THE EXPERIENCE OF LECTURERS IN USING ICT ON TEACHING ESP COURSES AT THE FACULTY OF MATHEMATICS AND SCIENCES OF UNIVERSITAS NEGERI PADANG

THESIS

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to obtain a degree in Master of Education

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ABSTRAK

Darliza Listari. 2022. Pengalaman Dosen dalam Menggunakan TIK pada Mata Kuliah ESP di Fakultas MIPA Universitas Negeri Padang. Thesis. Master of English Education of the Faculty of Languages and Arts of Universitas Negeri Padang.

Komunikasi dan Teknologi Informasi (TIK) adalah bentuk teknologi yang digunakan untuk membuat, menampilkan, menyimpan, memanipulasi, dan bertukar informasi untuk mendukung kegiatan belajar mengajar. Sejak tahun 2017, Universitas Negeri Padang menggunakan TIK sebagai media belajar mengajar dalam rangka meningkatkan kualitas kegiatan belajar mengajar. Penelitian ini bertujuan untuk mendeskripsikan pemanfaatan TIK dalam mata kuliah ESP di Fakultas MIPA Universitas Negeri Padang berdasarkan pengalaman dosen. Penelitian kualitatif deskriptif digunakan. Subyek penelitian ini adalah tiga orang dosen Fakultas MIPA yang mengajar mata kuliah ESP tahun ajaran 2021/2022. Pengumpulan data dilakukan melalui observasi, wawancara, dan dokumentasi. Temuan mengungkapkan bahwa dosen memiliki pengalaman dalam menggunakan ICT pada kegiatan mengajar mata kuliah ESP seperti ICT dapat mendukung proses pembelajaran mata kuliah ESP secara online, ICT berguna sebagai sumber pembelajaran pada proses belajar dan mengajar ESP, ICT berguna sebaga layanan penyimpan data pada aktifitas mengajar ESP, ICT memfasilitasi komunikasi antara dosen dan mahasiswa, ICT menghemat waktu dosen untuk menjelaskan materi ESP, dan dosen suka untuk menggunakan ICT pada pengajaran mata kuliah ESP. Namun, beberapa kendala yang ditemukan oleh dosen terkait dengan penggunaan TIK dalam mengajar mata kuliah ESP yaitu eksternal dan internal. Kendala eksternal seperti dukungan teknis dan administratif yang tidak memadai, kurangnya akses ke komputer/perangkat lunak, waktu yang tidak cukup untuk merencanakan pengajaran, kurangnya pengembangan profesional. Untuk kendala internal seperti keyakinan tentang komputer dan alat digital, keyakinan tentang mengajar saat online, dan praktik kelas yang mapan.

Kata kunci: Pengalaman, TIK, mata kuliah ESP, Kendala

ABSTRACT

Darliza Listari. 2022. The Experience of Lecturers in Using ICT in ESP Courses at the Faculty of Mathematics and Science of Universitas Negeri Padang. Thesis. Master of English Education of the Faculty of Languages and Arts of Universitas Negeri Padang.
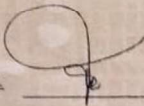
Information Communication and Technology (ICT) is a technology used to create, display, store, manipulate, and exchange information to support teaching and learning activities. Since 2017, Universitas Negeri Padang has been using ICT as a teaching and learning medium in order to improve the quality of teaching and learning activities. This present research aims to describe the use of ICT in ESP courses at the Faculty of Mathematics and Science of Universitas Negeri Padang, based on lecturers' experiences. Descriptive qualitative research is employed. The subject of this research was three lecturers in the Faculty of Mathematics and Science who taught ESP courses in the 2021/2022 academic year. The data were collected through observation, interviews, and documentation. The findings reveal that lecturers had experiences using ICT in ESP courses' teaching activities include ICT supports online teaching process of ESP courses, ICT is useful as learning resources in ESP teaching and learning, ICT is useful as a data storage service in ESP teaching activity, ICT facilitates communication between lecturers and students, ICT saves lecturer's time to explain the ESP materials, and lecturers like to use ICT in teaching ESP courses. However, several barriers were found by lecturers related to the use of ICT in teaching ESP courses, namely external and internal. The external barriers included inadequate technical and administrative support, lack of access to computers/software, insufficient time to plan to teach, and lack of professional development. The internal barriers included beliefs about computers and digital tools, online teaching, and established classroom practices.

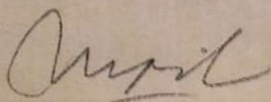**Keywords:** Experiences, ICT, ESP courses, Barriers

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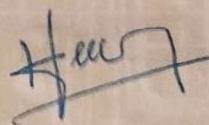NIM   : 19178007
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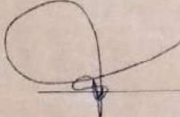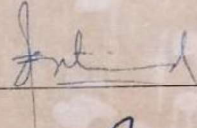Prof. Dr. Ermanto, S.Pd., M.Hum.
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SURAT PERNYATAAN

1. Karya tulis saya yang berjudul "The Experience of Lecturers in Using ICT in ESP Courses at the Faculty of Mathematics and Science of Universitas Negeri Padang" adalah asli dan belum pernah diajukan untuk mendapatkan gelar akademik di Universitas Negeri Padang maupun perguruan Tinggi lainnya.

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Saya yang menyatakan,

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CHAPTER 1

INTRODUCTION

A. **Background of the Problem**

In 21st-century education, technology, as the newest instructional media, helps to optimize and create sophisticated learning immersion and maximize the quality of students. In Indonesia, technology has been integrated into the 2013 curriculum that introduces ICT (Information and Communication Technology) as a learning concept to encourage students' learning autonomy and communicative development. Using ICT is one aspect that makes the students more interested in the teaching and learning process. Due to its potential impact, the new policy and the growing push for ICT in Indonesian education have resulted in the more effective implementation of ICT. ICT can upgrade and provide many opportunities for lecturers to experience and understand it when lecturers use them as part of the learning and teaching process. In other words, ICT is effectively used in teaching and learning.

Universitas Negeri Padang (UNP) has integrated ICT into teaching and learning since 2017 using blended learning. One ICT used that has been applied in UNP is Learning Management System, namely elearning2.unp.ac.id. This platform provides opportunities for students to learn optimally by using ICT to find learning resources, support students to learn the language and acquire knowledge and promote students' independence and autonomous learning as a practical teaching and learning tool. Basal (2016) defines LMS as software or Web-based technology

used to facilitate learning by providing a platform enabling easy access to learning content and resources by the learner. Thus, LMS allows lecturers and students to share instructional materials, make class announcements, submit and return course assignments, and communicate with each other online.

In addition, much technology has been introduced to the lecturers to use in the classroom and with daily administrative tasks, for example, Zoom Meeting, WhatsApp, and others. It may increase lecturers' knowledge and support students' learning motivation. However, the use of ICT depends on various factors, including the lecturers' expertise and pedagogical and content knowledge. Cohen et al. (2004) state that if the lecturers are not sufficiently expert or well prepared, lecturers have a negative attitude to the use of ICT, do not change their teaching behavior or do not enable learning styles and learning behavior to change. Therefore, the best promises of ICT will not be realized. Thus, the lecturers need to know how to use and operate all kinds of information and communication technology tools with a positive attitude to support the quality of learning outcomes.

One of the courses that can be implemented through ICT is English for Specific Purposes (ESP) teaching and learning activity. ESP is considered an approach to teaching and learning English as a foreign language (Hutchinson & Waters, 1987). Therefore, the activities and materials used in ESP classes in these specific fields should be carefully selected while keeping learners' needs and desires in mind. Lesiak-Bielawska (2015) states that ESP teachers attempted to incorporate technology into their classes, and eventually, the use of technology affected ESP pedagogy. Regarding how technology affects all aspects of life, language learning

and ESP are not immune to significant changes. In particular, incorporating technology into the ESP curriculum provides students with numerous learning opportunities and benefits, ranging from interactive and communicative activities related to their professions to tools for giving feedback and self-evaluation in that specific context (Butler-Pascoe & Wiburg, 2003).

With technology development in ESP classes, teachers began using ICT tools to help students use the target language in situations. These sorts of phenomena are also assumed that it is found in ESP courses at the Faculty of Mathematics and Science of Universitas Negeri Padang, which is one of the faculties with a high percentage of using technology in teaching (Rencana Strategi UNP 2020-2024, 2020). Therefore, the subject of ESP courses at the Faculty of Mathematics and Sciences is English for Chemistry, English for Chemistry Education, English for Physics, English for Physics Education, English for IPA, English for Biology, English for Biology Education, English for Mathematics, English for Mathematics Education, and English for Statistics. The purpose of these courses is that students can develop English speaking, listening, reading, and writing skills by implementing science and technology according to their respective fields.

The advantages of using technology in ESP include clear input for students' interests in the field and communicative and interactive activities tailored to various professions. According to Dashtestani & Stojkovi (2015), when students use technology in ESP, they gain access to task-based and collaborative learning activities and authentic content and materials.

Moreover, since remote teaching, ESP courses were affected. ESP lessons have to deliver asynchronously and synchronously modes of teaching. The lessons were published and explained on elearning2.unp.ac.id as the central platform. Users choose asynchronous or synchronous learning methods and media based on teaching purpose and intended use (Hrastinski, 2007b). In short, lecturers can use ICT to support ESP courses' learning and teaching process according to their functions, benefits, and operations in teaching materials. However, there is a policy from the campus that all learning processes must use the campus LMS as the leading platform so that all activities can be recorded and stored correctly.

In addition, in implementing ICT in ESP courses, several factors must be considered so that the teaching and learning process can be carried out effectively. The lecturers may have challenges in online teaching ESP courses in every meeting. For example, they must prepare the materials early, plan the strategy for online teaching ESP, and adapt ICT as instructional teaching and learning media. Some researchers claim that ICT is commonly and mainly used for content delivery, and all their functionalities for helping to learn are not fully exploited. The reasons are lecturers' pedagogical knowledge, lack of training, oversized classes, infrastructure, technical support, lack of time, and lack of equipment in the language classroom (Drigas & Charami, 2014; Muslem et al., 2018: Pham et al., 2019; Champa et al., 2019), become fixated on the technological component rather than the subject matter (Olaore, 2016), lack of management classroom (Yunus et al., 2013).

It is undeniable that the development of technology shifts the way of teaching and learning process. Both positive and negative ICT possibilities appear.

The experience is essential for educational innovation, effectiveness, implementation, and action, especially in integrating ICT into ESP Teaching and learning. The successful integration of ICT in the teaching and learning process is highly dependent on the preparation and attitudes of teachers (Shah, Parilah & Empungan, Joscyln, 2015). The more experienced teachers can identify areas where ICT can support and extend teaching and learning.

However, limited studies still explored lecturers' experiences using ICT in teaching ESP. The implementation of ICT cannot be successfully run unless teachers have the belief, capability, and experiences to use it in daily teaching and learning activities (Elemam, 2016). How effective ICT is in assisting the ESP teaching process is yet to be known at Universitas Negeri Padang. So, the researcher will fill the gap by seeking the lecturers' experience using ICT in teaching ESP. Furthermore, Kale & Goh (2014); Bansa & Asrini (2020) suggested that future researchers do observation to find how the teachers affect their evolving attitudes and experiences with ICT and investigate how teaching and learning go in the class by taking notes and pictures or video besides giving questionnaire and interview to see the implication of ICT in teaching. Therefore, this research will use qualitative research using triangulation data (observation, documentation, and interview) to see lecturers' experiences in using ICT in teaching.

Based on the explanation above, ICT in the teaching and learning process significantly impacts lecturers and students. Therefore, the experience and knowledge about using ICT in teaching ESP are necessary. Then, it is substantial to know what things have been experienced by the lecturers in using ICT in teaching

ESP courses, how they conduct teaching activities, and what barriers they have faced while using ICT in teaching ESP courses. Thus, this research seeks to acquaint the lecturers' experiences using ICT in teaching ESP courses at the Faculty of Mathematics and Sciences of Universitas Negeri Padang.

B. Identification of the Problem

The lecturers at UNP teach English for Specific Purposes (ESP) courses using ICT. Furthermore, during the COVID-19 pandemic, the teaching activity is virtual to avoid the corona virus's spread. Therefore, the teaching and learning process using ICT intensively, such as using e-learning platforms for discussion and giving the assignments, using Zoom application for virtual presentation and showing up their PowerPoint for presentation needs, and using other ICT tools to support teaching and learning activity. Meanwhile, the opinions of lecturers vary. Some of them enjoy using ICT in teaching and learning activities but also have obstacles to using it in teaching and learning processes. Thus, the use of ICT must be evaluated to reveal its effectiveness after its implementation. The best way to do it is by involving lecturers by allowing them to give their perceptions, the experiences of using ICT as they have used it in teaching ESP courses, the barriers faced by lecturers on using ICT in the teaching and learning process, the roles of lecturers on using ICT in a language classroom, the extant ICT can be used for language teaching and learning process, ICT tools that effective as learning media for language teaching and learning activity, evaluation of using ICT in a language classroom, and others.

C. Limitation of the Problem

Based on the identified problems, to support the use of ICT in education effectively, especially at Universitas Negeri Padang, this research focuses on analyzing the lecturers' experiences and barriers to using ICT in teaching ESP courses at the Faculty of Mathematics and Sciences. Thus, the researcher will analyze ESP lecturers' experiences using ICT in teaching activities. The experience includes how the lecturers use ICT during teaching ESP activities. Furthermore, from their experiences, the researcher is going to find out the barriers faced by the lecturers in using ICT in teaching ESP courses at the Faculty of Mathematics and Sciences.

D. Formulation of the Problem

Broadly, this research is formulated into "What are the experiences and barriers in using ICT on teaching ESP courses faced by the lecturers at the Faculty of Mathematics and Sciences of Universitas Negeri Padang?"

E. Formulation of the Research Question

Based on the formulation of the problem above, four research questions are formulated as below:

1. What are lecturers' experiences using ICT in teaching ESP courses at the Faculty of Mathematics and Sciences of Universitas Negeri Padang?

2. What are lecturers' barriers to using ICT in teaching ESP courses at the Faculty of Mathematics and Sciences of Universitas Negeri Padang?

F. Purpose of the Study

Related to the formulation of the problems, the objectives of this research are:

1. To find out the lecturers' experiences using ICT in teaching ESP courses at the Faculty of Mathematics and Sciences at UNP.

2. To find out the lecturers' barriers to using ICT in teaching ESP courses at the Faculty of Mathematics and Sciences at UNP..

G. Significance of the Research

The researcher hopes that the findings of the research will give a contribution to both academic and practical field, as follow:

1. Theoretical

It is expected that the finding of the present research could support and complete the previous theories related to the use of ICT in the English for Specific Purposes course. Then it can be helpful in English for Specific Purposes teaching and learning process, especially for lecturers at the faculty of mathematics and sciences of UNP.

2. **Practical**

The result of this research is expected to be helpful for the curriculum developers to make informed decisions as far as provision and strategies for the use of ICT in teaching and learning. Moreover, when lecturers know all about it, they can improve or correct deficiencies in the application and materials.

H. Definition of the Key Terms

There are a few terms used based on their function in the research. The terms are as follows:

1. Experience is the knowledge gained from what lecturers had observed, encountered, or used ICT in teaching ESP courses. The experience can be seen through lecturers' knowledge, and actions concerning the use of ICTs are identified through the kinds of ICT used by lecturers and how they use ICT in teaching ESP courses. So, experience refers to the lecturers' actions to integrate the knowledge and skills in ICT to enhance ESP teaching and learning activity.

2. Barrier emphasizes some difficulties and weaknesses based on external and internal factors faced by lecturers in using ICT in teaching ESP courses.

3. Information Communication Technology (ICT) can be defined as a collection of technologies and resources that lecturers use to improve the quality of teaching and learning activity in the ESP course.

4. English for Specific Purposes Course refers to an English subject designed to meet the specific needs of the learners and facilitate them in accessing literature or references required during the learning period.