

Using Online Resources Technology for Foreign Language Learning: Strategies, Impact, and Challenges

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Abstract—This paper explored students' perceptions of strategies, impact, and challenges using online resources for foreign language learning. The study also identified challenges faced by learners in applying online resources for their language learning. The study employed a qualitative interview with four students. This case study was conducted in one public university. The participants in this study were chosen purposively due to their investment and commitment using online resources for foreign language learning. The study identified that there were several strategies used students to maximize the use of online resources, i.e., searching meaning and synonyms, testing language proficiency, writing practice, grammar exercise, and gaining teaching materials. Students found it very interactive and enhanced their learning, not only contents and language learning, but also how to use the technologies. However, some students encountered challenges, including technical problems, skill issues, and irrelevant with their interests. The study applied an in-depth exploration of the phenomenon, and the results can contribute to perceptive academic and applied knowledge to the public principally on the idea of online foreign language learning. Future study wishes to examine a significant number of sampling; the broader sample is expected to enhance the findings of this study. The prospective research also demands to be conducted within numerous academic settings. Within multiple parameters, it is expected to contribute to a broader population and encompasses our conclusion by providing a more wide-ranging spot to reinforce the findings of this study.

Keywords— education learning; online resource technology; language learning; learning strategy.

I. INTRODUCTION

Changing the focus of teacher-centered towards learner-centered learning is a progress sign of online resources technology in the world of education [1]. Conventional teaching places the teacher as the sole active communicator in the teaching and learning process. Now, teaching has experienced a significant change. Teachers and students have been placed in positions that are active together with interactive teaching in using technology and media in the learning process [2]. Online resources technology as an excellent source of information has become positive progress for the world of education. The use of online resources can certainly be directed to support the learning process.

The rapid development of the teaching approach because of the development of online resources technology has influenced various aspects of human life. Now, the world community is in the era of online knowledge-based society [3]. People's ability to use their knowledge to increase productivity becomes vital. Education should be able to build human resources. Therefore, education policy is directed to be able to prepare human resources capable of

dealing with future challenges effectively and efficiently by utilizing all aspects of existing resources, including online resources technology. The use of online resources technology for education, especially foreign language learning, needs to be continuously improved.

Foreign language learning using online learning resource technology aims to meet the needs of foreign language learners and is expected to attend the target achievement of learning objectives. Online resource technology could help foreign language learners complete formal education. Hence, it also could broadly provide soft skills that are useful for students' carrier enhancement [4]. In this case, formally, foreign language learners are educated through teaching and or training activities that take place both on-campus and off-campus. Off-campus education is a lifelong educational effort to prepare foreign language learners to play a role in various environments precisely in the future.

In Indonesia, education always has its polemic, starting from the curriculum or education system [5], teacher welfare and education quality [6], and other problems. However, all of that has not been genuinely overcome until now. Not all of the aspects have been completed; the government released

a regulation on the National Education System, which requires all formal education providers and units established by the government or community to take the form of educational and legal entities [7]. To support the development of a democratic civil society by acting as an independent moral force and achieving competitive advantage through the application of the principles of resource management under the principle of professional management [8]. This has led to the birth of new problems in the strategic environment of higher education. It influences the level of organizational structure, university management, and lecturers' recruitment models. Besides, students' admission procedure with a single tuition fee, which is subject to be fair access [9], but sometimes the lower class pay the high cost.

However, high tuition fees do not necessarily guarantee good quality education [10]. At present, the use of technology in learning is not new, such as the use of computers as learning media, where there is a lot of software that functions to support education. By using computers, students become better able to solve problems and become better communicators. Through computer networks, students could collaborate and work together with friends from other classes, groups, and teachers. The network can help learners create, analyze, and produce information and ideas more quickly and efficiently [11].

Besides, through online resource access, it can increase student awareness of the world around them. Furthermore, online resources technology can now be used where we can connect with others by utilizing computer network technology that plays a significant role in the world of education. We can know the benefits of computer network technology is felt, with our computer network can save energy and costs. A computer network is a group of computers that are connected [12]. So, with a computer network, computers connected to it can communicate with each other. For example, we are sharing data, hardware, sharing resources, and others. To build each network, we need equipment that can be used to connect one computer to another. Equipment required includes servers, workstations, network cards, concentrators, and network cables to support the speed of the internet connection.

Students are interested in using online resources technology for various reasons. Students consider online resources technology as a trend and want to be a part of it [13]. Students realize that most of the resources circulating on online resources technology are a foreign language, and they begin to understand specific terms that are useful in mastering foreign language skills. The online resources technology also offers hands-on practical language experience by giving students practical communicative lessons that will be able to motivate them to use everyday foreign languages. Many reasons have been studied by many scholars concerning the use of online resources technology in foreign language classes.

Learning to use a computer to access online resources technology by itself can motivate students to learn foreign languages [14]. Many students who have not been able to use the online resources technology, but when they are taught how important it is to understand networks, the average student is interested and wants to master it. The

online resources technology places foreign languages as international languages. Students can understand that most of the information circulating on online resources technology is a foreign language. Students can use foreign languages as a medium for learning to communicate with others throughout the world. Of course, a few students want to communicate in the Indonesian language within the local network, but many of them prefer to communicate with people from other countries. The online resources technology as an interactive media could engage students in the collaborative and interactive online video [15]. However, when students access online resources technology, without realizing it, they have thought and tried to use specific terms in a foreign language.

Besides, almost all websites in online resources technology provide contact using e-mail addresses, so students can ask questions or send comments as a language awareness [16]. Facilities to access online resources technology are relatively easy to obtain. In some developed countries, online resources technology facilities are available in computer laboratories. However, the same conditions have not yet been fully maximized in developing countries, such as Indonesia. However, with the development of online resources technology today, almost every university has a computer laboratory. Still, it is not maximally connected to the Internet through wireless networks due to limited server network capacity [17].

The most necessary component in the use of online resources technology in foreign language learning is the integration system [18]. The essential thing in a foreign language education program should be integrated, not an additional application. The teacher must be directly involved with the program, for example, the provision of homework and interaction—the ability of students to use online resources technology. Students do not have to have expertise in using technology. But the most important thing is to teach simple steps on how to use online resources technology. Lecturers' activity is also needed to motivate students to use online resources technology actively. If necessary, the lecturers make e-handouts to help students not to take too many notes [19] or instructions using the online resources technology, especially how to use a web browser or send an e-mail.

Teaching techniques for language skills are also needed in teaching foreign languages, especially writing and grammar. Lecturers need to direct students about websites that can be used to find the information they need, e-mails that will be used to send and receive data from anywhere. Web publishing is used to publish student work and grammar check to correct grammar. Lecturers also could apply teaching writing by providing language feedback technology that involves grammar check [20]. Keep in mind that the use of online resources technology in language teaching is not intended as an alternative language teaching, but only as a tool to teach language. The use of online resources technology will enrich the teaching of the language itself. With the online resources technology, students not only acquire new learning paradigm but also can get more authentic and exciting information. The lecturers can actively explore the potential of students and utilize online

resources technology to achieve teaching goals that have been set innovatively and excitingly.

The introduction of online resources technology for a medium of instruction is not new in higher education contexts. Some investigations conducted in the use of online technologies for language learning. Researchers investigated the use of interactive online learning for foreign language learners [21], and content language learning and instruction using online media [22]. Besides, learners who equip with current technology can maximize their opportunities to achieve the best result of their learning [23], and the use of online technology for language learning on education has expanded rapidly [24].

For Indonesian higher education, the use of web-based instruction is a new change that happened in the last few years, mainly for soft and hard science. Some researchers investigated the influence of online technologies in language learning: learners aspiration in utilizing technology for learning [25], the use of Instagram for language learning [26], mobile-assisted language learning [27], learners can use technology for their vocabulary development [28], online learning and gamification [29], the culture of language learning [30]–[32], podcast and language learning [33], internationalization awareness and commitment for learning [34], technology and historical literacy [35], literacy and anthropology in higher education [36], literacy in vocational education [37], intercultural literacy [38], technology, oral and written literacy [39], [40], and hybrid-eLearning [41]. Among the studies, none of them have focused on holistic skill development because of online learning and explore the challenges of online education. This study aims to identify the ways learners use technology, their attitudes, and problems in using online resources for language learning.

Many online communities have employed online resources technology for learning. The online community benefits not only cognitively and emotionally, but also, they gain an advantage socially [42]. Cognitively, they can develop their knowledge on mastering technology on the one hand, and expand their language capacity on the other. Emotionally, they may attach to a specific technology and tend to use it frequently, which helps learners to have an emotional bond with technology. Socially, learners can develop social networking and establish new friends that can last longer.

Online technology facilitates the online community in providing chances for them to interact and medium for teachers and students to give feedback and suggestion for their language development [43]. The online technology also mediates an online learning community to participate in online educational games that motivate teachers and students to explore, such as math games and other cognitive tested games [22]. Online learning media enables learners to practice their language skills such as composition and speed reading [44] and enable learners to understand the policy [45] on virtual language learning. These indicate that, despite the drawback of technologies, online technology can benefit all stakeholders who use positively for their purposes.

From the review of the studies above, it indicates that none of the studies has explicitly addressed online foreign

language learning that occurred in Indonesian higher education contexts. Hence, there is limited information on the issues of online language learning within the Indonesian context. To fill this gap, this study aims to explore learners' reflections of strategies and impact on using online resources for language learning. Thus, this research is pivotal for the overarching understanding and identification of such a theme within the Indonesian setting. Additionally, the paper describes the challenges faced by learners in employing online resources technology for language learning.

II. MATERIALS AND METHOD

A. The Study and Participants

The case study was applied to four participants that were chosen to explore strategies, impact, and challenges of using online resources technology for language learning. These participants were randomly taken from one class of foreign language department students in one public university. The reason for choosing this course was they utilized online resources for language learning, and they gave their consent to participate in this study. The class was given time to use online resources for four months. Case studies are the right approach to seek a comprehensive understanding of a phenomenon [46] because it provides ways of how learners using online resources technology for language learning. The case selected is from students from foreign language departments through a qualitative interview [47].

B. Data Collection and Analysis

Data were collected through qualitative interviews. Students who participated in this study were initially given two options for their perceptions and reflections in using online resources for foreign language learning: quantitative feedbacks and qualitative interview. All students preferred qualitative interviews because the design of the interview was interactive. The data in this study were analyzed thematically using QDA Miner Lite [48], as in Figure 1 below.

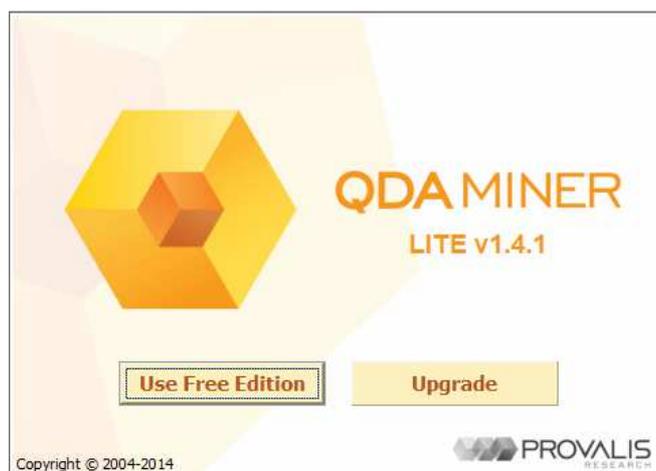


Fig. 1 QDA Miner Lite software

All data were stored and inserted in the QDA Miner Lite query application tool, which then produced thematic results of data. The thematic analysis emphasizes efforts to identify, analyze, and interpret patterns of meaning or themes in

qualitative data [49], [50]. The thematic results of the findings in this study include:

- Online resources and strategies for language learning
- Online resources impact on language learning
- Challenges of using online resources technology for foreign language learning

III. RESULTS AND DISCUSSION

A. Results

1) *Online resources and strategies for foreign language learning*: The finding indicates that there were five resources and strategies that students frequently use for

language learning online. Figure 2 below indicates that learners used online resources for some purposes, such as testing resources for testing students' language proficiency levels. Students accessed the writing websites for writing practice and grammar resources for grammar exercising. Students also access online resources technology for dictionary purposes because they wished to look up the meaning and synonym of words in a foreign language. Besides, students accessed online resources because they prepared their teaching materials. The online resources and strategies in foreign language learning are presented in Figure 2 below.

🔍 Code retrieval - 11 Hits

Category	Case	Text	Comment
Dictionary and Thesaurus - Meaning and Synonym Search			
Online Resources and Strategies for Foreign Language Learning	P2	I often use online dictionaries and thesaurus to search for meanings and synonyms. Mostly, I access thesaurus from Microsoft Office for Word.	Students enjoy accessing thesaurus in MS Word
Online Resources and Strategies for Foreign Language Learning	P4	I experience accessing online learning resources to search meaning and synonyms in online dictionary and thesaurus. I have downloaded these two application in my mobile, so I can use them anytime I need them.	Students installed dictionary and thesaurus in Mobile
Grammar Resources - Grammar Exercising			
Online Resources and Strategies for Foreign Language Learning	P1	I also usually practice my ability in grammar by accessing online learning resources and grammar topic. I am also aware that I am weak in Grammar, so I usually practice doing grammar exercise online.	Online resources provide instruction and exercise in grammar
Online Resources and Strategies for Foreign Language Learning	P2	I practice my grammar mastery by accessing online learning resources on grammar topic. I am not too interested in learning grammar from textbook, so by learning grammar online and doing online grammar exercise, I am sure I can improve by grammar mastery.	Students are uninterested in learning grammar from textbook
Online Teaching Resources - Teaching Materials Search			
Online Resources and Strategies for Foreign Language Learning	P1	I also access online teaching resources to find references as materials or teaching materials. I am working also as a part-time teacher at one of private institution, I always download the teaching materials from online learning resources.	Most of the students in class are part time teacher at private foreign language course
Online Resources and Strategies for Foreign Language Learning	P3	I use online resources since it provides plenty of opportunities and ideas to use for teaching purposes. It helps me prepare teaching materials for my part-time work at private course.	Materials for teaching as part-time teacher
Testing Resources - Language Proficiency Test			
Online Resources and Strategies for Foreign Language Learning	P1	I access online resources technology for testing my proficiency level in foreign language learning. I prepare to take the test as the requirement to graduate. I believe I can pass although some of my seniors took more than once chance to pass the test.	The requirement to graduate in Foreign Language Department
Online Resources and Strategies for Foreign Language Learning	P3	The online resources are useful to pass the language tests, so that I can graduate from foreign language department. Previously, I was afraid of not being able to pass or pass the test several times. But now I believe I can pass the test.	preparation for the final test to graduate
Online Resources and Strategies for Foreign Language Learning	P4	I access testing resources because I am keen to measure my language levels and competency. I do this by preparing myself for international language tests and absolutely I wish to improve my language competence for internal purposes.	Students also are interested in taking international language test
Writing Websites - Writing Practice			
Online Resources and Strategies for Foreign Language Learning	P1	Usually I access the online resources technology on writing topic to specifically practice my competency level in writing. I am aware that I am really weak in writing competency. So, I practice writing exercise online since the score is immediately displayed in the website.	Students are aware of their lack of writing
Online Resources and Strategies for Foreign Language Learning	P2	Before being familiar with online learning resources, I was not interested in writing. After being accustomed to the online learning resources, I always practice writing test and accessing some materials on academic writing tips	Students are motivated by the online writing practice

Fig. 2 Online resources and strategies for language learning

Students accessed testing resources because they were keen to measure their language levels and competency. They did this in two circumstances: a) they prepared for international language tests; and b) participants wish to improve their language competence for internal purposes, which was the use of online resources to pass the language tests so that they could graduate from foreign language department. Many students experienced a lack of writing competence due to a lack of grammar proficiency. Online learning resources technology enables foreign language students to practice writing and grammar exercises. Most students tend to search the meaning of words from the online dictionary that assisted them in understanding word definitions. Students accessed online resources. After all, they prepared their teaching materials because some of the students in that class were student teachers and part-time teachers in foreign language courses. They believed that online resources provided plenty of opportunities and ideas for them to use for their teaching purposes.

2) *The online resources impact on foreign language learning:* The impact of online resources on students' language learning was strongly positive. It was due to students' view that online resources provide a variety of materials that helped students to learn a foreign language. It also improves their common knowledge and skills for their future carrier. The students believe that learning was not boring. They experienced that learning by accessing online resources makes them feel comfortable. Online learning resources also provide unlimited resources for students to learn foreign language learning. The unlimited resources provided by online learning resources technology is a solution for the limited update sources provided by the university library. Some of the online resources could be accessed freely, and others must be members. Some of the students have become members of online resources. This context assisted learners in getting access to online resources comfortably and affordably. The impact of online resources on students' language learning can be seen in Figure 3 below.

🔍 Code retrieval - 9 Hits

Search Expression Search Hits

Group by: Code

Code:

Category	Case	Text	Comment
Helped Students to Learn Foreign Language			
Online Resources Impact on Foreign Language Learning	P2	Learning by using online resources can motivate me to learn foreign language. Online resources are helpful as media for learning to communicate with others throughout the world.	Media to communicated globally
Online Resources Impact on Foreign Language Learning	P3	The online resource helps me to meet my needs in foreign language learning. Online resources technology not only helps me as foreign language learners to complete my formal education, but also can broadly provide me soft skills that are useful for my future.	Online resources meet the students' need for learning
Online Resources Impact on Foreign Language Learning	P4	Online resources help me to improve my foreign language skills which certainly helps me to graduate. I'm sure, one day after I graduate, the skills will help me to get a decent job.	Online resource help students to graduate
Learning Was Not Boring			
Online Resources Impact on Foreign Language Learning	P3	Learning by accessing online resources makes me feel comfortable. Learning from online sources does not make me tired of spending a long time in front of my laptop. This is different from studying in class manually without online media which makes me instantly sleepy.	Students spend time in front of the laptop without feeling bored.
Online Resources Impact on Foreign Language Learning	P4	Learning from online sources, not only eliminates sleepiness, but also enlivens high curiosity to learn new things that cannot be obtained in conventional classrooms.	Learning from online resources can enliven high curiosity to learn new things
Unlimited Resources for Language Learning			
Online Resources Impact on Foreign Language Learning	P1	Online resources technology also provide me unlimited resources for my foreign language learning. Now, the limited sources in university library is no longer the reason for me to update my reading resources. I can even download materials from online sources.	Solution for the limited sources in university library
Online Resources Impact on Foreign Language Learning	P2	The online learning resources offer the unlimited resources for my foreign language learning, some of resources require annual subscription, however, some provide free access and some others require me to register as members with significant discount for students.	Many students have become members of certain online resources
Variety of Materials			
Online Resources Impact on Foreign Language Learning	P1	I experience that online resources provide a variety of materials. I can assess a huge materials for any discipline. However, I focus on foreign language learning topic materials to improve my skills in foreign language learning	Many other materials that can use to improve their language skills
Online Resources Impact on Foreign Language Learning	P2	Online resources provide many options to acces a huge type of materials. The large selection of online-based materials for learning foreign languages, requires me to choose the material that I need the most for effective learning	Students can select the most important materials for their learning

Fig. 3 Online resources impact on foreign language learning

3) *Challenges of using online resources technology for foreign language learning*: The problems of using online resources for foreign language learning, including website is often difficult to access for learners. Some of the language expressions used in the site were difficult to understand. It is usually no internet signal because of technical and practical

problems. It often takes time to learn to use online resources, and some of the materials were not relevant to learners' interests. The students reported the specific sub-themes on the challenges using online resources technology for Foreign Language learning can be seen in Figure 4 below.

Code retrieval - 6 Hits

Category	Case	Text	Comment
It Is Difficult to Access (Website)			
Challenges of Using Online Resources Technology for Foreign Language Learning	P1	I find problems in using online resources for foreign language learning, it is that website is often difficult to access	Most of students have mobile hotspot to solve this problem.
Challenges of Using Online Resources Technology for Foreign Language Learning	P4	The website of online learning resources are difficult to access due to unstable internet connection	Server connection problem by university network
It Is Hard to Understand Words/Expression			
Challenges of Using Online Resources Technology for Foreign Language Learning	P4	I find it difficult to understand the meaning of expressions and words from the internet because of my low level of foreign language proficiency	The problem caused by low level of foreign language proficiency level.
It Is Often Taking Longer Time to Finish (Limited Time)			
Challenges of Using Online Resources Technology for Foreign Language Learning	P1	The low proficiency level in foreign language learning has caused me to be unable to operate and exploit websites of learning resources effectively and optimum to finish the assignment given by lecturer.	Students reported the low language competency to finish the specified time assignment.
The Materials Are Often Far from The Students' Interest			
Challenges of Using Online Resources Technology for Foreign Language Learning	P3	some of the materials provided by online learning resources are irrelevant to my interests	Students choose certain materials that makes them
Challenges of Using Online Resources Technology for Foreign Language Learning	P2	it is usually some of the materials are irrelevant to my interests.	

Fig. 4 Challenges of using online resource on foreign language learning

Students often find it hard to access the materials from the website because the design and the organization of the materials are not well structured so that it is hard for students. This is categorized as a practical challenge. The practical challenge refers to the application of a certain website or technology that is not easy to use, and it is hard to manage the materials uploaded on the website. Not only the practical challenge, it is also the time limit, which is categorized as technical challenges. The technical challenges refer to the real problem of the implementation of certain technology for language learning.

B. Discussion

The reason students employed online resources technology in some ways was due to online resources technology provides opportunities for learners to search and explore unlimited resources. The online resources technology helped students to update their knowledge, enhance their skills, to test their skills, and to interact with others in the online environment. The enhancement of expertise and experience is a form of cognitive enrichment of learners [22]. The acquisition of such skills brings confidence to learners in using technology. Consequently, learners can use technology for positive purposes and the improvement of their language skills and competency.

With the presence of the internet that provides online learning resources, learning a foreign language is no longer difficult [51]. Various kinds of sites and applications specifically for foreign languages, are currently available, both for students and teachers. Online learning resources

provide an opportunity to practice foreign language skills, both in the classroom and outside the classroom or in everyday life. Online learning resources can make it easier to improve grammar and writing competencies and as a source of learning material. Even when students see English-language advertisements, they can look up their meaning in an online dictionary [52].

The impact of online resources technology can foster the development of bilingual and multilingual of competence of the learners particularly within Indonesian contexts [53], positive attitude to technology [54], interactional competence [55], improve students' cognitive understanding [56] on the use of technology and positive perception and attitude on language learning [53] and technology. The availability of online resources technology promotes a positive contribution to foreign language learners inevitably. The graph indicates proficiency in using technology and online resources for language learning.

The reasons why some website was difficult to access were the limited availability of internet connection and more often, the unstable connection to the internet. Additionally, some students found it difficult to understand the meaning of expressions and words from the internet because they have a low level of foreign language proficiency. Moreover, what appears to be happening as learners trying to use online resources was due to the issues of language proficiency associated with the content of the learners. The low proficiency level in foreign language learning has caused them to be anxious [57] and unable to operate and exploit

websites of learning resources effectively and optimum to finish the assignment given.

The challenges faced learners extend the previous study that technology brought students to be spoon-fed individuals and did not make the required effort to benefit from Internet learning [23] and difficulty for learners to use the technological application [58]. Consequently, learners tend to avoid the current development of technology that helps them, which leads them to be far more traditional in their learning and left behind from the ongoing development of technology. The implication for this challenge is that students who live in remote areas that have not internet connection may find it hard to use modern and update technology for language learning. As it happens in many areas of Indonesia where the internet technology and the internet things are often scarce to see and to be applicable in remote sites.

IV. CONCLUSION

From the analysis of the findings, it appears that learners used online learning resources in some ways including practicing their skills and ability and evaluating their language competence through a series of testing practice that was available online. Despite these strategies, learners encountered some challenges, including technical, practical, and social difficulties. This study was carried out within an Indonesian university context, and the findings may provide a new perspective on the use of online resources for university students in developing countries. Our in-depth exploration of the phenomenon and the result can contribute to insightful theoretical and practical knowledge to the community, mainly on the notion of online foreign language learning. This study recommends reforming the English subject curriculum [5] to be more inclusive with the trend of online learning resources. Future study needs to explore in a small number of sampling, but also the broader sample that can enhance the findings of this study. The future study also needs to be conducted within multiple sites. Within numerous settings will contribute to a broader population and extends our conclusions by providing more extensive evidence to support the conclusions of this paper.

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