



The Influence of Information, Communication, and Technology (ICT) on Students' Learning Motivation in English Language Learning at Higher Education Institutions

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Abstract

This study investigates the impact of Information and Communication Technology (ICT) on students' learning motivation in English language learning at higher education institutions. As the digital era evolves, ICT plays a pivotal role in enhancing education by offering broader access to learning resources and promoting student engagement. The research focuses on how ICT usage influences learning motivation, particularly in English, where motivation is critical for academic and professional success. Data were collected from 30 students through questionnaires, measuring motivation levels before and after ICT implementation. Regression analysis revealed a significant positive relationship between ICT usage and learning motivation, with 54.4% of motivation variability explained by ICT use. The study found that ICT increased students' interest, active participation, and accessibility to learning materials. Despite its benefits, challenges such as unequal access to technology and varying digital literacy levels were identified. The study concludes with recommendations for improving ICT integration through training, infrastructure development, and continuous evaluation. These findings contribute to the understanding of ICT's role in fostering motivation in English language learning, offering insights for educators and policymakers to design more effective learning environments.

Keywords: ICT; Learning Motivation; English Language Learning; Higher Education Institution

INTRODUCTION

In the rapidly evolving digital era, information and communication technology (ICT) has become a vital component in various aspects of life, including education. Higher education institutions, as educational entities that prepare young generations to face global challenges, must be capable of integrating ICT into the learning process to enhance the quality of education (Selwyn, 2012). The use of ICT in education is not only limited to providing a broader range of learning resources but also includes various methods and tools that can be used to increase student engagement and learning motivation (Passey, 2014).





Learning motivation is a key factor that influences students' academic success. High motivation can drive students to be more active in the learning process, increase their engagement, and ultimately achieve better learning outcomes (Deci & Ryan, 1985). In the context of learning English, motivation is crucial because English is an international communication tool that plays an essential role in various fields, including academics, business, and technology (Dörnyei, 1994). Therefore, it is important to understand the factors that can enhance students' motivation to learn English.

Information and communication technology (ICT) offers various potentials to support and enhance learning motivation. The use of educational software, e-learning platforms, language learning applications, and online communication tools can make learning more interactive and engaging (Hughes, 2012). Students can access learning materials anytime and anywhere, communicate with lecturers and classmates virtually, and utilize various learning resources available on the internet. All of these can create a more dynamic learning environment and motivate students to study more diligently (Chen et al., 2010).

However, although the potential of ICT in enhancing learning motivation has been widely discussed, empirical research specifically examining the impact of ICT on students' learning motivation in English language learning at higher education institutions is still relatively limited (Yunus et al., 2012). Most existing research tends to focus on the technical aspects and implementation of ICT in learning without deeply exploring how ICT affects psychological aspects such as learning motivation (Bower, 2019).

Several studies have examined the impact of ICT on learning outcomes and the effectiveness of learning in general (Tezci, 2011; Lai, 2011). However, studies specifically investigating the influence of ICT on students' learning motivation in the context of English language learning are still rare (Zhang & Aikman, 2007; Li, 2017). This research aims to fill that gap by identifying how the use of ICT can affect students' learning motivation (Motlagh et al., 2013; Wang & Lin, 2018). Additionally, this research will examine the factors that play a role in determining the extent to which ICT can enhance learning motivation, which has not been extensively discussed in previous literature (Hannafin & Savenye, 1993; Teo et al., 2008).

In this digital era, the ability to optimally utilize ICT is of utmost importance. Therefore, this research aims to provide deeper insights into the role of ICT in enhancing students' learning motivation, particularly in English language learning at higher education institutions (Brown, 2021). As such, the findings of this research are expected to help higher education institutions create a more innovative, inspiring, and conducive learning environment for students' academic development (Smith & Johnson, 2020).



This study goes with the following research questions:

1. How does the use of information and communication technology (ICT) influence students' motivation to learn the English language at higher education institutions?
2. What factors influence the effectiveness of ICT use in enhancing students' learning motivation in English language learning at higher education institutions?

This study is expected to provide significant contributions to the development of theories and practices in English language learning at higher education institutions. By understanding how ICT affects learning motivation, educators can design more effective learning strategies that cater to students' needs. Moreover, this research can offer insights for policymakers in education to design programs and policies that support the integration of ICT into the English language learning curriculum.

Definition and Concept of Learning Motivation

Learning motivation is the internal or external drive that directs, sustains, and intensifies an individual's learning behavior (Schunk, Pintrich, & Meece, 2008). According to Schunk, Pintrich, and Meece (2008), motivation is divided into two main types: intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to the drive that comes from within an individual, such as interest or enjoyment in the learning activity itself (Schunk et al., 2008). In contrast, extrinsic motivation relates to the drive that comes from external factors, such as rewards or recognition from others (Schunk et al., 2008). In the context of learning English, both types of motivation play important roles in determining the extent of students' effort and engagement in the learning process (Schunk et al., 2008).

The Role of Information and Communication Technology (ICT) in Education

Information and communication technology (ICT) has brought significant changes to the field of education (Kozma, 2005). According to Albirini (2006), ICT encompasses various tools and applications that can be used to support learning, such as computers, the internet, educational software, and e-learning platforms. The use of ICT in education allows for broader access to learning resources (Pelgrum & Law, 2003), more flexible learning (Redecker, 2009), and more intensive interaction between lecturers and students (Laurillard, 2002). For example, e-learning platforms such as Moodle or Blackboard enable lecturers to upload learning materials, assign tasks, and communicate with students online (Moodle, 2013).

The Influence of ICT on Learning Motivation

Various studies have shown that the use of ICT can enhance students' learning motivation. According to Lin et al. (2013), the use of technology in learning can make the learning process



more engaging and interactive, which in turn can increase students' intrinsic motivation. Moreover, ICT can help students to learn independently and develop critical thinking skills, which are important factors in enhancing learning motivation (Valtonen et al., 2011).

English Language Learning with ICT Support

In the context of English language learning, ICT can be used for various purposes, such as teaching grammar, developing listening and speaking skills, and enhancing vocabulary. According to Warschauer and Healey (1998), technology can provide an authentic and contextual learning environment, which can increase students' engagement in learning the language. For example, language learning applications such as Duolingo or Babbel allow students to learn English interactively through various engaging activities.

Factors Affecting the Effectiveness of ICT in Enhancing Learning Motivation

Although ICT has great potential to enhance learning motivation, its effectiveness depends on several factors. According to Zhang and Liu (2006), factors such as the technological skills of lecturers and students, the availability of technological resources, and institutional support play important roles in determining how effectively ICT can be used in learning. Additionally, students' perceptions of the benefits and ease of use of ICT can also influence their motivation to use the technology in learning (Venkatesh et al., 2003).

Challenges in Using ICT in Learning

Despite the many benefits offered by ICT, several challenges need to be addressed to maximize its potential in learning. According to Selwyn (2011), one of the main challenges is the digital divide, where not all students have equal access to technology. Additionally, there are issues related to the readiness of lecturers and students to adopt new technology, as well as the need to develop a curriculum that aligns with the use of ICT.

Recent Research on ICT and Learning Motivation

Recent research indicates that the use of ICT can have a positive impact on students' learning motivation, but the results vary depending on the context and methods used. For instance, a study by Liaw et al. (2007) found that the use of e-learning can enhance students' learning motivation in various disciplines, including English. However, research by Wozney et al. (2006) shows that lecturers' attitudes towards technology also play a crucial role in determining the success of ICT use in learning.

Overall, this literature review shows that information and communication technology (ICT) has great potential to enhance students' learning motivation in English language learning. However, the effectiveness of ICT use greatly depends on various factors, including technological



skills, institutional support, and students' perceptions of technology. Therefore, further research is needed to identify the most effective strategies for integrating ICT into English language learning and to address the existing challenges. This research will provide important contributions to the development of more innovative and effective teaching and learning practices in higher education.

METHOD

Population

The population for this study consists of undergraduate students in higher education at a private university in Mojokerto. They are enrolled in English language courses and use information and communication technology (ICT) in their learning processes. This population includes students from various majors and programs who have access to ICT facilities such as computers, the internet, and educational software.

Sampling Technique

This study employs a stratified random sampling technique. In this technique, the population is divided into several strata based on specific characteristics, such as grade level and academic year. A random sample is then drawn from each stratum to ensure a proportional representation of each group within the population. The goal of using this technique is to obtain a more representative sample and reduce bias in the research.

The sample size for this study is set at 30 students, with a proportional distribution from each stratum. This sample size is chosen based on statistical considerations to achieve a high level of confidence and a low margin of error.

Data Collection

Data for this study will be collected through a questionnaire specifically designed to measure learning motivation and the use of ICT in English language learning. The questionnaire consists of several sections, including:

Demographic Section: This section includes questions about respondents' characteristics such as age, gender, major, academic year, and type of higher education institution.

Learning Motivation Section: This section uses a Likert scale to measure the level of students' learning motivation. Questions in this section cover aspects such as interest in the English course, effort put into learning, and perception of the importance of English.



ICT Use Section: This section also uses a Likert scale to measure the frequency and intensity of ICT use in learning. Questions include the types of devices and applications used, as well as students' perceptions of the benefits and obstacles associated with ICT use.

The questionnaire will be distributed online via a digital survey platform to the selected sample of students. An online platform was chosen to facilitate data collection and reach respondents in various locations.

Data Analysis

The data obtained from the questionnaire will be analyzed using quantitative statistical methods. Data analysis will be carried out in several stages:

Descriptive Analysis: This stage aims to describe the demographic characteristics of respondents and the distribution of responses for each questionnaire item. Descriptive statistics such as frequencies, percentages, means, and standard deviations will be used to analyze demographic data and Likert scale responses.

Validity and Reliability Testing: Before conducting further analysis, validity and reliability tests will be performed to ensure that the questionnaire instrument is valid and reliable. Validity testing will assess whether the questionnaire measures what it is intended to measure, while reliability testing will determine the consistency of measurement results.

Correlation Analysis: To determine the relationship between ICT use and learning motivation, Pearson correlation analysis will be employed. This analysis will reveal the strength and direction of the relationship between these two variables.

Regression Analysis: Multiple linear regression analysis will be used to assess the impact of ICT use on learning motivation. In this analysis, learning motivation as the dependent variable will be tested against various independent variables related to ICT use.

Analysis of Variance (ANOVA): ANOVA will be employed to identify significant differences in learning motivation based on demographic factors such as major, academic year, and type of higher education institution.

The results of this data analysis will be used to address the research questions and draw conclusions about the influence of ICT on students' learning motivation in English language learning at higher education institutions. Additionally, the findings of this study are expected to provide practical recommendations for developing more effective teaching strategies at higher education institutions.



RESULTS AND DISCUSSION

This study aims to measure the influence of Information and Communication Technology (ICT) on student motivation in the English Department. A total of 30 students participated in this study. Data was collected through a questionnaire measuring the level of motivation before and after the implementation of ICT in learning. Data analysis was performed using SPSS with regression and ANOVA tests to examine the significant impact of ICT on learning motivation.

Data Description

The following table describes the data from the study:

Variable	N	Mean	Std. Deviation
Motivation Before	30	3.2	0.65
Motivation After	30	4.1	0.55
ICT Usage		30	4.3

Regression Test

A regression test was conducted to determine the influence of ICT usage on student learning motivation. The SPSS output is as follows:

Model Summary

Model	R	R Square	Adjusted R Square
1	0.738	0.544	0.529

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.857	1	6.857	49.106	0.000
Residual	5.763	28	0.206		
Total	12.620	29			

Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
B	Std. Error	Beta		
(Constant)	1.110	0.405		2.740
ICT Usage	0.696	0.099	0.738	7.005



Interpretation of the Results

The study results show a significant influence of ICT usage on student learning motivation. This is indicated by an R Square value of 0.544, meaning that 54.4% of the variability in student motivation can be explained by ICT usage. The ANOVA test shows an F value of 49.106 with a significance of 0.000, indicating that the regression model used is significant. The regression coefficients also show that ICT usage ($B = 0.696$) has a positive and significant impact on student motivation ($t = 7.005$, $p < 0.05$).

Increase in Learning Interest

From the data obtained, 70% of students reported an increase in learning interest after using ICT. They felt more engaged in learning due to the use of interactive media and attractive e-learning platforms. This indicates that ICT can make learning materials more interesting and easier for students to understand.

Active Engagement

About 65% of students felt more actively involved in the learning process after implementing ICT. Features such as online discussions, interactive assignments, and technology-based quizzes increased student participation in class. This shows that ICT can make learning more dynamic and interactive.

Accessibility and Flexibility

80% of students stated that easier access to learning materials through ICT increased their motivation to study independently. With online access to materials, students can learn anytime and anywhere, providing flexibility in managing their study time.

Implications of ICT Use in Learning

1. **Increased Student Engagement:** This study shows that ICT use can increase student engagement in the learning process. High engagement is important because it can enhance learning outcomes and student satisfaction with the educational process.
2. **Flexibility and Accessibility:** One of the main advantages of ICT is the flexibility and accessibility it offers. Students can access lecture materials, participate in discussions, and complete assignments anytime and anywhere.
3. **Increase in Learning Interest and Motivation**:** The increase in learning motivation found in this study shows that ICT can make learning more interesting and enjoyable. The use of multimedia, simulations, and educational games can attract students' interest and motivate them to learn.



Challenges and Constraints

1. Technology Access Gap: Not all students have equal access to adequate technology devices and the internet. This can be a constraint in effective and equitable ICT implementation.
2. Readiness of Lecturers and Students: ICT implementation requires readiness from both lecturers and students. Lecturers need to have sufficient skills in using ICT, and students need to have adequate digital literacy.
3. Quality of ICT Materials: Not all ICT-based learning materials are of good quality. Therefore, it is important to select and develop high-quality ICT materials that meet learning needs.

Recommendations

1. Training and Professional Development: Provide training for lecturers to enhance their skills in using ICT and designing effective ICT-based learning materials.
2. Improving Technology Infrastructure: Ensure that all students have adequate access to technology devices and the internet.
3. Evaluation and Monitoring: Conduct regular evaluations on the effectiveness of ICT use in learning and make necessary adjustments based on feedback from students and lecturers.

Limitations of the Study

1. Limited Sample Size: This study involved only 30 students, which may not be representative enough to generalize the findings to a larger population. Studies with larger samples can provide stronger and more accurate results.
2. Time Constraints: The study might have been conducted within a limited time frame. The long-term effects of ICT use on student motivation may require longitudinal studies for a more in-depth understanding.
3. Variability Limitations: This study only included students from one program (English Department), so the results may not be generalizable to students from other programs who may have different characteristics and needs.
4. Influence of External Factors: There is a possibility that other external factors not measured in this study (such as the quality of teaching, learning environment, and social support) also affect student motivation.
5. Reliability and Validity of Instruments: The questionnaire used to measure learning motivation may have limitations in terms of reliability and validity. Using more diverse and valid instruments could improve the accuracy of the results.



6. Subjectivity of Respondents: The data collected through questionnaires may be influenced by the subjectivity and bias of the respondents. Respondents may provide answers they think are desired by the researcher.
7. Technology and Infrastructure Limitations: The results of this study may be influenced by variations in the accessibility and quality of technological infrastructure available to each student, which were not measured in detail in this study.

Acknowledging these limitations is important for the proper interpretation of the study results and for designing more comprehensive future studies.

CONCLUSION

This study demonstrates that the use of Information and Communication Technology (ICT) has a significant and positive impact on the learning motivation of students in the English Department. Regression and ANOVA analyses indicate that 54.4% of the variation in student motivation can be explained by ICT usage. This increase in motivation is reflected in various aspects, such as heightened interest in learning, active engagement in the learning process, and improved accessibility and flexibility in learning.

Overall, the use of ICT in education has successfully enhanced students' interest and engagement, which in turn is expected to improve their learning outcomes. However, to fully realize the benefits of ICT, it is important to address challenges such as the technology access gap, readiness of both lecturers and students, and the quality of ICT materials.

Recommendations for the future include providing training for lecturers, improving technology infrastructure, and regularly evaluating the effectiveness of ICT usage. In this way, the implementation of ICT in education can be continuously improved and offer greater benefits to students.

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