The Relationship Between Lecturer Competence and Digital Learning At Polytechnic METrO Betong Sarawak: A Case Study

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Abstract: This study aims to look at the relationship between the level of competency and digital learning in Polytechnic METrO Betong Sarawak. This study was conducted using a questionnaire as a research instrument, and the data was analysed both descriptively and inferentially. The study respondents consisted of 37 lecturers from Polytechnic METrO Betong Sarawak. The study was analysed using Statistical Packages for Social Sciences for Windows Version 23.0 (SPSS) software, and the results of the study were reported in the form of min, standard deviation, percentage, and T-Test. Respondents answered an online questionnaire using Google Forms to obtain the data needed for the study. The results show that the min for competence of lecturers in the learning and teaching process at Polytechnic METrO Betong Sarawak is 4.22, while the readiness of lecturers in digital teaching at Polytechnic METrO Betong Sarawak is 4.41. The readiness of digital learning support in the learning and teaching process at Polytechnic METrO Betong Sarawak recorded a min value of 4.22.

INTRODUCTION

Online learning and teaching (PdPDT) is the latest style of learning in the era of the COVID-19 pandemic that challenges educators to adapt to these new teaching norms. During this era of the COVID-19 (Corona Virus Disease) pandemic, the exchange of teaching from face-to-face to technology-based online PdPDT such as learning portals, websites, YouTube, video conferencing, mobile applications, and so on was a drastic change, affecting the system of education around the world. By the end of 2019, an outbreak of coronavirus disease began to spread from Wuhan, China to other places [1]. The World Health Organization (WHO) describes the epidemic as a pandemic because the virus spreads rapidly between individuals through the air or droplets in a short time. In order to control the spread of this virus, the Malaysian government enforced the Control Movement Order (PKP) nationwide on March 18, 2020. In this regard, the Ministry of Education (MOE) has also issued an order to close all public schools and higher education institutions. Thus, the teaching process has changed from a conventional approach to the adoption of PdPDT technology [2]

Therefore, this study aims to examine the relationship between the level of competence and digital learning in the learning and teaching process. By understanding the real situation, the findings of this study are important to be a guide to the parties involved to ensure the selection of appropriate teaching methods in PdPDT.

BACKGROUND PROBLEM

Competence is an issue that is often a hot topic in the field of teaching. Effective teaching competencies and skills can attract students' interest in learning in the classroom. Competence is a standard used to determine the service performance of employees in performing their duties. In higher education, the competence of a lecturer is a standard or set of standards for lecturers to master various educational competencies to meet current higher education needs as well as improve their efficiency in carrying out tasks. The responsibility of performing lecture room assessment requires a professional assessment that encompasses the knowledge, professional responsibilities, experience, and input of students . These elements require the knowledge, skills, and positive attitudes of teachers to produce effective classroom assessments in schools. Through the writing of articles by Abdul Halim Masnan, Nur Ellina Anthony, and Nur Arifah Syahindah Zainudin

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(2019), science is the main indicator in preparing teachers to educate students to try to solve problems [3].

PROBLEM STATEMENT

The issue of lecturer competence in digital learning became a hot issue during the COVID-19 Pandemic. Without good competencies, digital learning goals are difficult to achieve. According to Mohammed Sani Ibrahim, Ahmad Zabidi and Husaina Banu [4], the success or failure of the learning-teaching process in the classroom depends entirely on the level of teacher competence. According to Anuar and Nelson Jinggan [5], which was presented in the Asia Pacific Journal of Curriculum & Teaching3 (2), 1-11, the influence of teacher skills' competence in teaching on students' academic achievement in history subjects is such that professional teachers should always improve their knowledge and skills teaching. The level of ability of teachers in using teaching approaches that are appropriate for students can determine the effectiveness of teaching. It also was supported by Junita Sulaiman and Wan Mohd Rashid Wan Ahmad in the research paper Competence in Determining the Professionalism of Vocational Teachers in Malaysia: Challenges Towards the Development of Teacher Professionalism TVET Online Journal for TVET Practitioners. (1) stated that due to the lack of a standard of competence in the field of teaching and teacher education programs as a guide in our country, there have been service problems, work stress, role conflict, role ambiguity, lack of a social support system from principals and colleagues [6]

RESEARCH OBJECTIVE

The objective of this study is to identify the relationship between competence and digital learning in METrO Betong Sarawak Polytechnic to achieve the purpose of the study. Several research objectives have been identified. Among the objectives of the study are as follows:

   a. Identify the lecturers' competencies in the learning and teaching process at Polytechnic METrO Betong Sarawak.
   b. Identify the level of readiness of lecturers at Polytechnic METrO Betong Sarawak for digital teaching.
   c. Identify the readiness of digital learning support in the process of learning and teaching at Polytechnic METrO Betong Sarawak.

Through the National e-learning Policy (DePAN) 2.0, launched by the Ministry of Higher Education on April 16, 2011, emphasises the Malaysian Education Development Plan 2013–2025 (Higher Education) or PPPM (PT), which outlines ten leaps to continue the empowerment of Malaysian Higher Education. [7] Recognizing the importance of technology-based education and Malaysia's position in the development of online courses, PPPM (PT) includes Leap # 9, which is Globalized Online Learning (GOL), which focuses on expanding access to education and improving the quality of learning and teaching while allowing learning to be tailored to the current needs of students. This leap outlines key initiatives to improve GOL to improve the quality of course delivery, reduce delivery costs, introduce Malaysian experts globally, enhance the branding and prominence of local HEIs, and also foster lifelong learning among Malaysians. GOL is a platform to expand access to courses offered by HEIs and liberalise higher education to be more accessible to all levels of society. Through GOL, Malaysia aspires to be the premier hub of education. This leap will see increased access to quality education for Malaysians and the global community, provide efficient course delivery, build the Malaysian education brand and enhance the excellence of HEIs, particularly in areas of thrust and expertise.

SIGNIFICANCE OF THE STUDY

This study was conducted to identify the extent to which the relationship between lecturers' competencies and digital learning can facilitate the learning and teaching process at Polytechnic METrO Betong Sarawak. This study is expected to be a guide for other researchers in order to improve the quality of digital teaching in order to attract students in the 21st century.

In addition, other researchers can also use this study to test the extent to which the readiness of lecturers in terms of interest, attitude, and support of digital learning and teaching mediums is appropriate to the field deemed necessary. This study is expected to facilitate other researchers in the future to measure the extent of the relationship between the factors mentioned above and organisational management. That in turn creates a solution to overcome the problem.

LITERATURE RESEARCH

Studies on digital competence and learning

According to the Fourth Edition Board Dictionary, the word "competence" comes from the basic word "competent," which means efficient, worthy, and able to perform a task perfectly. Mohd Sani Ibrahim, et al. [8] stated that the word "competence" is a combination of three main aspects, including knowledge, skills, and attitudes. It covers generic skills, basic skills, key skills, and personal skills of lecturers. It is also an important element in the field of higher education. In the context of TVET-based

higher education, the competence of lecturers is very important and should be given attention because success and failure in the learning and teaching process depend entirely on the competence of lecturers, which is the backbone of the higher education system. A relationship is defined as a connection, network, connection, affiliation, and attachment (House of Commons Fourth Edition Dictionary). Lecturers' teaching skills in delivering digital learning on the description of the modules taught to achieve comprehension.

Students need the skills and willingness to integrate the use of technology in order to produce critical, creative, and competitive students. This opinion is supported by [9], which states that the skills to use 21st century technology in order to produce critical, creative, and competitive students. In addition, according to .[10], online learning can also further expand the use of technology among students to conduct discussions in learning. Online learning often requires the use of the web and internet networks [11]. This learning method will also often use an application or software that allows the learning and teaching process to take place virtually. The application of technology in the educational

Location and Sampling of the study

This study was conducted at Polytechnic METrO Betong Sarawak, involving polytechnic lecturers. The study sample used in this study was 37 people. Sample size was determined with reference to Krejcie and Morgan's (1970) sample size determinant table.

Research Instruments

This study uses a survey instrument adapted from previous studies such as [15], who in their study stressed that the integration of technology into the classroom is needed and guided by teachers. However, integrating technology to develop 21st-century skills aims to produce students who are not only able to apply all of the sophistication of ICT but

ecosystem has provided opportunities for the integration of learning and teaching processes, empowering new digital platforms and helping students shape creativity in learning [12]. [13] argues that an ideal learning environment can also provide a quality learning experience for students. This is because the facility infrastructure and the online learning infrastructure are interdependent. Otherwise, learning activities may fail to be implemented [14].

RESEARCH METHODOLOGY

The researcher has chosen a quantitative approach by conducting a survey research method using a set of questionnaires. The researcher selected a total of 37 lecturers from Polytechnic METrO Betong Sarawak as the study sample based on the determination of Krejcie and Morgan sample size. Data in this study was obtained through a questionnaire using a 5-point Likert Scale. All information and data obtained through the questionnaire were analysed using the Statistical Package for the Social Sciences (SPSS) through the statistical modes of percentage description, mean, and standard deviation.

also able to think critically and creatively, as well as students who are competitive and have a high personality and interpersonal skills [9].

Research analysis

Quantitative methods in the Statistical Packages for the Social Sciences (SPSS) Window version 23.0 were used to analyse all the data that had been collected. The relationship between lecturer competence and digital learning at METrO Betong Sarawak Polytechnic is studied using frequency, percentage, mean, and analysis. The level of interpretation is taken into account by the value of five points. The highest value of 5.00 is divided into three levels, namely low (mean = 1.00–2.33), medium (mean = 2.34–3.66), and high (mean = 3.67).

Table 1: Mean Score Interpretation Table

Min Range	Interpretation
1.00-2.33	Low
2.34-3.66	Average
3.67-5.00	High

Source: Sumarni (2000) and Jamil (2002)

FINDINGS

Respondent Demographics

The study sample using this purposeful sampling method consists of 37 higher education officers at Polytechnic METrO Betong Sarawak. A total of 21 higher education officers are female, while the rest are 16 male higher education officers. Table 2 below shows a more detailed demographic profile of the respondents as a result of the conducted survey questionnaire.

Table 2: Demographic Analysis

Demographic Factors	Category	Frequency	Percentage (%)
Gender	male	16	43.2
	female	21	56.8
Age	26 Years- 30 Years	13	35.1
	31 Years - 35 Years	12	32.4
	36 Years - 40 Years	6	16.2
	41 Years - 45 Years	3	8.1
	Over 46 Years	3	8.1
Academic Qualification Level	Degree	24	64.9
	Bachelor	13	35.1
	1 Years - 5 Years	25	67.6
Teaching experience	6 Years - 10 Years	4	10.8
	11 Years -15 Years	4	10.8
	16 Years -20 Years	3	8.1
	Over 20 Years	1	2.7
Department	JPH	21	56.8
	JP	13	35.1
	General Studies	3	8.1

Table 3: Likert Scale of Respondents' Consensus on the Level of Knowledge of Polytechnic METrO Betong Sarawak Lecturers

Respondent's consent							
Bill	Item	SD (%)	DNA (%)	DS (%)	A (%)	VA (%)	Min
This survey is to identify the level of knowledge readiness of lecturers							
1	I have knowledge of the implementation of online learning and teaching (PdPDT)	-	-	2.7	73.0	24.3	4.22
2	I know how to access devices and applications in the implementation of online learning and teaching (PdPDT)	-	-	67.6	32.2	0	4.32
3	I am ready to implement online learning and teaching (PdPDT)	-	-	-	59.5	40.5	4.41
4	I used to use PdPDT in my teaching	-	-	-	45.9	54.1	4.54
5	My teaching content can be implemented in the form of PdPDT.	-	-	2.7	70.3	27	4.24
6	My teaching content is available in digital form from a variety of sources. (Examples: e-books, digital libraries, YouTube, and so on)	-	2.7	2.7	70.3	24.3	4.16
7	I am confident that the delivery of teaching content in PdPDT can achieve course learning outcomes (CLO).	-	10.8	8.1	70.3	10.8	3.81

To answer the first objective of the study, which is to identify the competence of lecturers in the learning and teaching process at Polytechnic METrO Betong Sarawak, refer to Table 3. The overall mean is in the high category of 4.22, while the mean of 4.32 for those who answered the question of whether lecturers know how to access devices and applications in the implementation of online teaching and learning (PdPDT). Lecturers who have used PdPDT in teaching got a mean of 4.54. The next question is whether the teaching content can be implemented in the form of PdPDT. They got a mean score of 4.24 and a mean of 4.16 for answering the question of whether teaching content can be found in digital form from various sources. (Example: e-book, digital library, Youtube and so on). Lecturers are confident that the delivery of teaching content by PdPDT can achieve course learning outcomes (CLO) with a mean of 3.81. These findings prove the level of knowledge of lecturers in the age group between 26-40 years proficient in PdPDT and have knowledge about it.

The second goal of the study is to identify the readiness of lecturers in digital teaching at Polytechnic METrO Betong Sarawak. Lecturers are also ready to implement online learning and teaching (PdPDT), which represents a high mean of 4.41. A total of 83.8% knew how to use Webex as a PdPDT application/platform, while Microsoft teams, Google Classroom, and Zoom represented 97.3%, 83.8%, and 78.4%, respectively.

According to the study, the most appropriate digital learning applications used were Microsoft Teams with 62.2%, Google Meet with 24.3%, and Webex and Zoom with 5.4%, respectively, while the Zoom application was the least suitable in digital learning.

Findings of the study to find out the level of PdPDT support readiness has got an overall mean of 4.22, where lecturers who have access to a computer/laptop that works well, respectively, got 5.4% disagree, 2.7% disagree, 56.8% agree and 35.1% strongly agree. During the pandemic of COVID-19, lecturers conducted PdPDT in their respective homes. The results showed that 13.5% disagreed that the internet at home was able to support the implementation of PdPDT, while 48.6% agreed and 37.8% strongly agreed. Researchers also studied internet access in institutions able to support the implementation of PdPDT, which got a min score of 3.81.

CONCLUSION

The implementation of PdPDT is an alternative that can help educators implement the learning process of this COVID-19 pandemic era. Lecturers need to improve their skills to implement this PdPDT so that students can conduct learning more effectively. However, there are constraints on internet use in some areas in Sarawak, which make it difficult for PdPDT to be carried out properly. However, the readiness and knowledge of lecturers at Polytechnic METrO Betong Sarawak in managing this PdPDT is excellent. This study is very suitable to find out the level of knowledge of lecturers in PdPDT at Polytechnic METrO Betong Sarawak for management action. Lecturers need to continue training and improve their skills in online learning.

In addition, *Jabatan Pendidikan Politeknik dan Kolej Komuniti* (JPPKK) also needs to review the latest student-centered curriculum so that students can learn easily and adapt to PdPDT. The implications of this study also suggest increasing the number of workshops and the construction of more innovative digital materials to facilitate the PdPDT process running smoothly in order to achieve development in the world of education on par with the global level.

This study proves that Polytechnic METrO Betong Sarawak lecturers are competent and ready to implement PdPDT in the COVID-19 pandemic era as a new norm in the PdPDT process to enhance capabilities in the digital learning environment for the benefit of students.

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