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The Role Of Lecturers' Self-Efficacy And Digital Literacy In The Use Of Information And Communication Technology (Ict) In The Learning Process (An Exploratory study at the Maritime College and Polytechnic within the Ministry of Transportation)

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Abstract

Digital literacy is crucial in maritime education as it significantly enhances lecturers' competence in the learning process. This study investigates the impact of digital literacy and self-efficacy on the use of ICT in universities under the Ministry of Transportation of the Republic of Indonesia. It specifically aims to: (1) examine how lecturers' digital literacy influences ICT use in teaching, (2) explore the impact of lecturers' self-efficacy on ICT integration, and (3) analyze the combined effect of digital literacy and self-efficacy on ICT use in these educational institutions. Conducted in 2023, this quantitative study utilized a survey method with data collected from 100 lecturers through online questionnaires (Google Forms). Data were analyzed using inferential statistics, including regression analysis, focusing on variables such as lecturer self-efficacy, digital literacy, and ICT use. Results indicate that: (1) lecturers' digital literacy significantly affects ICT use in maritime education, (2) lecturers' self-efficacy also plays a crucial role, and (3) the combined influence of digital literacy and self-efficacy is significant in enhancing ICT utilization in maritime colleges and polytechnics within the Indonesian Ministry of Transportation.

Keywords: *communication technology, digital literacy, information, lecturers, self-efficacy.*

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1. Introduction

Maritime education and training are intended to shape prospective sailors into reliable, expert and skilled sailors in operating various equipment on board ships, both in the field of navigation and ship machinery through the learning process. Problems that often arise in learning activities are the motivation and interest of students in learning that do not match what the lecturer expects. Meanwhile, educators/lecturers have a very important role in the learning process, especially in building scientific structures and shaping the character of students. The quality of students is highly dependent on the quality of their educators, because they are the ones who directly deal with learning.

Seeing the strategic role and position of educators/lecturers, lecturers should continuously improve their professionalism in carrying out their duties and responsibilities. Educators are required not only to transfer their knowledge or transfer of knowledge, skills and technology, but also to carry out the tasks assigned to them by the community such as (life skills) and values (beliefs).

The operational environment related to the maritime domain is developing rapidly. From a floating and labor-intensive isolated workspace, it has changed into something connected using Information and Communication Technology (ICT). Many work functions on ships are replaced by automated equipment. This has an impact on maritime education institutions in providing education and training that is in line with technological developments. Maritime education is faced with the challenge of not only providing various equipment that is

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in line with the development of shipping technology but also having to prepare teaching staff (lecturers and instructors) who master the equipment as used on ships. Many studies have
been conducted in response to this development, which states the need for skills training in the field of information and communication technology for sailors (Gosh, 2021) and at the same time the need to balance academic aspects in the maritime field with aspects of their skills (Manuel, ME,. 2017).

Teaching staff (lecturers) because of their position on land (offboard) are not always able to quickly operate and adapt immediately to technological developments. Maritime educators or lecturers at universities within the Ministry of Transportation are state civil servants who are required to work full time so it can be assumed that they cannot quickly find out and even understand developing technology, especially technology related to maritime affairs.

Strengthening the competence of educators/lecturers at maritime educational institutions must be carried out with standards set in both national and international regulations, in order to obtain professional educators. On the other hand, an educator/lecturer must also have an attitude of self-efficacy, namely the belief of an educator/lecturer in their own ability to raise and improve their competence in a better direction, especially in the use of information and communication technology. Self-efficacy affects how well educators/lecturers carry out their duties and responsibilities and their ability to improve their competence and provide a lively and interactive learning atmosphere, are able to increase student motivation and interest in learning, and so on. Efficacy in the use of information and communication technology is believed to play a very large role in the motivation and performance of educators/lecturers and encourages the various potentials possessed by an educator/lecturer.

Along with the massive and intensive use of learning technology, especially the use of information and communication technology today, efforts to create educators/lecturers who are competent with digital technology have become an interesting issue to study and analyze. The importance of digital literacy in the world of maritime education can bring about changes in the increasing competence of educators/lecturers in the learning process. Digital literacy in the world of maritime education can make students, educators/lecturers access, understand, and use digital media, especially in the field of information and communication technology. The inability to adapt and use information and communication technology media can cause problems of declining quality of maritime education and declining quality of graduates or on a broader scale the low quality of Indonesian sailors.

Digital Literacy

Literacy comes from English, namely Literacy, which can be interpreted as the ability to read and write. According to UNESCO (2018), literacy is the ability to identify, understand, interpret, create, communicate, calculate and use printed and written materials related to various contexts. Literacy is usually combined with other syllables to indicate abilities in a particular field. Digital literacy means an individual's ability to access, understand, create, communicate, and evaluate information through digital technology. Communication is also a key aspect of digital literacy. When communicating in a virtual environment, the ability to express ideas clearly, ask relevant questions, maintain respect, and build trust is as important as when communicating in person.

Deakin University's Graduate Learning Outcome 3 states that digital literacy is an effort to utilize technology in searching (browsing), using, and distributing (sharing) information in the digital world as it is today. Typing skills and the ability to produce digital content such as text, images, video, audio, and designs using digital technology are also included in digital literacy. Gilster defines digital literacy as a person's ability or skill to understand and use information from various digital sources effectively and efficiently in various formats. (Jazimatul, H. et al. 2017).

In conclusion, in addition to referring to the skills of using technology, information and communication devices, digital literacy also includes the process of reading, understanding, writing, and identifying something as new knowledge or content. It can also be concluded that

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digital literacy is an effort that is greatly needed by someone in this era to filter information accurately.

Digital literacy of communication and information includes three abilities, namely competence in using technology, interpreting and understanding digital content to assessing credibility by conducting research to communicating with the right tools. According to Steve Wheeler in Digital Literacies for Engagement in Emerging Online Cultures (Maulana, 2012) there are nine components of digital literacy, namely social networking, transliteracy, maintaining privacy, managing identity, creating content, organizing and sharing content, reusing/repurposing content, filtering and selecting content, and self-broadcasting. The conceptualization of digital literacy consists of four components, namely basic digital literacy skills, background knowledge of information, core competencies of digital literacy, and attitudes and perspectives of information users (Irhandayaningsih, 2020). Referring to the CRAAP Test (Currency, Relevance, Authority, Accuracy and Purpose), there are five things that must be considered in order to maximize the ability and role of digital literacy, namely understanding the currency of information (currency), understanding the suitability of information (relevancy), understanding the ownership of information sources (authority), understanding the accuracy of information (accuracy), and understanding the purpose of information (purpose).

Naufal, HA (2021) states that the factors that influence digital literacy are Functional Skills, communication, and Interaction, which involve conversation, discussion, and building ideas with each other to create a shared understanding, and critical thinking which involves changing, analyzing, or processing information data or ideas given to interpret meaning in developing insight. Digital literacy is influenced by several factors: 1) use of online media, 2) academic values 3) role of parents/family, 4) reading intensity (Kuo, 2016; McDougall, Readman, & Wilkinson, 2018).

According to Gilster (1997:18) there are four core competencies of digital literacy, namely internet searching, hypertextual navigation, content evaluation and knowledge assembly. Beetham in (Musiin & Indrajit, 2020) stated that there are seven elements of digital literacy, namely Information literacy, namely the ability to search for, evaluate, and use the information needed effectively, Digital Scholarship which includes the active participation of digital media users in academic activities to use information from digital media as a reference, Learning skills are learning effectively various technologies that have complete features for formal and informal learning activities, ICT literacy which focuses on ways to adopt, adapt, and use digital devices and media based on information and communication technology, Career and identity management or ways to manage online identities, Communication and collaboration, namely active participation for learning and research through digital networks, and Media literacy or media literacy which includes critical reading and creative and professional skills in various media. Self-Efficacy According to Bandura, self-efficacy is a person's evaluation of their ability or competence to perform a task, achieve a goal, or overcome obstacles and is also the result of the cognitive process that occurs (Baron & Byrne, 2004). According to Bandura (1997) there are four functions that influence a person, namely: According to Bandura, the influence of self-efficacy on a person's cognitive abilities varies greatly. The cognitive process is a thinking process, where the process includes the processes of obtaining, organizing, and using the information obtained. A person's actions begin with something that is thought about. A person with high self-efficacy prefers things that are expected to be successful. Conversely, a person whose self-efficacy is low, thinks more about things that are likely to or may not be achieved. Self-efficacy plays a role in controlling motivation. Motivation is generated through cognitive abilities. A person motivates himself in taking/choosing actions taken through previous thoughts and experiences. Self-confidence can affect motivation in several ways, namely determining predetermined goals, how much effort is made, how resilient they are in the face of difficulties and their resilience in the face of failure. The affective process in a person is a process of regulating emotions and emotional reactions. Self-efficacy is a person's ability to overcome the amount of stress and depression experienced in difficult and stressful situations, which can ultimately fulfill the person's level of

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motivation. The stronger the self-efficacy, the more courageous a person is to act in the face of stressful and threatening situations. A person who feels confident in himself uses control in situations that he feels are threatening, not thinking about other things that are disturbing. Meanwhile, someone who cannot control threatening situations will experience high anxiety. Selective function affects the selection of activities or goals that will be taken by a person. He will avoid activities or situations that are believed to have exceeded his abilities. However, he will do challenging activities and choose situations that are considered capable of being overcome. This behavior will strengthen the abilities, interests and social networks that affect life, and ultimately will affect the direction of personal development. This is because social influence plays a role in selecting the environment and increasing these competencies, values and interests for a long time after the factors that influence his decisions and beliefs have an initial influence. Factors Affecting Self-Efficacy. According to Bandura (Feist & Feist, 2013) there are four factors that influence a person's self-efficacy, the experience of success is a significant factor influencing a person's self-efficacy. Success will increase expectations about ability, and vice versa. This can be understood as: 1) Success that has been achieved previously can increase self-efficacy proportionally to the difficulty of the task being faced. 2) Tasks that can be completed independently will be more effective if completed independently than with the help of others. 3) Failure will decrease self-efficacy when someone feels they have given their best effort. 4) Failure due to high emotional pressure has less influence than failure that occurs in maximum conditions. 5) Failure that occurs before gaining experience has more influence on self-efficacy than failure after someone has previous experience. 6) Failure will have little influence on a person's self-efficacy if the person has expectations of success. Social Modeling is a model where someone observes the behavior and experiences of others in their learning process. Through this model, a person's self-efficacy can increase, especially if he feels he has the same ability or even feels better than the person who is the subject of his learning. He will have the confidence to be able to do the same thing. This increase in self-efficacy will increase motivation to achieve something he wants. The effectiveness of increasing self-efficacy will be more visible if the model subject has similar characteristics, level of task difficulty and similar situations. The modeling process or learning from other people's experiences will affect self-efficacy. A person's self-efficacy will change according to the influence of the model that is considered appropriate to his perception. Social persuasion can have an impact on a person's low or high self-efficacy. The words or opinions of others who are trusted in persuading are much more effective than those who are not trusted. Social persuasion can run effectively if there are examples of success that are conveyed. Social persuasion can increase a person's self-efficacy to try if the performance that is exemplified is proven to be successful. Physical and emotional conditions are things that can be situational where a person can be at a low level of self-efficacy due to experiencing excessive anxiety, fear, high stress, emotions and so on that make their performance low. IMO through its regulations in STCW aims to guarantee the qualification standards of seafarers for all its member countries. Data from the Ministry of Transportation, the number of seafarers in Indonesia until March 2023 shows a figure of 1,372,021 people (https://pelaut.dephub.go.id/) who have certificates of expertise and/or skills at both officer and rating levels working on ships under various national flags.

To obtain certificates and various mandatory requirements as required in STCW, prospective seafarers and seafarers must take training at maritime education institutions that have been "approved". Educational institutions therefore contribute very importantly in preparing the workforce in the maritime sector in meeting the demand for skilled and qualified seafarers (Gosh, 2021). Maritime education institutions not only need to have adequate infrastructure to implement various methods of delivering educational content, but must also meet the needs of their educators to continue to update their pedagogical skills and abilities to explore the use of digital technology. STCW Regulation I/6 stipulates that the person responsible for implementing training leading to the issuance of certificates for seafarers must also have adequate qualifications. Therefore, the continuous development of pedagogical profiles and professional competence of educators or lecturers is considered important. Self-

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efficacy is a person's belief in their abilities when carrying out an action to achieve a predetermined goal. Self-efficacy is always related to and has an impact on a person's behavior, motivation, and beliefs in facing a problem.The advancement of information and communication technology is developing very rapidly. Its application in supporting learning process activities in educational institutions is very important to accelerate the achievement of learning goals. Maritime educational institutions (Colleges and Polytechnics of Maritime Science) within the Ministry of Transportation have recently been equipped with various technologies in the fields of shipping and information and communication so that learning can be in line with the development of technological advances in the field of shipping. However, this also needs to be accompanied by the ability of the educators to use it, and is one of the important media in the learning process. Through information and communication technology media, learning can be packaged more attractively so that it is expected to make it easier for students to understand the material provided. Feelings of fear, confusion, stress, doubt, and anxiety about one's ability to solve problems, especially in the use of information and communication technology, due to the influence of self-efficacy.

2. Method

This research is a quantitative research with a survey method. The survey was conducted on lecturers at the maritime science college and polytechnic within the Ministry of Transportation. Data collection techniques used observation and online questionnaire distribution (google form). Observation is defined as a method of observation carried out by researchers on phenomena or research objects that appear on the surface. According to Bungin (2008), the observations made are a researcher's ability carried out in research by utilizing or assisting with the five senses such as the eyes, ears, mouth and others. The distribution of questionnaires is a method commonly used by researchers to collect social research data in the field. Sugiyono (2011) explains that this questionnaire is a research data collection technique by providing a list of statements and/or questions to a number of respondents to answer. The questionnaire is distributed to respondents by utilizing information technology (internet) via google form.

Data collection techniques to complete and explore qualitative data using open questions in online questionnaires. Although interview techniques are usually carried out directly (face-to-face) with or without interview guidelines, data collection in this study is sufficient using a questionnaire with the researcher's belief that there is no too high (significant) difference between direct interviews (face-to-face) and indirect interviews. Core field data collection will be carried out in June-August 2023 using a questionnaire to 100 educators (Lecturers) at the Maritime College/Polytechnic within the Ministry of Transportation. Survey data will be presented in the form of numbers and analyzed using inferential statistical techniques. The study uses a causal research design to test independent variables against dependent variables. The research design is designed to determine the cause and effect relationship between variables. Where the independent variables in this study are digital literacy and self-efficacy, while the dependent variable is the use of information and communication technology in the learning process. The population used in this study were educators (lecturers) at the Maritime College and Maritime Polytechnic within the Ministry of Transportation. The sampling used in this study was Area-Based Random Sampling (Cluster Random Sampling) where 10 respondents were determined in each area/educational institution. Statistical analysis used regression analysis (Olive, 2017) with the following variable tests; 1) Lecturer Self-Efficacy, 2) Lecturer Digital Literacy, 3) Use of Information and Communication Technology in Digital Learning.

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Conceptual Definition, Operational Definition, and Indicators

Table 1. Conceptual Definition, Operational Definition, and Indicators

Variabel	Definisi Konseptual	Definisi Operasional	Indikator
Efikasi Diri Dosen	Keyakinan yang dimiliki oleh seseorang mengenai kemampuannya yang digunakan untuk menyelesaikan suatu tugas demi memperoleh hasil yang diinginkan	Keyakinan yang ada dalam diri dosen tentang kemampuan yang dimilikinya untuk melakukan tindakan sehingga dosen dapat membentuk perilaku yang sesuai dengan harapan yang diinginkan	1) Keyakinan atas kemampuan diri dalam mengatasi kesulitan tugas 2) Keyakinan dalam meghadapi kesulitan mencari referensi atau sumber pustaka. 3) Ketekunan dalam menyelesaikan tugas. 4) Kemampuan menghadapi hambatan dalam mencapai tujuan. 5) Kemampuan menggunakan pengalaman hidup sebagai suatu langkah untuk mencapai keberhasilan.
Literasi Digital Dosen	Keterampilan yang dibutuhkan untuk hidup, belajar, maupun beraktivitas dalam masyarakat seiring berkembangnya akses informasi dan komunikasi (UNESCO,2011)	Keterampilan dosen dalam memahami, mengakses, mengatur, mengintegrasikan, mengkomunikasikan, menilai dan menghasilkan informasi dengan aman dan tepat menggunakan teknologi digital dan komunikasi.	1) Pencarian internet 2) Pandu arah hypertext 3) Evaluasi konten informasi 4) Penyusunan pengetahuan
Teknologi Informasi dan Komunikasi	Teknologi yang berhubu-ngan dengan pengambilan, pengumpulan, pengolahan, penyimpangan, penyebaran, dan penyajian informasi.	Kemampuan menggunakan teknologi komputer *(hardware* dan *soft-ware)* untuk pemrosesan dan penyimpanan informasi, juga berfungsi sebagai teknologi komunikasi untuk penyebaran informasi	*1)* Mampu menggunakan aplikasi *Google Classroom* atau *Zoom Meeting* 2) Mampu mengkombinasikan *Google Classroom* atau *Zoom Meeting* dengan aplikasi lain dalam pembelajaran daring 3) Terampil mengintegrasikan berbagai jenis media ajar (audio, video, gambar, dan *ebook*) dalam *Google Classroom* atau *Zoom Meeting* 4) Terampil mengintegrasikan berbagai jenis media ajar (audio, video, gambar, dan e-book) dalam Google Classroom/Zoom Meeting 5) Mampu membuat materi sendiri (audio, video, gambar, dan ebook) dalam pembelajaran daring 6) Mampu menggunakan Learning Management System (LMS) 7) Pernah mengikuti pelatihan menggunakan LMS dalam pembelajaran daring 8) Pernah membuat materi sendiri kemudian digunakan untuk pembelajaran daring di LMS

Source: Data Processing

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3. Results and Discussion

Validity Test

Table 1. Validity test

Variabel	Item	R-hitung	R-tabel	keterangan
Literasi Digital Dosen	1	0,947	0,189	Valid
	2	0,916	0,189	Valid
	3	0,966	0,189	Valid
	4	0,953	0,189	Valid
Efikasi Diri Dosen	1	0,928	0,189	Valid
	2	0,949	0,189	Valid
	3	0,937	0,189	Valid
	4	0,900	0,189	Valid
	5	0,906	0,189	Valid
Teknologi Informasi dan Komunikasi	1	0,951	0,189	Valid
	2	0,904	0,189	Valid
	3	0,916	0,189	Valid
	4	0,914	0,189	Valid
	5	0,921	0,189	Valid

Source: Data Processing

It is known that the r-table value in this study with N = 108 and sig. 0.05 is 0.189. From the results of the validity test analysis in the table above, the variables of Lecturer Digital Literacy (X1), Lecturer Self-Efficacy (X2), and Information and Communication Technology (Y) have an r-count value> r-table, so it can be concluded that all statement items used in this study are valid and can be used as measuring tools.

Reliability Test

Table 2. Reliability Test

Variabel	Cronbach's Alpha	Critical value	information
Lecturer Digital Literacy	0,960	0,6	Reliable
Lecturer Self-Efficacy	0,957	0,6	Reliable
Information and communication technology	0,956	0,6	Reliable

Source: Data Processing

From the results of the reliability test analysis in the table above, it is known that the Cronbach's Alpha value for the Lecturer Digital Literacy variable (X1) is 0.960> 0.6, Lecturer Self-Efficacy (X2) is 0.957> 0.6 and for the Information and Communication Technology variable (Y) is 0.956> 0.6. From these results, it can be concluded that all statement items are reliable.

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Table 3. *Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
Literasi Digital Dosen	108	8	20	16.20	3.266
Efikasi Diri Dosen	108	10	25	18.97	3.659
Teknologi Informasi Dan Komunikasi	108	15	25	21.54	3.322
Valid N (listwise)	108				

Source: Data Processing

The table above shows that the amount of data used in this study is 108 data taken from the questionnaire results. Lecturer Digital Literacy shows that this ratio has the lowest value (Minimum) of .8, the highest value (Maximum) of 20, for an average value (Mean) of 16.20, while the standard deviation for Lecturer Digital Literacy is 3,266. Lecturer Self-Efficacy which shows an average value (Mean) of 18.97, this means that the average sample fulfills its obligations, and the lowest value (Minimum) of .10 which means the lowest value of Lecturer Self-Efficacy is .10 and the value (Maximum) or maximum value is .15 while the standard deviation value is 3,659. Information and Communication Technology shows an average value (mean) of 21.54 while the lowest value (minimum) is 15 while the highest value (maximum) is 25 and the standard deviation value for Information and Communication Technology is 3.322.

Normality test

Table 4. Normality test

N		108
Normal Parametersa, n	Mean	.0000000
	Std. Deviation	2.91627672
	Absolute	.076
	Positive	.055
	Negativ	-.076
Test Statistic		.076
Asymp. Sig. (2-tailed)		.157c

Source: Data Processing

Based on the results of the Kolmogorov-Smirnov test, it shows that the data is normally distributed. The standardized residual value is normally distributed if the sig. value > alpha (0.05) is 0.157 > 0.05, which indicates that the value is normally distributed.

Multicollinearity Test

Table 5. Multicollinearity Test

(Constanta)	Collinerity Tolerance	Statistic VIF	Information
Lecturer Digital Literacy	.982	1.018	Free from multicollinearity
Lecturer Self-Efficacy	.982	1.018	Free from multicollinearity

Source: Data Processing

Based on the output on collinearity, it can be seen that the tolerance value of the Lecturer Digital Literacy variable is 0.982 and Lecturer Self-Efficacy is 0.982, while the VIF value of the Lecturer Digital Literacy variable is 1.018. and the Lecturer Self-Efficacy variable is 1.018. This means that the research variables do not show any symptoms of multicollinearity in the regression model.

Heteroscedasticity Test

Table 6. Heteroscedasticity Test

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Srd. Error	Beta	T	Sig.
(Constant)	2.287	1.365		1.675	.097
Literasi Digital Dosen	.027	.062	.042	.433	.666
Efikasi Diri Dosen	-.097	.055	-.170	-1.754	.082

Based on the image above, it can be concluded that there is no heteroscedasticity problem. And the table above shows that the data is free from heteroscedasticity symptoms. This is because in the table above the Sig value> 0.05.

Autocorrelation Test

The requirement in using the Durbin-Watson test is if there is a positive autocorrelation if the DW value is below 2 (DW < -2). The test results can be seen in the following table:

Table 7. Autocorrelation Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.479a	.229	.215	2.944	1.709

Source: Data Processing

The Durbin-Watson value in the table above is 1.709. This value means that there is no autocorrelation in this regression model. Autocorrelation will occur if the Durbin-Watson value is -2 ≤ DW ≤ 2.

Table 8. Multiple Linear Regression Test

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std.Error	Beta
1	(Constant)	10.846	1.940	
	Lecturer Digital Literacy	.282	.088	.277
	Lecturer Self-Efficacy	.323	.078	.356

Source: Data Processing

The table above can be explained about the multiple regression equation in this study.

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From the regression equation above, the conclusions that can be explained are as follows:

a) The constant value (α) of 10.846 with a positive sign states that if the Lecturer Digital Literacy and Lecturer Self-Efficacy variables are considered constant, the Y value is 10.846.
b) The regression coefficient value of the Lecturer Digital Literacy variable (X1) of .282 with a positive sign states that if the Lecturer Digital Literacy level increases by one unit assuming other independent variables are constant, then Information and Communication Technology will increase by .282.
c) The regression coefficient value of the Lecturer Self-Efficacy variable (X2) of .323 with a positive sign states that if the Lecturer Self-Efficacy level increases by one unit assuming other independent variables are constant, then Information and Communication Technology will increase by .323.

Coefficient of Determination Test

Table 9. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.479[a]	.229	.215	2.944

Source: Data Processing

Based on the table above, the R value is 0.479 and the R square value is 0.229, which shows that the percentage contribution of the influence of the independent variables (Lecturer Digital Literacy and Lecturer Self-Efficacy) to the dependent variable (Information and Communication Technology) is 22.9%. This shows that the ability to run the independent variables, namely Lecturer Digital Literacy and Lecturer Self-Efficacy on the dependent variable (Information and Communication Technology) which can be explained by this equation model is 22.9%, while the remaining 77.1% is influenced or explained by other variables that are not included in the research model.

Hypothesis Test

a) T-Test

Table 10. T-Test

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	sig
1	(Constant)	10.846	1.940		5.591	.000
	Literasi Digital Dosen	.282	.088	.277	3.203	.002
	Efikasi Diri Dosen	.323	.078	.356	4.117	.000

Source: Data Processing

Based on the table above, the influence of each independent variable on the dependent variable is as follows:

1) Testing Lecturer Digital Literacy (X1) on ICT (Y)
Ho: β2=0 means Lecturer Digital Literacy has no positive effect on Information and Communication Technology H1: β2> 0 means Lecturer Digital Literacy has a significant positive effect on Information and Communication Technology. The second hypothesis in this study is that Lecturer Digital Literacy (X1) has a positive effect on Information and Communication Technology (Y). Based on the SPSS output table "Coefficients"

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above, the Significance value (Sig) of the Lecturer Digital Literacy variable is 0.002. Because the Sig. value is 0.002 <0.05, it can be concluded that H1 is accepted and Ho is rejected. This means that there is a significant influence between Lecturer Digital Literacy (X1) on Information and Communication Technology (Y).

2) Testing of Lecturer Self-Efficacy (X2) on Information and Communication Technology (Y)

Ho: β2 = 0 means that Lecturer Self-Efficacy has no positive effect on Information and Communication Technology H2: β2 > 0 means that Lecturer Self-Efficacy has a significant positive effect on Information and Communication Technology. The second hypothesis in this study is that Lecturer Self-Efficacy (X2) has a positive effect on Information and Communication Technology (Y). Based on the SPSS output table "Coefficients" above, the Significance value (Sig) of the Lecturer Self-Efficacy variable is 0.000. Because the Sig. value is 0.000 <0.05, it can be concluded that H2 is accepted and Ho is rejected. This means that there is a significant influence between Lecturer Self-Efficacy (X2) on Information and Communication Technology (Y).

b) F-Test

Table 11. Anova

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	270.852	2	135.426	15.626	.000[b]
	Residual	910.000	105	8.667		
	Total	1180.852	107			

Source: Data Processing

Ho: Lecturer Digital Literacy and Lecturer Self-Efficacy simultaneously do not affect Information and Communication Technology.

H1: Lecturer Digital Literacy and Lecturer Self-Efficacy simultaneously have a significant effect on Information and Communication Technology.

Based on the output table above, the Significance value (Sig) is 0.000 <0.05, so it can be concluded that the hypothesis is accepted or in other words Lecturer Digital Literacy (X1) and Lecturer Self-Efficacy (X2) simultaneously have a significant effect on Information and Communication Technology (Y).

Age

Table 12. Age Data

		Frequency	Percent
Valid	21-30 years	3	2.8%
	31-40 years	20	18.5%
	41-50 years	35	32.4%
	51-60 years	34	31.5%
	>60 years	16	14.8%
	Total	108	100.0%

Source: Data Processing

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It is known that in terms of age, the most or most dominant are 41-50 years old, as many as 35 (32.4%) and 51-60 years old, as many as 34 (31.5%), while the least are 21-30 years old, as many as 3 (2.8%) and the rest are 31-40 years old, as many as 20 (18.5%), while >60 years old are 16 (14.8%).

Education

Table 13. Education Data

		Frequency	Percent
Valid	S 2 (Magister)	97	89.8%
	S 3 (Doktor)	11	10.2%
	Total	108	100.0%

Source: Data Processing

In terms of education, it is known that the most or most dominant is S2 (Masters), namely 97 (89.8%) and the rest or the least S3 (Doctorate), namely 11 (10.2%).

The benefits of this study are: (1) To determine the self-efficacy of educators or lecturers at maritime colleges or polytechnics within the Ministry of Transportation, so that mapping and identification of areas that allow for improvement can be carried out; (2) To determine the digital literacy of educators or lecturers at maritime colleges or polytechnics within the Ministry of Transportation, so that mapping and identification of areas that allow for improvement can be carried out; (3) Can be used as a study in decision-making for the development of educators (lecturers and instructors).

For more in-depth research to provide a more complete picture, it is suggested, namely: (1) This study can be used as evaluation material for improving digital literacy and lecturer self-efficacy; (2) In further research, it can be continued by analyzing the influence between variables of perceived ease of use, perceived usefulness, university support, computer self-efficacy, and lecturer attitude in the use of information and communication technology.

4. Conclusions

Based on the analysis as mentioned above, it can be concluded from this study that: The value of r table in this study with N = 108 and sig. 0.05 is 0.189. From the results of the validity test analysis in the table above, the variables of Lecturer Digital Literacy (X1), Lecturer Self-Efficacy (X2), and Information and Communication Technology (Y) have a calculated r value> r-table, so it can be concluded that all statement items used in this study are valid and can be used as measuring tools. It is known that the Significance value (Sig) is 0.000 < 0.05, so it can be concluded that the hypothesis is accepted or in other words, Lecturer Digital Literacy (X1) and Lecturer Self-Efficacy (X2) simultaneously have a significant effect on Information and Communication Technology (Y). There is a significant role between Lecturers' Digital Literacy towards Lecturers' Information and Communication Technology in the learning process at the Maritime College and Maritime Polytechnic within the Ministry of Transportation. There is a significant role between Lecturer Self-Efficacy towards Information and Communication Technology in the learning process at the Maritime College and Maritime Polytechnic within the Ministry of Transportation. There is a significant simultaneous (jointly) role between Lecturer Digital Literacy and Lecturer Self-Efficacy in Information and Communication Technology between lecturer digital literacy and lecturer self-efficacy towards the use of information and communication technology in the learning process at the Maritime College and Maritime Polytechnic within the Ministry of Transportation.

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