension and the pedagogical dimension. Some things that are considered important and need to be accommodated as a form of computer-assisted language learning needs are summarized in the following discussion [12].

The dimension for the content of Technology-Enhanced Language Learning (TELL) includes multimedia and internet-based learning materials which are and has an 'interdisciplinary' character equipped with support systems and learning materials that can be personalized according to interests, needs, and learning styles [12]. In addition, the new technological approach in the 21st century is more than just using computers, but also utilizes the internet and multimedia as a source of new technology to carry out computer-aided language learning [12]. Many resources and materials available on the internet can be categorized as interactive, authentic, and varied [12] as an integrated part of 21st-century learning [13]. Therefore, the material must be following the needs of students in the real world and enrich students with relevant knowledge, attitudes, and skills to live in a multicultural and interrelated world [12]. Interdisciplinary learning materials contribute to the concept of enabling students to be more interested in learning and feel the need for what the discipline has to offer as well as practice active learning strategies, higher order thinking, critical thinking skills, analysis, synthesis, application, and evaluation, also helping students to develop new knowledge [12] using their perceptual system which is influenced by their perception by activating familiar networks [19].

The dimension for the pedagogy of Technology-Enhanced Language Learning (TELL) includes the importance of developing student agency in learning and teaching activities, providing opportunities to be actively involved in building knowledge, and availability of space for students to interact socially and engage in social networking activities on the Internet [12]. In addition, TELL should also develop literacy skills in lectures, raise student awareness about new digital genres and how to take advantage of them, and encourage the use of higher order thinking skills and 21st-century skills in learning, and teaching strategies to evaluate themselves and their learning outcomes [12].

Agency can be defined as a person's capacity and ability that can be used as a source of reference, reason, and basis for his actions. Teachers need to provide more opportunities for students to develop their agency so that opportunities are open for students to learn to make choices, answer challenges, and collaborate with the hope of more motivation and involvement in learning [12].

The meaning system works individually and is influenced by past experiences and personal experiences so that, in the context of teaching and learning, students need to be involved in learning related to what they already know, to encourage meaningful learning [12]. Students new forms and understandings will not be easily built if the teacher's input is only limited to what they want to do and most importantly, the teacher must avoid forcing his way of understanding on his students [12]. Through social networks, students are designed to interact and generate communication through social networking sites that allow students to publish news, information, and comments on any topic for

other students to read, and most importantly, those who read blogs can respond with their comments. [12]. For example, using Facebook® or Researchgate® or other platforms to learn and provide opportunities for others outside the learning system to respond.

Literacy skills are of great concern to meet the 21st-century demands for higher digital knowledge and information so a change in the education system is needed that supports professional growth and literacy [12]. New literacy or digital literacy reveals two important aspects, namely the ability to access and evaluate information and the ability to use media or technology including in terms of media literacy (i.e. the ability to use, control, and handle media as a tool for learning), information literacy (i.e. the ability to find, analyzing, and evaluating information available from the internet), and multimedia literacy (i.e. the ability to interpret multimedia information and produce multimedia documents or information) [12].

Communication cannot achieve its goals without genre and technological advances have a major impact on the way people access and obtain information, it also has an impact on the way they interact [12]. This situation has led teachers to actively involve students in understanding the emerging "digital genre" genre, including studying the types of genres and rhetorical structures used, especially in media equipped with unique features such as multimodal, hypertextual, and internet interactive capabilities [12]. In other words, digital genres are not only providers of content but also carriers of meaning, determining aspects of social practice (how text is used, by whom, and for what purpose [12].

Higher order thinking skills (HOTs) are becoming a popular concept of student-centered learning where the common mechanism by which all thinking skills, including critical thinking—problem-solving, effective communication (communication and collaboration), and creative thinking (creativity and innovation) [12]. Classification of HOTs in Bloom's taxonomy involves three stages; analyze, evaluate, and create [12].

Self-evaluation is an aspect that is encouraged in 21st-century learning practices that involve the process of monitoring and evaluating students' quality of their thinking behavior by asking students to compare their performance and assess their work against standards or criteria and targets that can facilitate student self-evaluation [12]. Practically speaking, encouraging student self-evaluation in the classroom should ideally be built on a four-stage model; define criteria (clear learning targets), apply criteria (self-evaluation), provide student feedback (reflection), and set new goals and actions plans [12].

2.4 Student Engagement in E-Learning

Student engagement is defined as active actions or participation with certain goals and in certain domains through interactions and tasks [6]. Technology is believed to increase students' engagement in at least two ways: meaningful interactions and assignments. According to Lon, these types of interactions can take the form of interactions between students and subject matter, interactions between students and instructors, and interactions between students and other students [6]. Meanwhile, meaningful tasks that can increase students' engagement must be able to make students: (1) willing to learn independently in groups, (2) more concerned with the quality of work, and (3) willing to play an active role in learning situations, (4) view ICT as part of learning [20].

3   Research Methods

The approach used in this research is qualitative research. The current research was conducted from 1 September 2021 to 20 December 2021 and had gone through a research review and ethics clearance process developed by the Quality Assurance Agency of IAIN Syekh Nurjati Cirebon. This research is the initial stage of a series of research on the development of E-learning at an English Language Teacher Education (ELTE) Department of a university in West Java, Indonesia. The research and development process includes at least 7 stages [21], of which in this study one initial stage was taken, namely the identification of problems and needs for development. It was begun with an evaluation assessment which is based on a literature review that examines in-depth the theories, principles, and criteria of TELL. The review framed the questionnaire for data collection. All data that has been collected was analyzed (compare-contrast) with relevant literature. The stages of this research are as follows:

1. Conduct a literature review related to language learning independently and collaboratively using ICT media.
2. Based on a literature review, develop an open-ended questionnaire for collecting information as a basis for developing E-learning in the English Language Teacher Education (ELTE) Department of the university.
3. Send the questionnaires to students and lecturers for identification of problems and issues in learning at the English Language Teacher Education (ELTE) Department of the university.
4. Identifying what is needed to develop E-learning at the English Language Teacher Education (ELTE) Department of the university based on problems and issues in learning at the site.
5. Identifying what is needed in the context of developing E-learning in the English Language Teacher Education (ELTE) Department of the university based on the experience of students and lecturers' involvement in online learning.

3.1   Data Collection Techniques and Data Sources

The data collection instruments are in the form of questionnaires. The questionnaires have content validity evidence assuring that the items are developed from relevant literature or theories [22]. Besides, an expert with qualifications and experience in teaching ELT research and language assessment verifies the instruments for "[e]xpert opinion can be a useful source of information for assessing reliability" [23]. The data collected in this study are in the form of:

1. ELTE students' opinion questionnaire regarding the implementation of an online classroom. The data sources are students at levels 1, 2, 3, and 4 (population of around 600 students) with the hope of summarizing all their needs, both those who have not and those who have gone through the face-to-face learning process and virtual classrooms that have been independently initiated by lecturers in the English Language Teacher Education (ELTE) Department. The sample taken is as many students as possible with the target of each class being at least 10 students.

2. ELTE lecturers' opinion questionnaire regarding the implementation of an online classroom. The source of the data is the lecturer of the English Language Teacher Education (ELTE) Department with the hope of summarizing all the needs for the use of additional classes in the form of a virtual classroom in the process of learning effectiveness in the Department. The samples taken were $50\% + 1$ Homebase lecturer at the Department (11 lecturers).

3. Focus Group Discussion (FGD) with ELTE lecturers discussed the findings of the questionnaires (1 and 2) to sharpen and add findings regarding the need for E-learning development in the English Language Teacher Education (ELTE) Department. At the end of FGD, the lecturers filled out another questionnaire to collect their responses about the issue being discussed.

3.2   Data Analysis Techniques

The next step is data analysis, using the collected data to rearrange to create a new narrative [25]. Data analysis was carried out by comparing and contrasting data that had been collected with related literature in similar studies. Qualitative data from the questionnaire will be analyzed using content analysis and the review process is carried out critically by looking at the context and situation of the research location. Content analysis is used to see data patterns from questionnaires because the content analysis can help identify patterns, themes, assumptions, and meanings from the data [24]. The data analysis steps follow the process as follows [24]:

1. Data is collected and made into text or compiled to be "read." In this case, the questionnaire data is made in tabular form.
2. Codes are developed analytically and/or inductively identified in the data and affixed to record sets (tables).
3. Code is transformed into categorical labels or themes.
4. The material is sorted by these categories, identifying phrases, patterns, relationships, and similarities or differences.
5. Sorted materials are inspected to isolate meaningful patterns and processes.
6. The patterns identified are considered based on previous research and theory, and a small series of generalizations are made.

The data collected and has gone through the analysis process will narrow to the conclusion of student needs which are supported by the readiness of the lecturers in designing virtual classroom-based learning in the English Language Teacher Education (ELTE) Department of the university. The learning in question includes mastery of English language skills as the core material and mastery of content that supports the professionalism of prospective English teachers (pedagogics and linguistics) in the ELTE Department.

4   Results and Discussion

The need for E-learning development at the English Language Teacher Education (ELTE) Department is based on the identification of problems and issues found during the study.
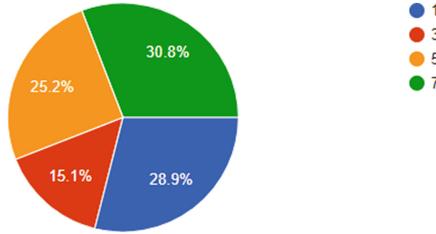
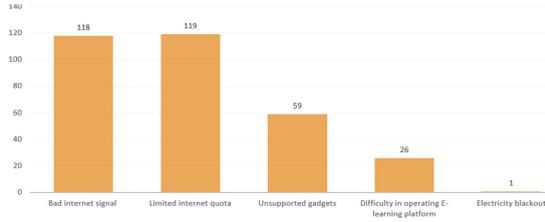**Fig. 1.** Presentation of respondents by semester.

Fig. 2. Technical obstacles faced by students

4.1 Students' Responses

Student responses in this study were very good, as evidenced by the number of respondents who exceeded the target (number of respondents: 159 people, target: 40 people). 7th-semester students (49 people) participated the most, followed by semester 1 (46 people), 5 (40 people), and 3 (24 people) (Fig. 1).

From these respondents, problems and issues contained in E-learning learning were identified. These problems and issues are still divided into technical and non-technical obstacles. The technical obstacles most often faced by students include difficulty in getting an internet signal, a limited quota for accessing the internet, unsupported devices, and difficulties in operating online learning applications. Figure 2 provides a visualization of the distribution of technical constraints faced by students.

Furthermore, from non-technical constraints, there are several problems or issues, namely the difficulty of students to concentrate on learning, low learning motivation, difficulty understanding the material given, difficulties in interacting with fellow students, and difficulty asking the lecturer as the most prominent thing in the response. Figure 3 illustrates the visualization of the number of these constraints.

To dig up information about the needs that are needed, the responses from students are analyzed further, by looking for keywords that lead to the notion of needs, namely the words "perlu dan butuh" (Indonesian word for need and requirement). From this search, it can be identified several things that are considered E-learning-based learning needs in the English Language Teacher Education (ELTE) Department of a university. These needs are divided into two, technical needs and non-technical needs.

E-learning technical requirements include the following issues:

1. training on the use of social media and online learning applications,
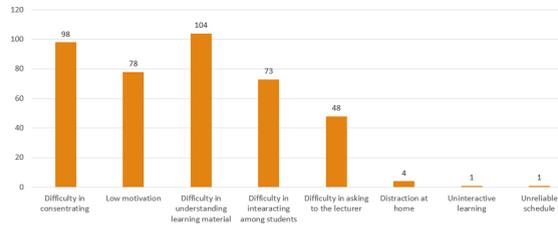
Fig. 3. Non-technical barriers to online learning

2. improvement of the internet network in the area,
3. avoiding the use of applications that are not needed during the online learning process,
4. the uniform online learning platform,
5. quota assistance, and
6. facility upgrades.

The respondents highlighted six things relating to their needs. The first is the need to increase the ability of lecturers (and students). Student 1 stated that: "There needs to be a seminar or direction regarding how lecturers can use social media or other online learning apps when learning is done online." Apart from that, the E-learning platform also needs to be adjusted so that students are more comfortable using applications that are not too many or varied. Student 3 conveyed the need for this by stating: "There is a need for uniformity of online learning media/applications for all subjects."

Furthermore, the quality of the internet network is considered to be something that needs to be improved. Student 2 raised this issue by conveying: "Connectivity is sometimes unstable, maybe it is necessary to have an observation by the internet provider regarding which areas have unstable internet access and improve connectivity again." To deal with this, Student 9 suggested that they focus more on the applications used during E-learning learning by stating that: "[…] avoid using applications that are not needed during the online learning process such as social media, etc."

Internet limitations that must be provided by students are considered burdensome. Subsidies from the campus and the government are expected to help students. This is because according to Student 5: "Internet quota is very much needed because it feels quite burdensome to buy a very large quota. Overcome it with the help of campus quotas. Student 6 added that the internet quota is part of the facility: "If you want to go online, continue to provide the quota that students need, […]. Facilities must be adequate."

E-learning non-technical needs include the following matters:

1. learning that encourages critical thinking,
2. learning encourages high mastery of language,
3. strategies to be able to evaluate themselves and student learning outcomes,
4. quality learning materials and lecturer explanations,
5. arrangement of learning activities to reduce procrastination and focus on learning,
6. implementation of blended learning,
7. development of literacy in learning,

8. the need for project-based learning, and
9. lecturer pays attention to student learning load.

Students specifically highlight the following points as part of their E-learning needs. First, learning to encourage critical thinking and strengthening language skills is considered very important. Student 6 raised this issue and stated that: "Lecturers also make students aware that in the 21st century it is necessary to have critical thinking and high mastery of language so that education in Indonesia becomes more developed and advanced." In this regard, the next issue raised is the need for lecturers to teach self-assessment of student learning outcomes. Student 7 stated that: "Lecturers [need to] always teach strategies to be able to evaluate themselves and student learning outcomes by giving directions and advice on what to avoid in learning, and willing to accept and learn from mistakes." This needs to be supported by the delivery of material that is more acceptable to students, as assessed by Student 8, namely: "The equipment used is good enough, but needs a lot of improvement in providing material to students."

The quality of the lecturer's explanation is also something that needs to be improved. Student 4 said that apart from the quality of the learning materials that were quite good, the delivery of the material was something that could not be underestimated. Student 4 stated that: "Sometimes the material only from videos is not optimal if the lecturer does not explain because what is needed is a direct explanation from the lecturer which is simpler and easier if the video feels lacking." From the students themselves, the arrangement of learning activities also needs to be improved. Student 9 highlighted this as safely conveyed: "[…] avoid procrastination, and avoid using applications that are not needed during the online learning process such as social media, etc."

Online learning or E-learning is not considered effective enough so that students perceive the importance of offline (offline) meetings. Students think that the implementation of blended learning can help students master the learning material. Student 10 stated that: "My suggestion is that blended learning is better because apart from saving quota, students can also be more flexible because they don't need to use various applications." In addition, Student 14 also argues: "Online learning needs to be combined with offline in the form of blended learning." Literacy is also considered important to be developed. Literacy development in learning, according to Student 11: "[…] develops literacy because it needs to be done by students." Student 15 added: "Yes, of course, in every lesson, literacy will be needed."

In practice, the learning system needs to be supplemented with other systems, for example, project-based learning. Student 12 highlighted this as part of increasing students' ability to work together and learn responsibly. In this case, Student 12 stated that: "It is necessary to hold a small group project to grow awareness and responsibility for learning in each student." However, consideration of the student's burden must also be considered so that students can do their assignments well and maximally. Student 13 raised this issue by stating: "My advice to all lecturers is that if you want to give assignments, don't burden the students too much, or as appropriate. Because yes, the task is not only from 1 lecturer, sometimes every course must have an assignment. It's okay to give assignments, but at least students have the right to their freedom to rest." Despite all the difficulties and needs felt by students, students think that online learning still needs to be
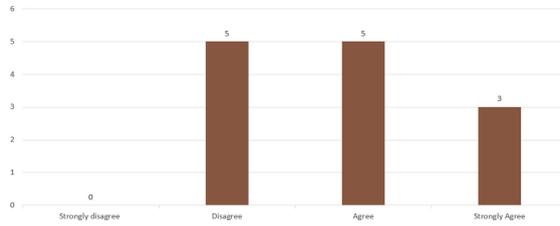
Fig. 4. Lecturer's opinion about the need for blended learning
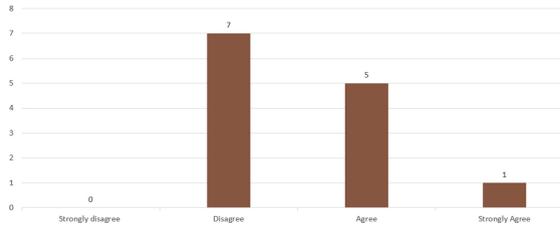
Fig. 5. Lecturer's opinion about the need for uniformity of online learning media/applications
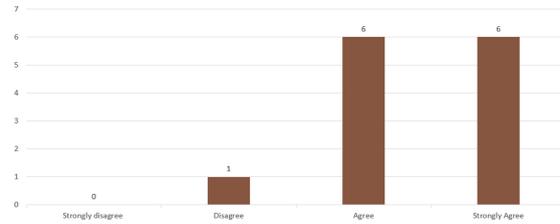
Fig. 6. Lecturer's opinion about the need for training on the operation of online learning media/applications

continued, perhaps because it is following the times and unavoidable mobility. Student 16 stated that: "Online learning needs to be continued after the pandemic."

4.2 Lecturer's Responses

The lecturer's response exceeds the predetermined target. Of the 11 target lecturers, 13 lecturers responded. Similar to students, lecturers face similar obstacles. Therefore, lecturers consider that E-learning learning needs to be combined with face-to-face learning, or blended learning accompanied by training on the operation of online learning media/applications in the form of training. Figures 4 and Fig. 5, 6 illustrate the lecturer's opinion.

The need for E-learning development in the English Language Teacher Education (ELTE) Department of a university based on the lecturers' experiences involved in online learning.

The data presented here are the results of FGDs conducted by lecturers facilitated by resource persons who are heavily involved in CALL-based language learning and E-learning. Based on the responses and comments during the FGD, this need is classified into three needs of the parties involved in the implementation of E-learning at the English Language Teacher Education (ELTE) Department, namely the need for E-Learning for students, the need for E-Learning for lecturers, and the need for E-Learning for lecturers must be met by stakeholders. The appendix contains lecturer response data regarding these needs.

For students, according to the lecturers, several needs must be met. The following points were identified from the lecturers' responses during the FGD regarding the need for E-learning development in the English Language Teacher Education (ELTE) Department:

1. The right platform and media (efficient, economical, effective), along with applications that are quota-friendly, easy to apply (user-friendly), features that allow meaningful interactions and facilitate two-way communication for both lecturers and students;
2. Socialization and technical training on the use of learning applications and LMS that will be implemented in online learning;
3. Adequate servers and adequate internet data quota;
4. Strong learning motivation (emotional and social relationships);
5. Learning design that enriches and enhances digital and authentic literacy;
6. Innovative learning tools that are brain-body compatible; and
7. Interesting subject content and visuals.

The lecturers themselves identify several things that are needed in E-Learning-based learning. This identification produces several points that are similar to student needs. The following are the results of the identification of what is needed by lecturers in E-learning-based learning:

1. The right platform and media (efficient, economical, effective, and easily accessible), along with quota-friendly applications, easy to apply (user-friendly);
2. Development of brain-body compatible innovative learning tools;
3. Debriefing of lecturers in the form of socialization, technical training, and strengthening skills regarding the use of learning applications and LMS that will be implemented in online learning;
4. Independent exploration so that lecturers are more skilled and able to provide tutorials to facilitate students;
5. Lecturers have the will, creativity, innovation, and flexibility, and keep up with the times; and
6. Adequacy of internet data quota.

Regarding the obligations of stakeholders in supporting and preparing E-learning-based learning, the lecturers have a fairly sharp view. The issues in the spotlight are:

1. Provide basic and crucial services and facilities needed by lecturers and students, including internet data quota, Wi-Fi, and a reliable LMS system;

2. E-learning capacity strengthening training for lecturers and workshops on the use of a comprehensive LMS;
3. Establishment of a creative team (content, media) as a supporter of making learning media;
4. Seriousness in determining the applications used in learning and implementing equitable and measurable training;
5. Moral and material support, including research funds to support the development of learning innovations; and
6. Efficient, economical, and effective application and software development that makes it easier for lecturers and students to carry out E-learning-based learning.

Finally, regarding the platform needed, the lecturer specifically highlighted several aspects and tools that needed to be there. This includes the need for:

1. Forums, games, evaluation or assessment tools that can be used to measure student competence, attendance forms, user-friendly features;
2. Video tutorials and guides in using E-Learning applications;
3. A platform that allows two-way interaction, and has compatibility with innovative learning tools with efficient, economical, and effective features that are tailored to the needs of each course;
4. Internet data, techniques, approaches, and appropriate and satisfactory materials; and
5. Network stability.

The results obtained in this study are quite promising because the needs that must be met in the context of developing E-learning-based learning have been identified. Both students and lecturers have experienced online learning during the pandemic which made them aware of what is needed for effective learning. The inhibiting factors have been identified so that what solutions must be prepared are also quite well identified.

The technical needs identified in this study were realized by students and lecturers, starting from things that came from within students and lecturers (such as the readiness of internet data quotas and training on the use of online learning platforms and applications) as well as from outside students and lecturers (such as improving internet and strengthening the campus LMS system). Identification of non-technical needs E-learning also includes several things, ranging from learning design (e.g. learning that encourages critical thinking and literacy), learning materials, learning systems (blended learning, project-based learning), and an evaluation system that also involves students.

Regarding the expected blended learning system, following Morsound, students are expected to gain new knowledge by connecting their previous knowledge (prior knowledge) and experience (constructivism) with context-based learning (situated learning) [6]. Self-evaluation is also one thing that should be applied so that students can compare their performance and assess it based on the standards or criteria and targets that have been determined [12].

Socialization and technical training on the use of learning applications and LMS that will be implemented in online learning are also things that students and lecturers pay great attention to. Furthermore, the lecturers also pay attention to how to use platforms and

media appropriately (efficiently, economically, effectively), along with quota-friendly applications, making them easy to apply (user-friendly). Platforms and media can be used based on habits and learning styles and according to student interests [12]. The features needed are also to enable meaningful interaction and facilitate two-way communication for both lecturers and students. Lecturers and students are also in the spotlight where they are expected to have the will, creativity, innovation, flexibility, and keep up with the times, so they dare to do independent exploration to be more skilled in implementing E-learning-based learning.

Of course, this must be supported by stakeholders by providing basic and crucial services and facilities needed by lecturers and students, including internet data quota, Wi-Fi, a reliable LMS, as well as adequate servers. Moral and material support from stakeholders is also needed, including research funds to support the development of learning innovations and the creation of a creative team (content, media) to support the creation of learning media. The development of efficient, economical, and effective applications and software that makes it easier for lecturers and students to carry out E-learning-based learning should also be intensified. What is important to note is how to create innovative learning tools that are brain-body compatible, which may be in the form of interesting subject content and visuals to increase strong learning motivation. This is expected to increase the number of universities that implement E-Learning as a whole [11].

Beyond technical or ICT issues, the pedagogical dimension of E-learning needs also to be addressed properly as it plays a significant role in the success of learning. A classroom that has established student-centered learning could tackle the technical problems better as the students have the agency to navigate their learning in any kind of situation. Besides, interdisciplinary is another potential area to explore. Interdisciplinary provides students with more perspectives on a particular issue. Therefore, they will get accustomed to assessing problems holistically not merely from a single view. Problem solving also helps students to be engaged in activities involving higher order thinking skills, namely analyzing, evaluating, and creating [12].

5   Conclusion and Suggestions

To achieve success in the development and implementation of E-learning, each stakeholder needs to pay attention to the issues that become obstacles and the needs that need to be met. Issues or obstacles that still often arise in the ELTE department are still technical. Even so, this technical obstacle cannot be underestimated because it can have an impact on non-technical obstacles whose impact can be more significant, for example, a decrease in student interest and participation in participating in E-learning. These issues can possibly be answered by incorporating theories and concepts related to E-learning in the teaching and learning and further research, such as: strengthening student agency, implementing interdisciplinary studies, increasing literacy (including digital literacy), as well as developing higher-order thinking skills.

In addition, the E-learning learning platform or media also needs to accommodate learning needs and be user-friendly so that it is easier and more enjoyable to use. Learning platforms that match the working system of the human brain will also help distance learning to be more effective.

Educators need to work harder to be able to present a more meaningful learning experience for students, considering the challenges of online learning are not the same as challenges in offline learning. Therefore, technical support for students and lecturers is very much needed. In addition, it is also necessary to have the training to increase the capacity of lecturers, especially in the ELTE department, so that not only issues and problems of E-learning learning can be controlled properly but also in the future there will also be innovations in ICT-based learning.

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