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Investigating the Interrelationships of Student Satisfaction, Learning Outcomes, and Employment in Open and Distance Learning: A Structural Equation Modeling Approach

Oleh:

Astri Dwi Jayanti Suhandoko, M.Ed., Ph.D., NIP 198512312020122006
Ni Made Ayu Krisna Cahyadi, S.E., M.E. NIP 199308132020122008
Enggar Mulyajati, S.Pd., M.Hum. NIP 199308132020122008
Rahmat Budiman, S.S., M.Hum., Ph.D. NIP 197101161999031001

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Judul Penelitian	:	Investigating the Interrelationships of Student Satisfaction, Learning Outcomes, and Employment in Open and Distance Learning: A Structural Equation Modeling Approach
Ketua Peneliti		
a. Nama lengkap dan gelar	:	Astri Dwi Jayanti S., M.Ed., Ph.D.
b. NIP/NIDN	:	198512312020122006/0331128507
c. Jabatan Fungsional	:	Asisten Ahli
d. Program Studi	:	Pendidikan Guru Sekolah Dasar
e. Jurusan/Fakultas	:	Pendidikan Dasar/FKIP
f. Nomor HP atau (e-mail)	:	081574570707/astri.dwi@ecampus.ut.ac.id
Anggota ke-1		
a. Nama lengkap dan gelar	:	Ni Made Ayu Krisna Cahyadi, S.E., M.E.
b. NIP/NIDN	:	199308132020122008/ 0013089301
c. Jabatan Fungsional	:	Asisten Ahli
d. Program Studi	:	Prodi Ekonomi Pembangunan
e. Jurusan/Fakultas	:	FEB
f. Nomor HP atau (e-mail)	:	+62 815-7457-0707/ madeayu.krisna@ecampus.ut.ac.id
Anggota ke-2		
a. Nama lengkap dan gelar	:	Enggar Mulyajati, S.Pd., M.Hum.
b. NIP/NIDN	:	198905112022032004/ 0011058908
c. Jabatan Fungsional	:	Asisten Ahli
d. Program Studi	:	Prodi Sastra Inggris Bidang Minat Penerjemah
e. Jurusan/Fakultas	:	FHISIP
f. Nomor HP atau (e-mail)	:	+62 812-1811-9096/ enggar@ecampus.ut.ac.id
Anggota ke-3		
a. Nama lengkap dan gelar	:	Rahmat Budiman, S.S., M.Hum., Ph.D.
b. NIP/NIDN	:	197101161999031001/0016017102
c. Jabatan Fungsional	:	Lektor Kepala
d. Program Studi	:	Magister Pendidikan Bahasa Inggris
e. Jurusan/Fakultas	:	Sekolah Pascasarjana
f. Nomor HP atau (e-mail)	:	+62 821-2345-1123/budiman@ecampus.ut.ac.id
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Ketua Peneliti,

Astri Dwi Jayanti S., M.Ed., Ph.D.

NIP 19851231202012200

Abstract

This study explores the complex interrelationships between key factors influencing student satisfaction, learning outcomes, and employment prospects in Open and Distance Learning (ODL) environments. Employing a mixed-methods approach, the research integrates quantitative analysis through Structural Equation Modeling-Partial Least Squares (SEM-PLS) and qualitative insights from semi-structured interviews. The study examines critical variables such as Student-Lecturer Ratio, Technology and Infrastructure, Lecturer Competency, and Course Design and Content, assessing their direct and indirect effects on student outcomes. A sample of 200 students from higher education institutions across Southeast Asia participated in the quantitative survey, while 30 students were selected for in-depth interviews. The findings provide a comprehensive understanding of how these factors interact to influence overall educational effectiveness and post-graduation success in ODL programs. This research contributes to the existing literature by addressing gaps in previous studies, offering practical insights for enhancing ODL programs, and serving as a valuable resource for policymakers and educators committed to improving student experiences and outcomes in distance education.

Keywords: ODL, Student-Lecturer Ratio, Technology and Infrastructure, Lecturer Competency, and Course Design and Content, SEM-PLS

1. INTRODUCTION

In the modern landscape of education, Open and Distance Learning (ODL) has established itself as a vital mode of delivering education to diverse populations worldwide. ODL offers accessible and high-quality education, accommodating learners who might otherwise be excluded from traditional, campus-based systems due to geographical, financial, or personal constraints (Saidi, Sharip, Abd Rahim, Zulkifli, & Md Zain, 2021). This openness provides crucial opportunities for lifelong learning. The effectiveness of ODL depends on several factors that influence student satisfaction, learning outcomes, and employment prospects. These factors include the student-Lecturer Ratio, the availability and quality of Technology and Infrastructure, Lecturer Competency, and the design and content of courses. Each plays a significant role in shaping the overall educational experience and, ultimately, the success of students in ODL programs.

Despite its advantages, there is a need to continuously assess the quality of education provided through ODL. Previous research has explored individual components of ODL, such as the impact of technology on learning outcomes (Balalle, 2024; Ding & Yu, 2024; Kulal, Dinesh, Abhishek, & Anchan, 2024) and the role of lecturer competency (Engel, Zimmer, Lörz, & Mayweg-Paus, 2023; Stephenson, Mayes, Combs, & Webber, 2015; Yin, Cronen, Condelli, & Ogut, 2022). However, these studies often examine these factors in isolation, leading to a fragmented understanding of the ODL environment. This study seeks to fill this gap by employing Structural Equation Modeling-Partial Least Squares (SEM-PLS) to explore the relationships between key variables in the ODL context. SEM-PLS is well-suited for investigating complex models with multiple interrelated variables, allowing for a comprehensive analysis of the direct and indirect relationships among critical factors: Student-Lecturer Ratio, Technology and Infrastructure, Lecturer Competency, Course Design and Content, Student Satisfaction, Student Employment, and Student Learning Outcomes.

This study is guided by the following hypotheses, which articulate the expected relationships between key variables in the ODL context:

- **H1:** A lower Student-lecturer ratio is positively associated with higher Student Satisfaction.
- **H2:** Better Technology and Infrastructure are positively associated with higher Student Satisfaction.
- **H3:** Higher Lecturer Competency is positively associated with higher Student Satisfaction.
- **H4:** More effective Course Design and Content are positively associated with higher Student Satisfaction.
- **H5:** Higher Student Satisfaction positively influences Student Learning Outcomes.
- **H6:** Higher Student Satisfaction positively influences Student Employment.
- **H7:** A lower Student-lecturer ratio is positively associated with better Student Learning Outcomes.
- **H8:** Better Technology and Infrastructure are positively associated with better Student Learning Outcomes.
- **H9:** Higher Lecturer Competency is positively associated with better Student Learning Outcomes.

- **H10:** More effective Course Design and Content are positively associated with better Student Learning Outcomes.
- **H11:** A lower Student-lecturer ratio is positively associated with higher Student Employment.
- **H12:** Better Technology and Infrastructure are positively associated with higher Student Employment.
- **H13:** Higher Lecturer Competency is positively associated with higher Student Employment.
- **H14:** More effective Course Design and Content are positively associated with higher Student Employment.

The significance of this study lies in its potential to contribute to the growing body of literature on ODL by providing empirical evidence on the factors driving student satisfaction, learning outcomes, and employment. While previous research has offered valuable insights into individual elements of ODL (Hussain, Yu, Muhammad, Afaq, & Mudasir Ahmad, 2024; Jeong, 2018), there remains a gap in understanding how these elements interact to influence overall educational effectiveness and post-graduation success (Seah, 2023). This study addresses this gap by examining the interrelationships between various aspects of the ODL environment, which have often been studied separately. By adopting a holistic approach that considers the complex interplay between different variables, this study offers a nuanced understanding of the factors that contribute to the success of ODL programs.

One key variable examined in this study is the student-lecturer ratio. In traditional educational settings, a lower student-lecturer ratio is generally associated with better student outcomes and satisfaction. In the context of ODL, however, the impact of the student-lecturer ratio is less straightforward (Bubnic, Mernik, & Kosar, 2024; Bwachele, Chong, & Krishnapillai, 2023). Given the reliance on technology to facilitate interaction between students and lecturers, this study investigates how the student-lecturer ratio influences not only student satisfaction but also learning outcomes and employment. Technology and infrastructure are also crucial components of the ODL environment. The effectiveness of ODL programs depends on the availability and quality of technological tools and infrastructure that support educational content delivery and communication (Balalle, 2024; Sayaf, Alamri, Alqahtani, & Alrahmi, 2022). While technology's role in distance learning has been well-documented, this study examines how technology and infrastructure interact with other variables, such as lecturer competency and course design, to shape student satisfaction, learning outcomes, and employment.

Lecturer competency is another critical variable in this study. In the ODL context, where face-to-face interaction is limited, lecturers' ability to use technology effectively, design engaging course content, and provide timely feedback is essential for ensuring a positive student experience and achieving desired learning outcomes and employment. Although Lecturer Competency's importance is well-documented, its interaction with other factors requires further exploration to understand its impact on student satisfaction, learning outcomes, and employment. Course Design and Content are central to the success of ODL programs. The design of courses, including the structure, organization, and delivery of content, plays a significant role in determining student engagement and, ultimately, learning and employment outcomes. While much research has focused on course design's impact on learning (Baldwin & Yu-Hui, 2019; Wu, Tang, & Mou,

2019), this study explores how Course Design and Content interact with other elements of the ODL environment, such as Lecturer Competency and Technology, to influence student satisfaction, learning outcomes, and employment.

The findings of this study are expected to have both theoretical and practical implications for ODL. Theoretically, this study contributes to understanding the complex interactions between various factors influencing student satisfaction, learning outcomes, and employment in ODL. By employing SEM-PLS, this study provides insights into the direct and indirect effects of different variables, offering a comprehensive understanding of the ODL environment. Practically, the results can inform the design and implementation of ODL programs by identifying key factors that contribute to student success. Educational institutions can use these findings to enhance the quality of their ODL offerings, improve student satisfaction, and achieve better learning outcomes and employment rates. Furthermore, this study serves as a valuable resource for policymakers and educators developing strategies to improve ODL programs' effectiveness.

2. LITERATURE REVIEW

The advancement of Open and Distance Learning (ODL) has significantly impacted educational accessibility and quality. As institutions worldwide adopt ODL to reach diverse learners, understanding the factors that contribute to its effectiveness becomes increasingly important. This literature review examines key components of ODL student-lecturer ratio, technology and infrastructure, lecturer competency, and course design and content and their influence on student satisfaction, learning outcomes, and employment.

2.1. Student-Lecturer Ratio

The student-lecturer ratio is a critical factor in educational settings, traditionally associated with the quality of student learning experiences. Lower ratios are typically linked to higher student satisfaction and better learning outcomes, as they allow for more personalized attention and interaction between students and lecturers (Rodriguez & Elbaum, 2014; Solheim, Rege, & McTigue, 2017). In ODL contexts, however, the impact of the student-lecturer ratio is less straightforward. The reliance on technology-mediated communication alters traditional dynamics, and the effectiveness of lower ratios may depend on how well technology is integrated into the learning process (N. Ali, 2024; Okoye et al., 2023). Existing studies suggest that while a lower Student-lecturer ratio can enhance student engagement, its benefits are contingent on the effectiveness of the technological tools and infrastructure available (Makransky, Borre-Gude, & Mayer, 2019).

2.2. Technology and Infrastructure

Technology and Infrastructure form the backbone of ODL, enabling the delivery of educational content and facilitating interaction between students and lecturers. The quality and availability of technological resources are crucial for ensuring that students can access course materials, participate in discussions, and receive feedback (Saykılı, 2018). Research by Ertan and Yüzer (2024) highlights that robust technological infrastructure is essential for maintaining student satisfaction in ODL environments, as it directly affects the accessibility and usability of learning

platforms. Moreover, the integration of advanced technologies, such as learning management systems (LMS) and digital communication tools, has been shown to improve learning outcomes by providing a more interactive and engaging learning experience (Mahzum, Sofyan, Nasrudin, Mailizar, & Herliana, 2023). However, the effectiveness of these technologies is also dependent on other factors, such as Lecturer Competency and Course Design.

2.3. Lecturer Competency

Lecturer Competency is another vital component of ODL that significantly impacts student satisfaction and learning outcomes. Competent lecturers not only possess subject matter expertise but also the skills necessary to effectively utilize technology in delivering course content and engaging with students (Duong Thi Kim et al., 2023). Studies have shown that lecturers who are proficient in using digital tools and platforms can enhance the learning experience by making content more accessible and by providing timely and constructive feedback (Eravíková, Tirpáková, & Markechová, 2015; Thomas, Adeyanju, Popoola, & Odewale, 2020). The importance of Lecturer Competency in ODL is underscored by research indicating that students are more likely to be satisfied and perform better in courses where lecturers demonstrate a high level of digital literacy and pedagogical adaptability (Chinyamurindi & Dlaza, 2018). Nevertheless, the interaction between Lecturer Competency and other factors, such as Technology and Infrastructure and Course Design, remains a critical area of exploration.

2.4. Course Design and Content

Course Design and Content are central to the success of ODL programs. Well-designed courses, characterized by clear structure, engaging content, and appropriate assessment methods, are more likely to lead to positive student outcomes (Edwards, 2024). Research by Peramunugamage, Ratnayake, Karunanayaka, and Jayawardena (2024) emphasizes the importance of aligning course design with the principles of effective online learning, such as cognitive presence, social presence, and teaching presence. The design of ODL courses should facilitate active learning, encourage interaction, and provide students with opportunities to apply their knowledge in real-world contexts (Peramunugamage et al., 2024). Effective Course Design also plays a crucial role in student satisfaction, as it directly influences how students interact with the content and with each other (Pesesse et al., 2023). However, the success of Course Design in enhancing learning outcomes is often intertwined with the competencies of lecturers and the technological infrastructure supporting the course.

2.5. Student Satisfaction, Learning Outcomes, and Employment

Student Satisfaction is a key indicator of the effectiveness of ODL programs. It is influenced by various factors, including the student-lecturer ratio, technology and infrastructure, lecturer competency, and course design (Aheto, Barfi, Kwesi, & Nyagorme, 2024). Satisfied students are more likely to engage with the course material, persist in their studies, and achieve better learning outcomes (Tsige GebreMeskel & Mogamat Noor, 2022). Moreover, student satisfaction is positively correlated with higher employment rates post-graduation, as students who are satisfied with their educational experience are more likely to be equipped with the skills and

knowledge necessary for the workforce (Toklucu, Silman, Turan, Atasoy, & Kalkan, 2022; Vermisli, Cevik, & Cevik, 2022).

Learning Outcomes in ODL are shaped by the complex interplay of the factors discussed. Studies have shown that well-supported students, those who benefit from low student-lecturer ratios, strong technology and infrastructure, high lecturer competency, and effective course design are more likely to achieve higher learning outcomes (Cresencio, 2023). These outcomes are not only reflected in academic performance but also in the development of skills and competencies that are valued in the job market (Simonson, Zvacek, & Smaldino, 2019).

Finally, the impact of ODL on Student Employment has been a growing area of interest. Research indicates that ODL programs that emphasize practical, job-relevant skills, and that are supported by effective teaching and technological infrastructure, tend to produce graduates who are competitive in the job market (Jacob, Gerth, & Weiss, 2018). The alignment of ODL course content with industry needs, combined with a focus on experiential learning, is crucial for enhancing the employability of graduates (Jena, 2020).

3. METHOD

3.1 Research Design

This study employs a mixed-methods approach (S. Dawadi, Shrestha, & Giri, 2021), combining quantitative and qualitative data to explore the relationships between several key variables in Open Distance Education (ODE). The quantitative component uses Structural Equation Modeling-Partial Least Squares (SEM-PLS) to analyze variables such as Student-Lecturer Ratio, Technology and Infrastructure, Lecturer Competency, Course Design and Content, Student Satisfaction, Student Employment, and Student Learning Outcomes. SEM-PLS is chosen for its ability to handle complex models and analyze both measurement and structural models simultaneously (Hair et al., 2021; Usakli & Rasoolimanesh, 2023). Complementing this, qualitative data from semi-structured interviews will provide deeper insights into the relationships identified in the quantitative analysis, offering a richer understanding of the findings (Deterding, Waters, & research, 2021).

3.2 Population and Sample

The target population consists of students currently enrolled in ODE programs at higher education institutions in Southeast Asia. A stratified random sampling technique is used to ensure a diverse sample across disciplines, academic levels, and regions (Berndt, 2020; Lohr, 2021). The quantitative sample size is approximately 500 students, determined by the "ten times rule" for SEM-PLS. For the qualitative component, 15-20 students will be selected through purposive sampling, based on criteria such as engagement levels and academic diversity, to participate in in-depth interviews.

3.3 Data Collection Instruments

Quantitative data will be collected through a structured online questionnaire (Breakwell, Barnett, & Wright, 2020; Taherdoost, 2022), divided into sections corresponding to the constructs:

- Student-Lecturer Ratio: Measures perceptions of the ratio’s adequacy and effectiveness.

- Technology and Infrastructure: Assesses the reliability and effectiveness of technological tools.
- Lecturer Competency: Evaluates instructors' expertise, teaching skills, and digital proficiency.
- Course Design and Content: Focuses on relevance, currency, and engagement of course materials.
- Student Satisfaction: Gauges overall contentment with the program.
- Student Employment: Assesses the program's impact on career readiness.
- Student Learning Outcomes: Measures the attainment of educational objectives and skill application.

Each section includes 5 items on a 7-point Likert scale from "Strongly Disagree" (1) to "Strongly Agree" (7).

For qualitative data, a semi-structured interview guide will be used, covering topics such as perceptions of student-lecturer interaction, the role of technology, lecturer competency, and the relevance of course content to employment outcomes. Interviews will be conducted online, recorded with consent, and transcribed for analysis.

3.4 Data Collection Procedure

Quantitative data will be collected via a secure online platform (e.g., Microsoft Forms). The survey link will be distributed through institutional channels, with reminders sent bi-weekly to maximize response rates. Participation is voluntary, with informed consent obtained digitally. Qualitative data collection will involve inviting selected participants for one-on-one interviews via email. Interviews will last 30-45 minutes, focusing on elaborating the quantitative findings. Informed consent will be obtained before interviews, and participants can withdraw at any time.

3.5 Data Analysis

Quantitative data analysis will begin with descriptive statistics to outline respondent demographics and baseline characteristics. Next, a measurement model assessment using SEM-PLS will validate the constructs through Confirmatory Factor Analysis (CFA), evaluating reliability, convergent validity, and discriminant validity. The structural model assessment will then explore relationships among the constructs using SEM-PLS (Rigdon, Sarstedt, & Ringle, 2017). Path coefficients will be examined to understand the strength and direction of relationships, with bootstrapping procedures testing statistical significance. R-squared values will indicate how much variance in dependent variables is explained by predictors. Model fit will be evaluated using PLS-SEM criteria such as Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI).

Qualitative data will be analyzed using thematic analysis (M. Ali, Mustapha, Osman, & Hassan, 2021; S. J. J. o. N. Dawadi, 2021; Horntvedt, Nordsteien, Fermann, & Severinsson, 2018). Transcripts will be coded to identify key themes and patterns related to the constructs studied (Peters, 2017). The qualitative insights will contextualize and enrich the quantitative results, providing explanations for observed relationships and contributing to a deeper understanding of the ODE environment.

3.6 Ethical Considerations

This study adheres to ethical standards set by the institutional review board (IRB) and follows the 1964 Helsinki Declaration principles. Participant confidentiality will be strictly

maintained, with data anonymized and reported in aggregate form. Detailed information about the study's purpose, procedures, risks, and benefits will be provided to participants for informed consent. Participants have the right to withdraw at any point without penalty, ensuring ethical integrity and fostering trust in the research process.

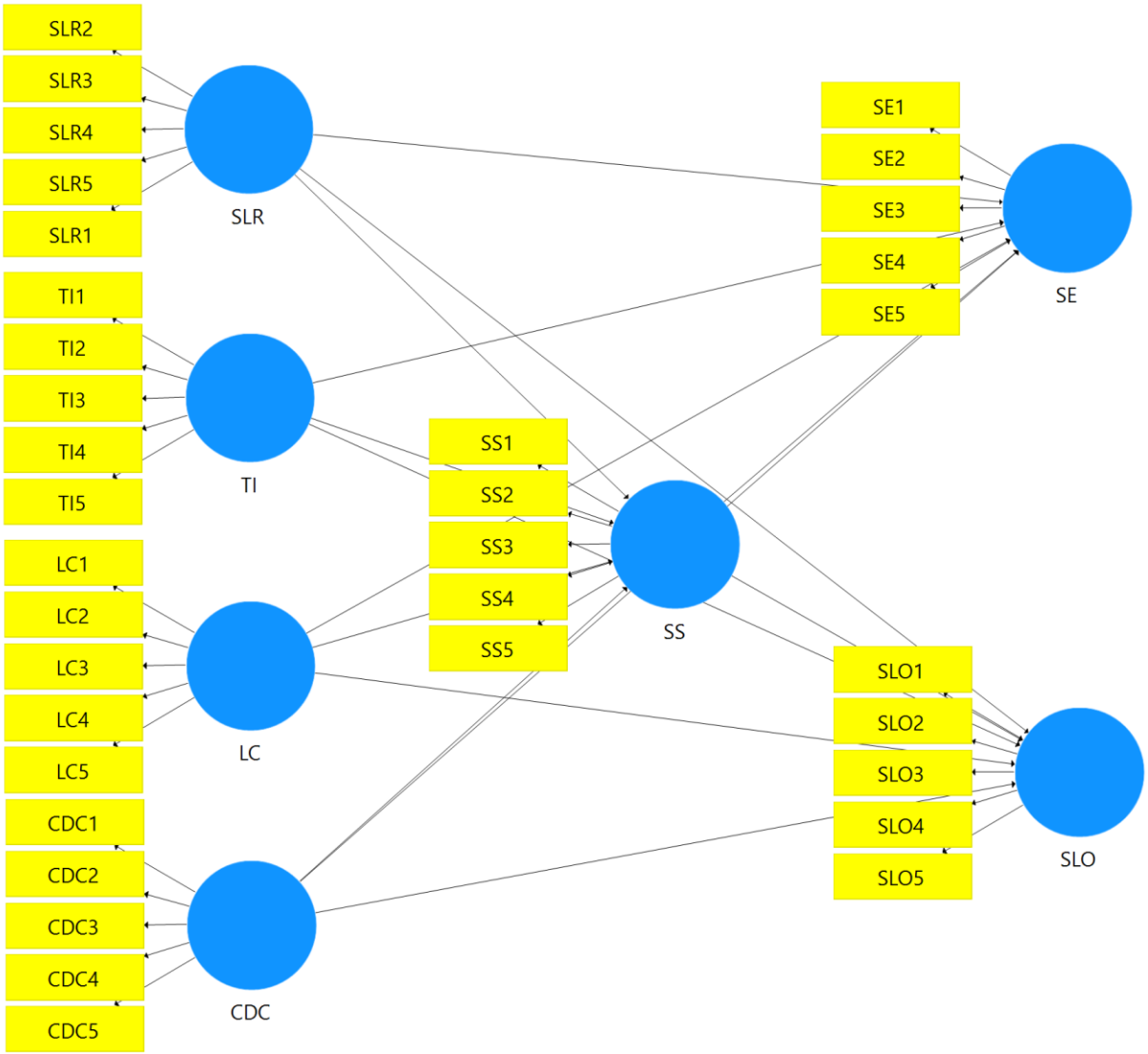

Diagram 1. Research Framework

INSTRUMENT

No	Code	Indicators	Strongly Agree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
			1	2	3	4	5	6	7
1.	SLR	Student Lecturer Ratio							
	SLR1	The student-to-lecturer ratio in my courses supports effective learning							
	SLR2	I receive timely and individualized feedback from lecturers							
	SLR3	The frequency of my one-on-one interactions with lecturers is sufficient							
	SLR4	The student-to-lecturer ratio facilitates my academic success							
	SLR5	Compared to my previous educational experiences, the student-to-lecturer ratio is superior							
2.	TI	Technology and Infrastructure							
	TI1	The online learning platforms used are consistently reliable."							
	TI2	Technical issues are resolved quickly and effectively							
	TI3	The available technology enhances my learning experience							
	TI4	Technical support is readily accessible and helpful							
	TI5	The technology used in my courses is up-to-date and well-maintained							
3.	LC	Lecturer Competency							
	LC1	Lecturers demonstrate a deep understanding of the subjects they teach							

	LC2	Lecturers engage and motivate students effectively in an online setting							
	LC3	Lecturers effectively incorporate new teaching technologies into their instruction							
	LC4	Lecturers regularly update course content with relevant resources							
	LC5	Lecturers' competency positively impacts my learning experience							
4.	CDC	Course Design and Content							
	CDC1	The course content is directly relevant to my professional or academic goals							
	CDC2	Course materials are regularly updated to reflect current trends and knowledge							
	CDC3	Interactive elements in the courses enhance my understanding of the material							
	CDC4	Courses are well-structured to facilitate both synchronous and asynchronous learning							
	CDC5	The design of the courses challenges me intellectually							
5.	SS	Student Satisfaction							
	SS1	I am satisfied with the academic support provided by the faculty							
	SS2	Overall, I am satisfied with my learning experience in this program							
	SS3	The program meets or exceeds my expectations for academic quality							

	SS4	Resources and facilities provided by the program are adequate for my needs							
	SS5	I would recommend this online program to potential students							
6.	SE	Student Employment							
	SE1	This program has prepared me well for employment in my chosen field							
	SE2	The skills I have acquired are relevant to the job market							
	SE3	I have utilized career services or networking opportunities offered by the program							
	SE4	Employers value the education I received from this program							
	SE5	I feel confident applying my skills in a professional setting							
7	SLO	Student Learning Outcome							
	SLO1	I am confident in applying the knowledge from my courses to solve real-world problems							
	SLO2	I have achieved the intended learning outcomes of my courses							
	SLO3	My critical thinking skills have improved through my coursework							
	SLO4	I can demonstrate how the learning outcomes are applicable in my personal or professional life							

	SLO5	Additional learning resources would help me achieve better outcomes							

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OU5 MEETING

ANALYZING STUDENT OUTCOMES AND SATISFACTION IN OPEN AND DISTANCE LEARNING: A STRUCTURAL EQUATION MODELING APPROACH

Group 5

Presented by:

Astri Dwi Jayanti S. M.Ed., Ph.D.

Team Leader

OUR TEAM

Asst. Prof. Dr. Supamas Chumkaew
Sukhothai Thammathirat Open University (STOU)

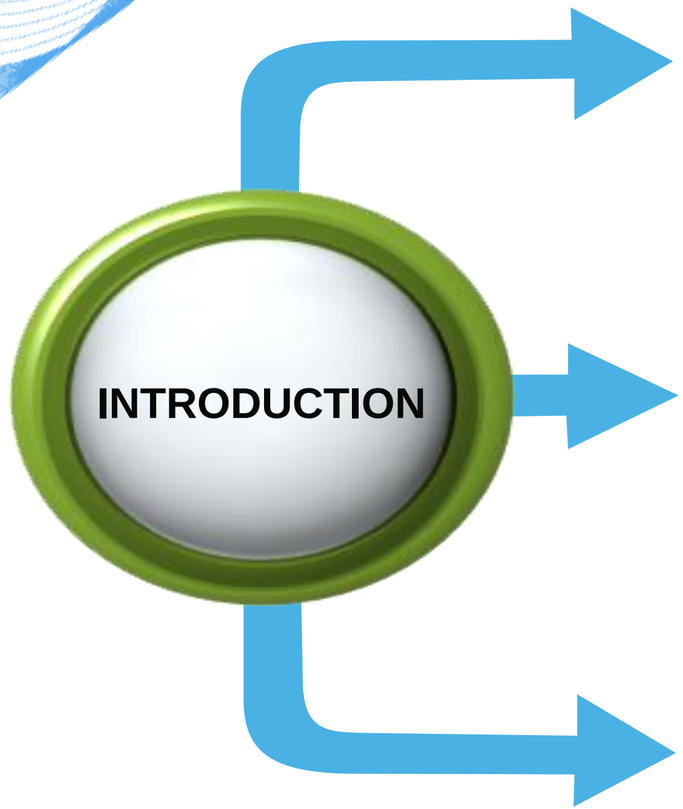
Assoc. Prof. Dr. Tuan Fatma Tuan Sulaiman
Open University Malaysia (OUM)

Astri Dwi Jayanti, M.Ed., Ph.D.
Universitas Terbuka (UT)
Team leader

Asst. Prof. Luisa A. Gelisan
University of the Philippines Open University (UPOU)

MBA Quynh Anh Nguyen
Hanoi Open University (HOU)

INTRODUCTION



Background

- Open and Distance Learning (ODL) has emerged as a crucial mode of education, providing: 1) Accessible and high-quality learning opportunities. 2) Support for learners excluded from traditional systems due to: Geographical constraints, financial limitations, personal circumstances.
- Enables lifelong learning and promotes education for all.

Objectives

The study will:
1) Examine key factors affecting quality of open and distance Learning (ODL) in universities in Southeast Asia, and
2) Identify and analyze key factors that affect the quality of education in the distance learning system using structural equation modeling (SEM).

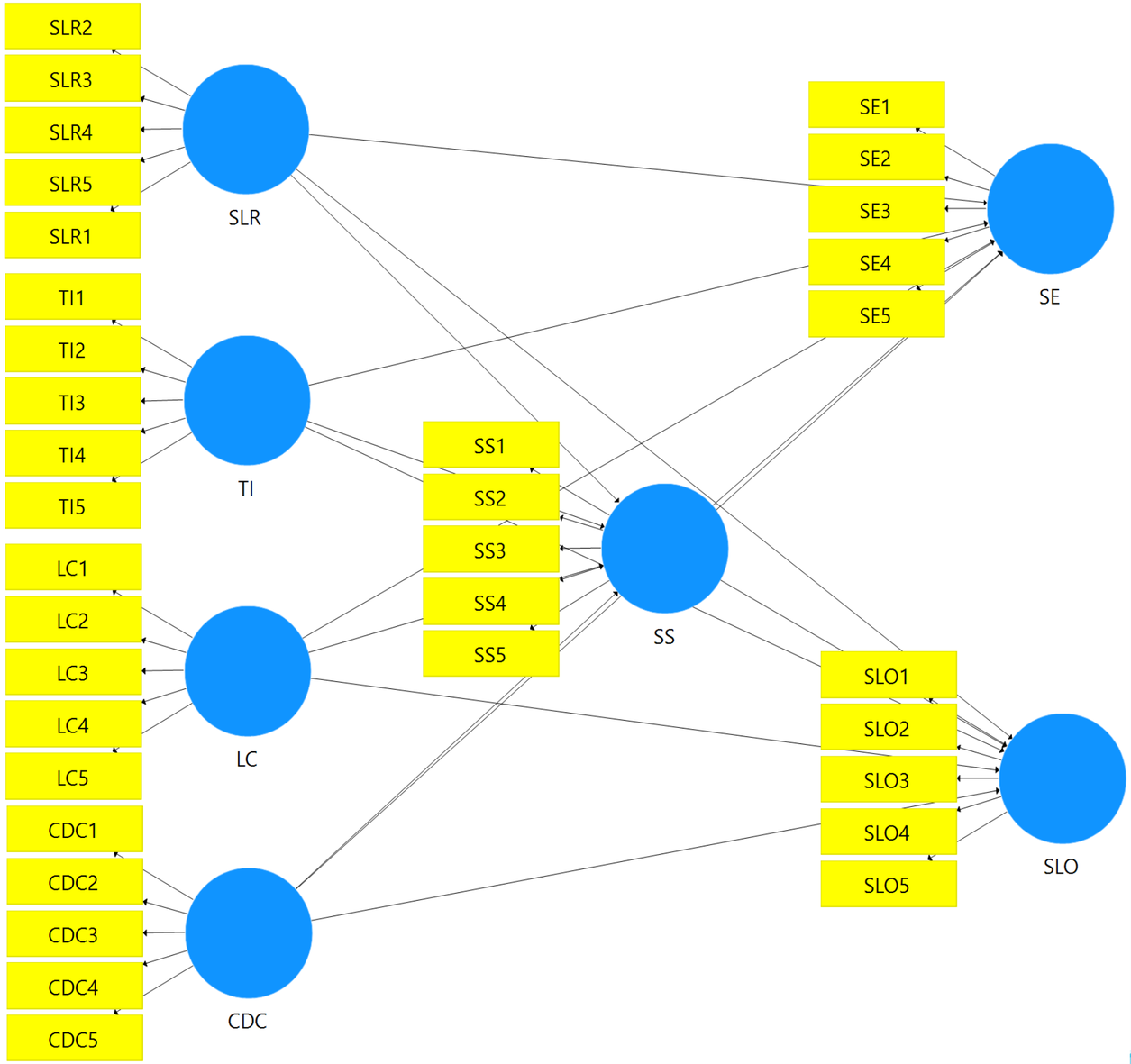
Research Gap

Limited research on how these factors interact in Southeast Asian ODL universities.

RESEARCH FRAMEWORK

A Structural Equation Modeling

Student-Lecturer Ratio (SLR)
Technology and Infrastructure (TI)
Lecturer Competency (LC)
Course Design and Content (CDC)
Student Satisfaction (SS)
Student Employment (SE)
Student Learning Outcomes (SLO)



LITERATURE REVIEW

STUDENTS – TUTOR RATIO

INFRASTRUCTURE & TECHNOLOGY

LECTURER COMPETENCIES AND QUALITY OF DISTANCE EDUCATION

COURSE DESIGN AND CONTENT

LITERATURE REVIEW

STUDENTS – TUTOR RATIO

Effectiveness of Online Tutoring

- Online tutoring has proven to be effective (Fesler et al., 2023; Gortazar et al., 2023; Kraft etal., 2022)
- Online tutoring is effective but limited in personalization and tailored instruction (Ready et al., 2024)

Challenges in Online Learning

- Individual learning speeds (Hetzner & Leen, 2012)
- Communication Gap (Ekmekçi, 2015)
- Feedback Challenge (Cervini & Korea, 2024)

Impact of Class Size

- Larger classes sizes adversely affect skill acquisition (Etomes & Lyonga, 2020)
- Impact varies by discipline and demographics (Cervini & Korea, 2024)
- Increased workload for tutors (Kraft, 2024)

LITERATURE REVIEW

INFRASTRUCTURE AND TECHNOLOGY

Infrastructure and technology improve distance learning (Elumalai, 2020; Kedia & Mishra, 2023)

Critical Role

1) Content Delivery
2) Student and Administrative Support

Function

Challenges

1) Lack of personal interaction and engagement (Kedia & Mishra, 2023)
2) Digital divide from costs and limitations (Saleem et al., 2022)
3) Monitoring online accuracy is difficult

Advantages

1) Enables communication via digital tools
2) Overcomes barriers, fosters collaboration (Garlinska et al., 2023)
3) Facilitates online assessments

INFRASTRUCTURE AND TECHNOLOGY

LITERATURE REVIEW

LECTURER COMPETENCIES AND QUALITY OF DISTANCE EDUCATION

- Lecturer competencies shape distance education quality
- Encompasses subject, pedagogy, tech, and support

1. Role of Lecturer Competencies

- Community of Inquiry (Garrison et al., 2000)
- Teaching Roles (Anderson et al., 2001)

2. Frameworks & Core Roles

- TPACK Framework (Mishara & Koehler, 2017)
- Effective Communication, personalized feedback, designing structured and interactive online courses, and technical proficiency to support virtual learning (Bates & Sangra, 2017)

3. Key Competencies

- Enthusiasm, feedback, and flexibility enhance engagement
- Effective instructors show approachability, patience, and passion
- Personalized feedback prevents isolation (Kedia & Mishra, 2023)

4. Research Insights

- Professional development is vital for adapting to technology, teaching methods, and enhancing online curriculum (Basar et al., 2021; Liu et al., 2022)
- Lecturer training enhances program quality (Kebritchi et al., 2017)

5. Continuous Development

Lecturer Competencies and Quality of Distance Education

LITERATURE REVIEW

COURSE DESIGN AND CONTENT

Student Satisfaction

Learning designs impact student behavior and outcomes (Rienties & Toetenel, 2016)

Instructor satisfaction aligns with curriculum and services

Pedagogical Design

Content Importance

Critical Course Design Factors (Karen et al., 2000)

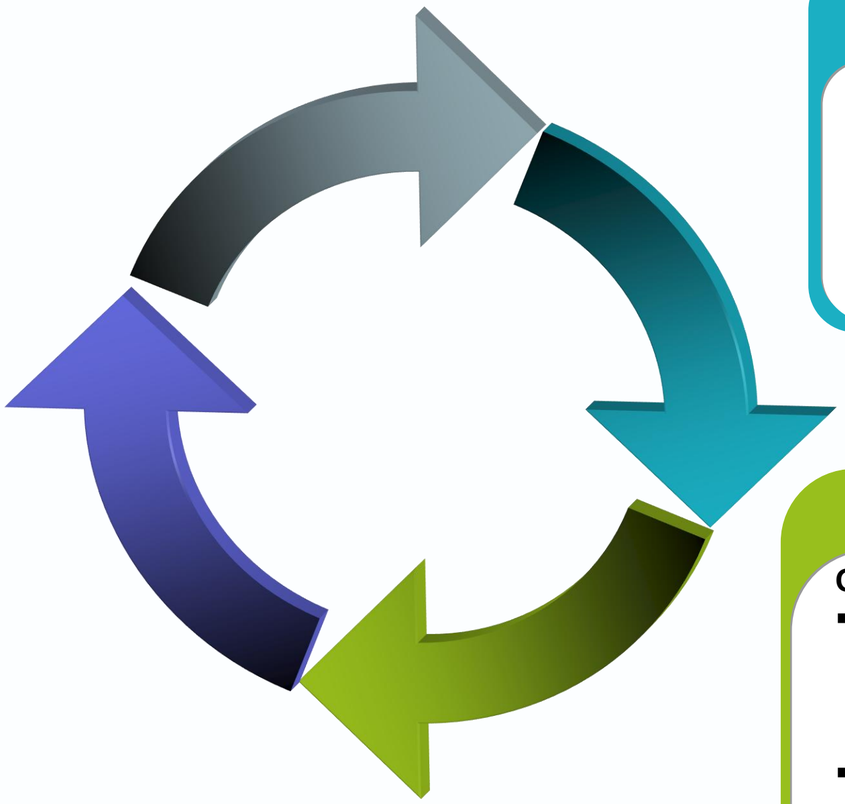
- Transparent interface
- Interactive and constructive instructor engagement
- Valued, dynamic discussions

- Course content is vital but needs tech integration (Elumalai et al., 2020; Jordan & Mitchell, 2015)

METHOD

Research Design

- Mixed-method approach (Cresswell, 2021)
- Quantitative: SEM-PLS (Hair, Hult, Ringle, 2021)
- Qualitative: Semi-structured Interviews (Powney & Watts, 2018)



Data Collection

- Online Questionnaire (7 Variables, 5 items/variables, 7-point likert scale)
- Focus Group Discussion/one-to-one interview (Offline/Online)

Population & Sample

- 250 students/Open University/Country (currently enrolled in ODL programs to answer survey questionnaire)
- 15-20 students/Open University/Country (to participate in interview)

Data Analysis

Quantitative

- Confirmatory Factor Analysis (CFA), evaluating reliability, convergent validity, and discriminant validity. (Validate the construct, relationships among the construct)
- Path coefficient (strength and direction of relationships)
- R-squared values (variance of dependent variables)

Qualitative

Thematic analysis: Transcript→ Code→ Key Themes & Patterns

INSTRUMENT (In progress)

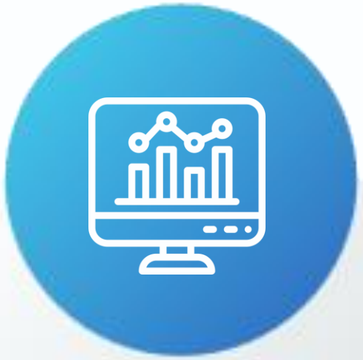
In the Instrument section, each variable includes 5 indicators.

7-point likert scale

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neutral
5. Somwhat Agree
6. Agree
7. Strongly Agree

GOALS AND PLAN

Data Collection (November - January)



Analyze data (February)

Preparation of Research Reports and Journal Article Publications (March)

GROUP 5

THANK YOU

for your attention!