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ZOOM-BASED LEARNING STAGES IN HIGHER EDUCATION

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Abstract

This research is crucial because, inevitably, learning in higher education has shifted to the digital realm, making Zoom a substitute classroom. Unfortunately, many instructors and students still feel that online lectures are less than optimal, often feeling like one-way lectures. To address this issue, our primary goal was to identify and develop the most appropriate and effective steps or stages for using Zoom in the classroom, from how instructors prepare, manage interactive sessions, and evaluate the results. We conducted this research using qualitative methods, distributing questionnaires to instructors and students who already have extensive experience with Zoom and observing how they actually teach and learn. We predict the emergence of a practical "Zoom Stage Model," where the key lies in utilizing Zoom's interactive features (such as breaking the class into small groups for discussion or using polls) to increase student engagement. It is hoped that this model can truly make online lectures feel more lively, less boring, and ultimately, improve the quality of learning on campus.

Keywords

Online Learning, Zoom, Higher Education, Learning Stages, Qualitative Methods, Learning Effectiveness.

INTRODUCTION

Fundamental changes have occurred in higher education, particularly since the pandemic forced universities to shift from traditional face-to-face lectures to online learning. In this context, video conferencing applications like Zoom have emerged as a key solution. Zoom allows teaching and learning interactions to

continue, even when lecturers and students are separated by distance. This application serves as a vital bridge for maintaining communication, delivering materials, and conducting discussions, making it a crucial tool for academic continuity in higher education.

While Zoom offers the convenience of virtual meetings, online learning isn't as simple as transferring classroom activities to a computer screen. To achieve optimal learning outcomes, lecturers and students must u he first stage in Zoom-based learning is planning, which plays a crucial role in determining the success of online lectures. At this stage, lecturers need to thoroughly prepare learning tools, starting with the Semester Learning Plan (RPS), adapting teaching materials to digital formats, and selecting relevant methods and supporting media. Furthermore, technical readiness must also be considered, such as ensuring a stable internet connection, mastery of Zoom features (e.g., screen sharing, breakout rooms, and chat), and providing technical information to students before the lecture begins. Good planning will minimize technical obstacles and help create a structured learning flow.

The understand that Zoom-based learning has distinct characteristics and stages that differ from traditional lectures. From technical preparation and interaction design in virtual classrooms to evaluation, everything requires careful adjustments and strategies. Without a thorough understanding of these stages, online lectures can feel ineffective, boring, or even hampered by technical issues.

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The next stage is the implementation and evaluation of learning during and after the Zoom session. In this process, lecturers are required to actively manage classroom interactions to keep students engaged, for example, through interactive discussions, Q&A sessions, virtual group work, or the use of polling features. Meanwhile, learning evaluation focuses not only on student learning outcomes but also on the effectiveness of the online learning process itself. Lecturers can reflect on the methods used and solicit student feedback to improve the quality of Zoom

lectures in future sessions. Zoom-based learning is not merely a temporary solution but can develop into an adaptive and sustainable learning model in higher education.

Therefore, this article aims to thoroughly examine the stages of Zoom-based learning in higher education. We will detail each important step to consider, from the planning stage before the lecture begins, through implementation and interaction strategies during the Zoom session, to post-lecture evaluation. The goal of this discussion is to provide clear, practical guidance for academics, ensuring that Zoom can be utilized optimally and effectively as a learning medium, while enhancing the quality of the virtual teaching and learning experience.

METHOD

This research is a descriptive qualitative study using an online questionnaire. Data collection for this study was conducted online. The questionnaire was distributed online to 30 respondents, all third-semester students in the Islamic Religious Education Study Program. Data were collected by completing a questionnaire distributed to all respondents. The collected data were then analyzed for description. The questionnaire consisted of several questions, and after completion, the data were obtained from the results of the questionnaires answered by the respondents.

RESULTS AND DISCUSSION

Understanding Zoom-Based Learning. Online learning is a new educational method that is currently very popular. Over the past decade, online learning has had a significant impact on the education sector and continues to grow. Quality online learning provides numerous assessments for teachers. Furthermore, bright students also have the opportunity to benefit from the positive impact of online learning, encouraging them to reflect on their own learning style. [1] Zoom Meeting is an application that can be downloaded via electronic media. This application can be used as a learning medium because Zoom Meeting uses video, allowing teachers and students to meet face-to-face, albeit not in person, but virtually. Zoom Meeting is an application created by Eric Yuan and introduced in 2011, with its headquarters in San Jose, California. This application has various functions, not only used in education

[1] Arba Sunur dan . Muhammad Irwan Padli Nasution, "Penggunaan Aplikasi Zoom Meeting Sebagai Media Pembelajaran Jarak Jauh," *Jurnal Pendidikan, Sains Dan Teknologi* 2, no. 2 (2023): 933, https://doi.org/10.47233/jpst.v2i2.1293

but also in legal, social, and other fields. This application is free for various groups to use, but has a time limit of approximately one hour. If used for more than one hour, users can purchase the paid version of the Zoom Meeting application. With the Zoom Meeting app, we can communicate directly with anyone via voice and video. Therefore, this app is highly recommended for learning, especially for distance learning.

First's stages; the stages in the Zoom/online learning process are divided into three phases, namely: Preparation Phase (Foundation for Learning Quality) The preparation phase is the foundation that determines the success of the session, encompassing technical, pedagogical, and managerial aspects. a) Technical Preparation The instructor must ensure all technical aspects run smoothly, starting with checking the hardware and connections. Ensure the computer or laptop has sufficient specifications (at least 8 GB of RAM), an external microphone for better sound quality, and a stable internet connection (at least 10 Mbps) with a power backup. Next, the physical environment must be improved: use front-lit lighting; set the camera at eye level for natural nonverbal communication; and keep the background clean or use a simple virtual background. Finally, configure the Zoom features and perform technical tests. Enable security settings such as a Waiting Room Passcode and prepare host controls such as mute on entry. Conduct a trial run through a short simulation to ensure features like screen sharing, polling, and file compatibility run smoothly and without any hiccups.[2] b) Pedagogical Preparation This preparation leads to a sound learning design to ensure effective learning in the virtual space. Learning objectives must be clear and realistic, as time and focus are limited online. The learning flow is kept simple, with material divided into short sections (10-15 minutes maximum), and activities such as Q&A sessions or polls are included to maintain a lively atmosphere. Visual materials are designed to be user-friendly, with concise text, transparent contrasting colors, and large font sizes, while avoiding excessively long slides. Class interactions are also well-planned, including when to use chat, direct speech, or collaboration, to ensure students don't sit still or become too noisy. Instructors also choose appropriate methods, such as microlearning or flipped classroom. [3] c) Classroom Management Preparation. This aspect ensures that interactions are orderly and structured. A pre-session code of conduct (netiquette) governing camera and microphone use and question-and-answer procedures must be developed and disseminated to prevent confusion and delays in digital coordination. Pre-communication is conducted by sending links, technical instructions, and

[2] Googlr Inc., "Zoom Video Communications. Zoom Teaching & Learning Guide.," t.t.

[3] Richard E. Mayer, *Multimedia Learning*, 2nd ed (Cambridge University press, 2009), 18

introductory materials. A Co-Host is essential for managing the chat, organizing the waiting room, and monitoring breakout rooms. Finally, participants' mental readiness is built through a check-in or a light greeting.[4]

Implementation Phase (Implementation and Dynamic Interaction) This phase is the implementation of the entire plan, requiring interaction management and optimal use of Zoom features. a. Class Opening The opening begins with an icebreaker (quick poll or light-hearted questions) to break the ice and increase focus. The instructor then provides a clear explanation of the class's objectives and agenda, including the rules of interaction. The session concludes with a final technical check to ensure all participants' audio and visuals are functioning correctly. b. Material Delivery: The material is delivered in segments, each a concise, logical block. The instructor maximizes the use of interactive features such as polls for quick formative assessments, annotations for visual interaction, and chat for parallel discussions. The use of supporting visuals (diagrams, schematics) is emphasized to reduce cognitive load. The instructor must also pay attention to verbal and nonverbal communication, including varying intonation and visible gestures to the camera, and provide pauses for reflection. c. Collaborative Activities Breakout rooms are used strategically for group activities such as discussions, case analyses, or role-plays, effectively increasing participation. Afterward, each group is encouraged to present its findings to build confidence and enhance understanding.

Provide appropriate and constructive instructor feedback to correct misconceptions and reinforce understanding.[5]. Session Closing: The session closes with a summary of the material, highlighting key points and concepts. A simple reflection (e.g., asking about the most important lessons of the day) is conducted to enhance participants' metacognition. Finally, the instructor provides follow-up in the form of independent assignments, reading instructions, and shares presentation files orsessionrecordings[6].

Evaluation Phase (Measurement of Effectiveness and Improvement) This phase involves measuring the success of learning and teaching to ensure continuous improvement. a. Learning Evaluation Involves quizzes and assessments (short quizzes, reflection assignments, or case studies) to measure mastery of the material. The instructor analyzes participation from chat logs and Zoom reports, and reviews participant work (e.g., breakout room results) to assess understanding. b. Teaching Evaluation: The instructor seeks participant feedback on the clarity, quality of the material, and technical comfort. Self-instructor reflection is conducted on the delivery rhythm, the success of interactive features, and duration management. Additionally, an analysis of the learning format is conducted to determine whether the methods and activities used are optimal or need adjustment. c. Follow-up Evaluation results

[4] Googlr Inc., "Zoom Video Communications. Zoom Teaching & Learning Guide."

[5] Mayer, *Multimedia Learning*

[6] Mayer, *Multimedia Learning*

are used to improve the material (updating slides, examples, or activities) for the next session.[7] Remedial sessions are provided for participants who need additional guidance or enrichment materials. All session results, recordings, chat logs, and materials are documented for learning documentation as evidence, revision material, and reference for participants. b. Challenges: Students and lecturers continue to conduct lessons as usual, but sometimes in separate rooms or at their respective homes.

At first, we might think this job is easy, as we only need facilities like a cellphone, internet quota, and adequate network connectivity. However, that assumption turned out to be wrong. After several online learning sessions, several problems and obstacles began to emerge. One of these was that students became unfocused during Zoom-based learning because it felt like one-way communication. Many of them only had regular cellphones. Furthermore, even with a cellphone, a lack of internet quota and inadequate network connectivity also presented obstacles. Distractions are often one of the things that make it difficult for someone to focus. One factor that influences a person's ability to focus is external motivation. In general, two main principles Influence this. The first is the pleasure principle, the urge to do something enjoyable and interesting. This drive can help someone focus because they enjoy it. The second is the rule principle, which is the urge to do something because there are rules that have consequences. This principle can also motivate someone to take action and help improve focus. a. Advantages and Disadvantages[8] 1. Advantages a. The availability of a platform that enables easy communication between teachers and students via the internet, regularly or whenever they want to interact, without being hampered by distance, location, or time. b. Teachers and students have access to online, organized, and scheduled materials and study guides, allowing evaluation of how well the material has been learned.[9] c. Students can study or review course materials anytime, anywhere, because the materials are stored digitally.[10] d. If students need additional information related to the topic being studied, they can easily find it online[11]. Both teachers and students can discuss online with many participants, thereby broadening their knowledge and insights.[12] b. Relatively more efficient, especially for those who live

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[7] Mayer, *Multimedia Learning*

[8] Lulu Choirun Nisa, *Pengaruh Pembelajaran E-Learning terhadap Hasil Belajar Mata Kuliah Statistik Mahasiswa Tadris Bahasa Inggris Fakultas Tarbiyah IAIN Wali Songo.* Jurnal Phenomenon. Vol 2 No 1. https://journal.walisongo.ac.id/index.php/Phenomenon/article/view/416.

[9] Ryann K. Ellis, *A Field Guide to Learning Management Systems* (Alexandria, VA: ASTD Learning Circuits, 2009), 2–5.

[10] Munir, *Pembelajaran Jarak Jauh Berbasis Teknologi Informasi dan Komunikasi* (Bandung: Alfabeta, 2009), 45.

[11] Linda Harasim, *Learning Theory and Online Technologies* (New York: Routledge, 2012), 85

[12] Michael G. Moore dan Greg Kearsley, *Distance Education: A Systems View of Online Learning*, 3rd ed. (Belmont, CA: Wadsworth, 2012), 25–27.

far from educational institutions.[13] 1. Weaknesses, a. Minimal interaction between teachers and students, or between students themselves,[14] b. Lack of motivation in students can lead to learning failure, c. Not all locations have access to internet facilities or networks, d Limited number of teachers with knowledge and skills in using the internet.

RESULTS

Technical Learning Quality Research Results: This survey successfully collected data from students. Respondents indicated that they regularly access technical materials.[15] The most common answers were "Often" and "Sometimes" when asked how often they downloaded technical learning materials.[16] This indicates that students have a consistent need and effort to search for and study technical learning materials.[17] Assessment of Interactive Features and Material Delivery: Regarding learning methods, most respondents rated interactive features such as quizzes and polls as "Quite Effective."[18] However, levels of satisfaction with these features varied.[19] Some felt "Very helpful in staying focused and engaged," while others felt "Not very helpful, often felt unfocused."

On the other hand, the quality of material delivery still needs improvement. Respondents offered mixed opinions: some stated the material was "Very Clear and Concise," but many also complained that it was "Quite Clear, but sometimes too long," or even "Not very clear and often had too much text/slides." This suggests that material developers need to review the presentation format to make it more concise and focused. The Impact of Materials on Learning Motivation and Conclusions: The most crucial aspect of this survey's results is the impact of materials on learning motivation. The majority of respondents openly stated that their learning motivation

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[13] Alfred P. Rovai, "Building Sense of Community at a Distance," *International Review of Research in Open and Distributed Learning* 3, no. 1 (2002): 4–5

[14] Maggie Hartnett, *Motivation in Online Education* (Singapore: Springer, 2016), 12–15.

[15] G. Lust, J. Elen, dan G. Clarebout, "Regulation of Tool-Use Within a Web-Based Learning Environment: Benefit or Synecdoche?" *Computers & Education* 69 (2013): 65–67

[16] Jaclyn Broadbent dan W. L. Poon, "Self-Regulated Learning Strategies & Academic Achievement in Online Higher Education Learning Environments: A Systematic Review," *The Internet and Higher Education* 27 (2015): 4–6

[17] Alf Inge Wang, "The Wear Out Effect of a Game-Based Student Response System," *Computers & Education* 82 (2015): 218–220

[18] Richard E. Mayer, *Multimedia Learning*, 2nd ed. (Cambridge: Cambridge University Press, 2014), 185. (

[19] Melody M. Terras dan Judith Ramsay, "The Five Stages of E-Learning: A Framework for Helping Students Stay the Course," *British Journal of Educational Technology* 43, no. 3 (2012): 478–480

had decreased. The most common answers were "Yes, motivation is a little lower" and "Yes, motivation is much lower." Although a small number felt that their motivation remained stable or even increased, the percentage of respondents reporting decreased motivation remains a significant issue. Overall, the survey showed that although respondents actively accessed technical materials, the main weakness was the quality of the material presentation, which was often perceived as overly prolonged and excessive. This directly impacted the decreased learning motivation experienced by most respondents. Improvements should focus on enhancing the quality of material delivery, making it more precise and concise, in line with respondents' expectations, to maintain high learning motivation and ensure the learning focus is not disrupted.

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motivation experienced by most respondents. Improvements should focus on enhancing the quality of material delivery, making it more precise and concise, in line with respondents' expectations, to maintain high learning motivation and ensure the learning focus is not disrupted.

CONCLUSION

Learning using Zoom in higher education is a crucial adaptation to modern education, requiring lecturers to possess technical skills, teaching abilities, and the ability to manage the learning process. The effectiveness of the learning process depends heavily on thorough instructor preparation across three main stages: preparation, implementation, and evaluation. During the preparation phase, lecturers must provide the appropriate equipment, design materials, develop learning paths, and establish classroom ethics guidelines to ensure a smooth learning process. During the implementation phase, active interaction between lecturers and students through features such as polls, chat, and breakout rooms is an effective way to maintain student interest and focus. During the evaluation phase, each learning activity must be assessed, feedback provided, and continuous improvements made to ensure the quality of learning continues to improve. Although teaching via Zoom offers advantages in terms of flexibility and ease of connection without the constraints of space, online learning still faces several challenges, such as limited devices and internet connections, and low student motivation and focus. However, if these three learning stages are well managed and lecturers use Zoom's features effectively, the learning process will be more interactive, efficient, and meaningful. Thus, Zoom-based learning is not just a shift from face-to-face to digital methods, but rather a change in the world of education that requires a new approach so that lecturers and students can still achieve learning goals optimally even in a virtual space.

DAFTAR PUSTAKA

Arba Sunur, dan . Muhammad Irwan Padli Nasution. "Penggunaan Aplikasi Zoom Meeting Sebagai Media Pembelajaran Jarak Jauh." *Jurnal Pendidikan, Sains Dan Teknologi* 2, no. 2 (2023): 932–35. https://doi.org/10.47233/jpst.v2i2.1293.

Choirunissa, Lulu. "Pengaruh Pembelajran E-Learning Terhadap Hasil Belajar Mata Kuliah Statistik Mahasiswa Tadris Bahasa Iinggris Fakultas Tarbiyah IAIN Walisongo." *Phenomenon : Jurnal Pendidikan MIPA* 2, no. 1 (2016): https://doi.org/10.21580/phen.2012.2.1.416.

Mayer, Richard E. *Multimedia Learning*. 2nd ed. Cambridge University press, 2009.

Ellis, R. K. (2009). *A Field Guide to Learning Management Systems*.

Munir. (2009). *Pembelajaran Jarak Jauh Berbasis Teknologi Informasi dan Komunikasi*.

Moore, M. G., & Kearsley, G. (2012). *Distance education: A systems view of online learning* (3rd ed.). Wadsworth Cengage Learning.

Harasim, Linda. *Learning Theory and Online Technologies*. New York: Routledge, 2012.

Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, *27*, 4–6.

Hartnett, M. (2016). *Motivation in online education*. Singapore: Springer.

Lust, G., Elen, J., & Clarebout, G. (2013). Regulation of tool-use within a web-based learning environment: Benefit or synecdoche? *Computers & Education*, *69*, 65–67.

Mayer, R. E. (2014). *Multimedia learning* (2nd ed.). Cambridge: Cambridge University Press.

Rovai, A. P. (2002). Building sense of community at a distance. *International Review of Research in Open and Distributed Learning*, *3*(1), 4–5.

Terras, M. M., & Ramsay, J. (2012). The five stages of e-learning: A framework for helping students stay the course. *British Journal of Educational Technology*, *43*(3), 478–480.

Wang, A. I. (2015). The wear out effect of a game-based student response system. *Computers & Education*, *82*, 218–220.