UTILIZATION OF NETWORK-BASED LEARNING TECHNOLOGY BY MILLENNIAL GENERATION LECTURERS: A REVIEW OF ARABIC LANGUAGE LEARNING IN HIGHER EDUCATION

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Abstract

It is a major topic among academics that the supporting factor for introducing technology to Generation Z in Arabic language learning is the lecturers, mostly filled by the Millennial generation. Therefore, this study aims to explore the utilization of network-based technology by millennial generation lecturers (a review of Arabic language learning in higher education). This research is based on post-positivistic paradigm with quasi-qualitative approach; the data collection methods are interviews, observation, and documentation. The research subjects were 29 millennial generation lecturers born between 1981 and 1996. The data analysis technique used the analysis Miles, Huberman, and Saldana. The results of this study are face-to-face direct feedback-based material delivery technology by millennial lecturers relying on Zoom and Google Meet. In contrast, non-face-to-face direct feedback-based material delivery technology, WhatsApp, and Telegram are still the main applications. As for the technology of providing material based on indirect feedback on the audio aspect, there is no visible use of certain platforms or applications on them; on the audio-visual aspect, millennial lecturers actively create video content on the YouTube platform, while on the text aspect, the use of WordPress, Blogger or special websites is a separate choice for some millennial lecturers. Evaluation technology: several platforms are the choice of millennial lecturers, including Google Form, Quizizz, Kahoot, Quizlet, and Wizer.me. As for special platforms designed for learning purposes, each lecturer still relies on e-learning provided by their respective education units. However, there is an e-learning that is the first choice of most millennial lecturers, namely Moodle.
Keywords*: Technology, Millennial Lecturers, Arabic Language Learning*

مستخلص البحث

أصبح موضوعًا رئيسيًا بين الأكاديميين، أن عامل الدعم لإدخال التكنولوجيا لجيل زد في تعليم اللغة العربية هو المحاضرون، والذين يشغلون معظمهم حاليًا من قبل جيل الألفية. لذلك، يهدف هذا البحث إلى استكشاف استخدام التكنولوجيا المبنية على الشبكة من قبل أساتذة تعليم اللغة العربية من جيل الألفية (استعراض لتعلم اللغة العربية في التعليم العالي). يستند هذا البحث إلى النموذج ما بعد الإيجابية مع مدخل شبه الكيفي؛ وتستخدم طرق جمع البيانات المقابلات والملاحظات والتوثيق. كان موضوع البحث هو 29 محاضرا من جيل الألفية ولدوا بين عامي 1981 و1996. تقنية تحليل البيانات استخدمت نموذج تحليل مايلز وهوبيرمان وسالدانا. نتائج هذا البحث هي استخدام تكنولوجيا تقديم المواد بناءً على التغذية المباشرة وجهًا لوجه من قبل محاضري الألفية الذين يعتمدون على زوم وجوجل ميت. بينما لا يزال تكنولوجيا تقديم المواد بناءً على التغذية المباشرة وغير المباشرة واتساب وتليجرام هي لا تزال التطبيقات الرئيسية. أما بالنسبة لتكنولوجيا تقديم المواد بناءً على التغذية الصوتية، فلا يوجد استخدام واضح لمنصات أو تطبيقات معينة من قبلهم؛ فيما يتعلق بالجانب البصري الصوتي، يقوم محاضرو الألفية بنشاط في إنشاء محتوى فيديو على منصة يوتيوب، في حين أنه في الجانب النصي، استخدام ووردبريس أو بلوجر أو مواقع ويب خاصة هو اختيار منفصل لبعضهم. تكنولوجيا التقييم: عدة منصات تكون اختيارًا لمحاضري الألفية، بما في ذلك جوجل فروم وقويزيز وكاحوت وقويزليت وويزر.مي. أما بالنسبة للمنصات الخاصة المصممة لأغراض التعليم، يعتمد كل محاضر على التعلم الإلكتروني المقدم من وحدات التعليم الخاصة بهم. ومع ذلك، هناك منصة تعليم إلكتروني تعتبر الخيار الرئيسي لمعظم محاضري الألفية الذين يحتاجون إلى توفر التعليم الإلكتروني في كلياتهم، وهي منصة موديل.

الكلمات الرئيسية: التكنولوجيا، محاضرو الألفية، تعليم اللغة العربية

Abstrak

Menjadi topik utama dikalangan akademisi, bahwasanya faktor pendukung pengenalan teknologi terhadap generasi Z dalam konteks pembelajaran bahasa arab adalah dosen yang saat ini mayoritas adalah generasi Milenial, oleh karena itu, tujuan penelitian ini adalah untuk mengeksplorasi pemanfaatan teknologi berbasis jaringan oleh dosen

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pendidikan bahasa arab generasi milenial (suatu tinjauan pada pembelajaran bahasa arab di perguruan tinggi). Penelitian ini berlandaskan paradigma post-positivistic dengan pendekatan kuasi-kualitatif, metode pengumpulan data dalam penelitian ini adalah wawancara, observasi dan dokumentasi. Subjek penelitian 29 dosen generasi milenial dengan kelahiran antara 1981-1996 Adapun teknik analisis data yang digunakan adalah analisis dengan menggunakan model analisis dari Miles, Huberman dan Saldana. Hasil dari penelitian ini, penggunaan teknologi pemberian materi berbasis umpan balik langsung tatap muka, oleh dosen milenial mengandalkan Zoom Meeting dan Google Meet, sedangkan teknologi pemberian materi berbasis umpan balik langsung non tatap muka, Whatsapp dan Telegram masih menjadi aplikasi utama. Adapun teknologi pemberian materi berbasis umpan balik tidak langsung pada aspek audio, tidak terlihat penggunaan platform atau aplikasi tertentu pada dosen milenial, pada aspek audio visual dosen milenial secara aktif membuat konten video pada platform YouTube, sedangkan pada aspek teks, penggunaan WordPress, Blogger atau Situs Web khusus menjadi pilihan tersendiri pada sebagian dosen milenial. Teknologi evaluasi, terdapat beberapa platform yang menjadi pilihan dosen milenial, diantaranya adalah Google Form, Quizizz, Kahoot, Quizlet, dan Wizer.me. Adapun platform khusus yang dirancang untuk keperluan pembelajaran, maka masing-masing dosen masih mengandalkan e-learning yang disedikan oleh satuan pendidikannya masing-masing, akan tetapi ada sebuah e-learning yang menjadi pilihan utama kebanyakan dosen milenial yaitu Moodle.
Kata Kunci: *Teknologi, Dosen Generasi Milenial, Pembelajaran Bahasa Arab*

INTRODUCTION

It has become a hot topic of conversation among the public and specifically among academics today regarding the role of Generation Z in shaping the direction and dynamics of network-based learning technology, such as in the research conducted by Hastini,[1] Yusuf,[2] Lukum,[3] and Purnomo.[4] Generation Z, who grew up in the era of digital technology and are accustomed to multitasking skills, has the potential to be a significant change agent in the use of learning technology in higher education. The natural, technological skills this generation possesses can be a valuable asset in designing innovative learning strategies that suit the needs of students. Therefore, understanding

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[1] Lasti Yossi Hastini, Rahmi Fahmi, and Hendra Lukito, "Apakah Pembelajaran Menggunakan Teknologi Dapat Meningkatkan Literasi Manusia Pada Generasi Z Di Indonesia?," *Jurnal Manajemen Informatika (JAMIKA)* 10, no. 1 (2020): 12–28.

[2] eddy Yusuf, "Pembelajaran Berbasis Teknologi Untuk Generasi Z," *Widyakala Journal: Journal Of Pembangunan Jaya University* 3 (2016): 44–48.

[3] Astin Lukum, "Pendidikan 4.0 Di Era Generasi Z: Tantangan Dan Solusinya," in *Prosiding Seminar Nasional Kimia Dan Pendidikan Kimia*, vol. 2, 2019, 1–3.

[4] Agung Purnomo et al., "Generasi Z Sebagai Generasi Wirausaha," 2019.

how the previous generation, millennials, interact with network-based learning technologies is important in teaching Generation Z below.

Millennial lecturers who can respond positively to the technological preferences of Generation Z have a great opportunity to improve the quality of Arabic language teaching in higher education. Lecturers skilled in utilizing various online learning tools, understand the latest digital trends and cancan adapt their teaching strategies according to the learning styles of Generation Z will be able to create a stimulating learning climate that suits the needs of students.

The theory of generational differences was popularized by Neil Howe and William Strauss in 1991.[5] Howe and Strauss first coined millennial in their book Millennials Rising: The Next Great Generation.[6] They coined the term in 1987 when children born in 1982 entered preschool. At that time, the media started referring to the group connected to the new millennium when they graduated from high school in 2000.[7] There are many opinions regarding the vulnerability of the birth of the millennial generation;[8] Elwood Carlson said that between the birth of 1983 to 2001, Karl Mannheim,[9] with generation theory, explained the birth of the millennial generation between 1980 and 2000, Yakob said that between 1976 and 2000,[10] Zemke et al. said between 1980-1999,[11] Oblinger in Yakob also said born between 1981 and 1995.[12] Palfrey and Gasser identify millennials as those born between 1980 and 1995.[13] Another source

[5] Heidi Blackburn, "Millennials and the Adoption of New Technologies in Libraries through the Diffusion of Innovations Process," *Library Hi Tech* 29, no. 4 (2011): 663–77.

[6] Neil Howe and William Strauss, *Millennials Rising: The next Great Generation* (Vintage, 2000).

[7] I Z Ratnaningsih and A R Prasetyo, "Work-Life Balance Pada Generasi Y," *Dalam Asosiasi Psikologi Industri Dan Organisasi. Work-Life Balance Pada Generasi Y. Dalam Asosiasi Psikologi Industri Dan Organisasi*, 2017, 208–16.

[8] Nufian S Febriani, "Preferensi Media Sosial Generasi Milenial Pada Tingkat Pengetahuan Calon Legislatif," *Nyimak: Journal of Communication* 4, no. 1 (2020): 89–107.

[9] Elwood Carlson and Elwood Carlson, "The Lucky Few in Black and White," *The Lucky Few: Between the Greatest Generation and the Baby Boom*, 2008, 137–64.

[10] Ramzi Yakob, "Grown up Digital: How the Net Generation Is Changing Your World" (Taylor & Francis, 2009).

[11] Ratnaningsih and Prasetyo, "Work-Life Balance Pada Generasi Y."

[12] Blackburn, "Millennials and the Adoption of New Technologies in Libraries through the Diffusion of Innovations Process."

[13] John Palfrey and Urs Gasser, *Born Digital: Understanding the First Generation of Digital Natives* (ReadHowYouWant. com, 2011).

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states that millennials, or Generation Y, were born between 1980 and 2001.[14] A domestic research institute also states millennials were born between 1981 and 2000.[15]

Meanwhile, in this study, the researcher is close to Palfrey and Gasser's opinion and Oblinger's opinion, using Willam H. Frey's opinion, which is also a reference for the central statistical agency based on "*analysis of census bureau population estimates*"[16] where Frey classifies humans into several generational names, as in the table below;

Table 1. Generation Grouping Based on Birth Year

The post-Generation Z	Born in 2013 and above
Generation Z	Born 1997-2012
Millennials	Born in 1981-1996
Generation X	Birth years 1965-1980
Boomer/Baby Boomer	Birth years 1946-1964
Pre-Boomer	was Born in 1945 and below

Based on data from the central statistics agency in 2020 based on the results of the population census in that year, it was found that Generation Z dominated Indonesia's population with a total of 74.93 million or 27.94% of the total population Indonesia, then in second place with productive age, namely the millennial generation of 69.37 million or 25.87%, then generation X with 58.65 million or 21.88%, while the baby boomer generation with 11.56%, then the post-gen Z generation with 10.88% and finally the pre-boomer generation with 1.87%.[17] This means that currently, the millennial generation is at a productive age, where productive age is an age where a person is at the stage to work/produce something both for themselves and others, namely between the

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[14] Sezin Baysal Berkup, "Working with Generations X and Y in Generation Z Period: Management of Different Generations in Business Life," *Mediterranean Journal of Social Sciences* 5, no. 19 (2014): 218.

[15] Hasanuddin Ali and Lilik Purwandi, *Indonesia 2020: The Urban Middle-Class Millenials* (Alvara Research Center, 2016).

[16] William H Frey, "Analysis of Census Bureau Population Estimates," 2020.

[17] Badan Pusat Statistik and Statistik Telekomunikasi Indonesi, "Badan Pusat Statistik 2020" (Jakarta: BPS RI, 2020).

ages of 15 and 64 years,[1819] while millennial generation lecturers currently have an age range between 27 years and 42 years of age.

Higher education is an integral part of preparing future leaders in various fields.[20] In the era of globalization and rapidly evolving information technology, it is important for millennial-generation lecturers to understand and utilize network-based learning technologies to improve their teaching quality.[2122]

Regarding technology in this study, the researchers made the results of Ni Made and Putu Arya's research a research foundation, with a study entitled "*Classification of Technology in the Network to Support the Distance Learning Process in the Era of Independent Learning*".[23] In the study, Ni Made and Putu Arya classified learning technology in the network into three main indicators, as in the following diagram;
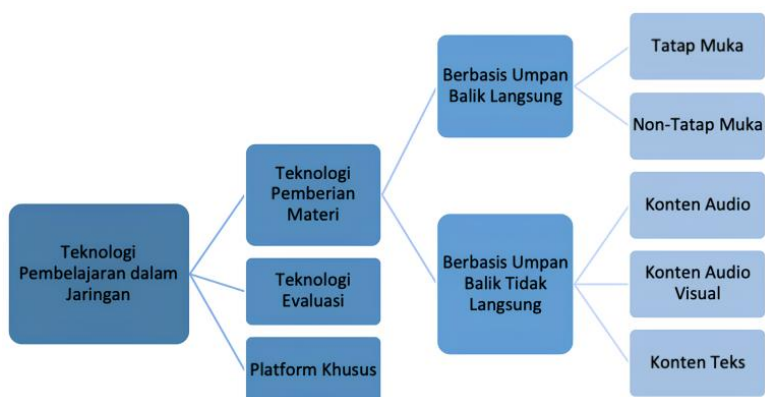

Figure 1. Grouping of Online Learning Technologies

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[18] Yuniar Tri Gesela Arum, "Hipertensi Pada Penduduk Usia Produktif (15-64 Tahun)," *HIGEIA (Journal of Public Health Research and Development)* 3, no. 3 (2019): 345–56.

[19] Achmad Nur Sutikno, "Bonus Demografi Di Indonesia," *VISIONER: Jurnal Pemerintahan Daerah Di Indonesia* 12, no. 2 (2020): 421–39.

[20] Siti Norkhafifah and Nur Syahabuddin, "Desain Pembelajaran Bahasa Arab Berbasis Teknologi Informasi Di Era New Normal," Al Mi'yar: Jurnal Ilmiah Pembelajaran Bahasa Arab Dan Kebahasaaraban 5 (2022).

[21] Taufik Taufik et al., "PENGEMBANGAN MEDIA PEMBELAJARAN MAHĀRAH QIRĀ'AH DENGAN MENGGUNAKAN BOOK CREATOR," Al Mi'yar: Jurnal Ilmiah Pembelajaran Bahasa Arab Dan Kebahasaaraban 6, no. 2 (2023): 569–84.

[22] Muhammad Afiq Aminullah, Fadilah Al Azmi, and Darul Jalal, "Pembelajaran Bahasa Arab Mandiri Melalui Platform Aplikasi Tiktok Sebagai Tren Belajar Masa Kini," Al Mi'yar: Jurnal Ilmiah Pembelajaran Bahasa Arab Dan Kebahasaaraban 5 (2022).

[23] Ni Made Dian Widiastuti and I Putu Arya Dharmaadi, "Klasifikasi Teknologi Dalam Jaringan Untuk Mendukung Proses Pembelajaran Di Era Merdeka Belajar," *Jurnal Pendidikan Teknologi Dan Kejuruan* 18, no. 2 (2021): 195–205.

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Material delivery technology is used by users in general to provide information related to an object to be discussed. Based on the characteristics of the learners who receive the material, material delivery technology can be classified into two types: direct feedback-based and indirect feedback-based. Direct feedback-based technology allows presenters to communicate directly with material recipients. Feedback (response) from the recipient of the material in using this technology is easily obtained because of its realtime nature. Indirect feedback-based technology allows presenters to share learning materials without knowing the condition of the learners so that the presenters do not get feedback (responses) directly at that time. For example, in the middle of delivering the material, the presenter wants to ask about the extent of the participants' understanding; of course, the presenter needs to get a response because the response can only be given after the material is published.[24]

Evaluation technology allows presenters to provide evaluation questions with answer keys so the system can automatically assess learners' answers. Specialized platform technologies are generally built exclusively to meet distance education needs optimally. Developers have analyzed what features are needed in online learning so that the developed system has complete capabilities in an integrated platform. It can be said that specialized platform technology combines material delivery technology and evaluation technology.[25]

One discipline that receives special attention in this context is Arabic language learning.[26] Arabic has a strategic role in spreading knowledge and culture in the Islamic world,[27] and teaching Arabic in higher education plays a key role in enriching students' understanding of intellectual and cultural heritage. Therefore, this study aims to investigate the extent to which millennial generation lecturers utilize network-based learning technologies in the context of Arabic language learning in higher education institutions.

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[24] Widiastuti and Dharmaadi.

[25] Widiastuti and Dharmaadi.

[26] S Sulaikho, M Huda, and A F S Hidayat, "Konstruksi Institution Culture Dalam Integrasi IMTAQ Dan IPTEK Pada Siswa Madrasah Muallimin Muallimat," *…* , *Jurnal Pendidikan Dan …*, 2023, http://www.jurnal.faiunwir.ac.id/index.php/Jurnal_Risalah/article/view/405.

[27] Ahmad Fadhel Syakir Hidayat et al., "The Integration of Character Education in Arabic Learning at Muhammadiyah Elementary School 4 Samarinda," *Borneo International Journal of Islamic Studies (BIJIS)*, 2022, 58–79.

From the results of the literature study conducted by researchers (*a review of literature*), so far as researchers have searched, there has been no similar research that looks at the utilization of technology, especially in this case network-based, and is associated with millennial generation lecturers at universities in Indonesia. As for research on technology utilization, there are many studies, such as those conducted by Gunawan and Amaludin on "*Utilization of learning technology in networks during the covid-19 pandemic*",[28] Salsabila et al. on "*Utilization of learning media technology during the covid-19 pandemic*",[29] Effendi and Wahidy on "*Utilization of technology in the learning process towards 21st century learning*",[30] Iswanto on "*Arabic language learning with the use of technology*,"[31] Renti et al. on Utilization of Chat GPT,[32] and Lathifah on the use of Canva,[33] but none have touched directly on millennial generation lecturers, which researchers claim as the *state of the arts* of this research.

With the development of technology, such as online platforms, learning apps, and other digital resources, millennial lecturers are expected to create a more dynamic, interactive, and relevant learning experience for their students. Therefore, this study aims to explore the utilization of network-based technology by the millennial generation of Arabic language education lecturers (a review of Arabic language learning in higher education). This study will generate findings to contribute to our understanding of the integration of network-based learning technologies in Arabic language learning. The results of this study are expected to provide practical guidance for millennial generation

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[28] Yosi Intan Pandini Gunawan and Asep Amaludin, "Pemanfaatan Teknologi Pembelajaran Dalam Jaringan Di Masa Pandemi Covid-19," *Madaniyah* 11, no. 2 (2021): 133–50.

[29] Unik Hanifah Salsabila et al., "Pemanfaatan Teknologi Media Pembelajaran Di Masa Pandemi Covid-19," *Trapsila: Jurnal Pendidikan Dasar* 2, no. 2 (2020): 1–13.

[30] Darwin Effendi and Achmad Wahidy, "Pemanfaatan Teknologi Dalam Proses Pembelajaran Menuju Pembelajaran Abad 21," in *Prosiding Seminar Nasional Program Pascasarjana Universitas PGRI Palembang*, 2019.

[31] Rahmat Iswanto, "Pembelajaran Bahasa Arab Dengan Pemanfaatan Teknologi," *Arabiyatuna: Jurnal Bahasa Arab* 1, no. 2 Desember (2017): 139–52.

[32] Renti Yasmar, Aidillah Suja, and Ahmad Fadhel Syakir Hidayat, "Pemanfaatan ChatGPT Dalam Meningkatkan Keterampilan Menulis/Maharah Kitabah Berbasis 6C (Critical Thinking, Creativity, Collaboration, Communication, Computational and Compassion)," *Al-Jawhar: Journal of Arabic Language* 1, no. 2 (2023): 87–104.

[33] Lathifah Al Husna, Ihda Filzafatin Habibah, and Ahmad Fadhel Syakir Hidayat, " تطوير مواد تعليم اللغة العربية على برنامج كانفا لتلاميذ الصف الثامن في المدرسة الثانوية الإسلامية," *Al-Jawhar: Journal of Arabic Language* 1, no. 1 (2023): 14–29.

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lecturers, higher education institutions, and policymakers to improve the quality of Arabic language learning amid technological dynamics and educational developments.

METHOD

This research is based on the post-positivistic paradigm with a quasi-qualitative approach, where theory is very important as a basis for research, not just a review.[34] The data collection methods used in this research are interviews, observation, and documentation.[35]

The research subjects in this study are informants who are considered credible to provide information and can be said to be representative of millennial generation Arabic language education lecturers affiliated with universities in Indonesia; as much as researchers can find informants starting in August to December 2023, 29 millennial generation lecturers with birth years between 1981-1996 were found, both from State Islamic Religious Universities (*Perguruan Tinggi Keagamaan Islam Negeri*) and Private Islamic Religious Universities (*Perguruan Tinggi Keagamaan Islam Negeri Swasta*).

The research procedure follows the quasi-qualitative research procedure designed by Mudjia Rahardjo,[36] starting from choosing a research problem, reading literature, conducting a methodological overview, formulating research problems, determining research objectives, determining theories, determining data sources/informants, formulating data collection instruments, formulating theoretical frameworks, collecting data, looking for other sources of information, triangulating data, analyzing and interpreting, producing propositions, dialoguing preliminary findings, theory construction, and reporting research results.

The data analysis technique used uses the analysis model from Miles, Huberman, and Saldana. The stages of this research were carried out through three stages, namely the data reduction stage (*reduction*) to determine relevant, meaningful, and important data based on the research conducted and obtain

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[34] Mudjia Rahardjo, *Tanya Jawab Metodologi Penelitian Sosial Kualitatif (Dari Positivistik Hingga Postkualitatif)* (Mojokerto: Giri Prapanca Loka, 2023).

[35] Mudjia Rahardjo, "Pengantar Metodologi Penelitian Studi Kasus Metode Campuran (Mixed Method), Penelitian Dan Pengembangan (R&D)" (CV Mazda Media Publishing. Malang, 2020).

[36] Rahardjo, *Tanya Jawab Metodologi Penelitian Sosial Kualitatif (Dari Positivistik Hingga Postkualitatif)*.

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the data that researchers need. The data (*data display*) obtained in this study is presented in the form of a narrative description (*with text*). Concluding (*verification*).[37]

RESULT AND DISCUSSION
Millennial Generation Lecturers

As the researchers raised in the introduction, this research takes the opinion of Willam H. Frey, which is also a reference to the central statistics agency, that the millennial generation was born between 1981 and 1996; therefore, among the informants that the researchers managed to reach, there are approximately 29 lecturers with Arabic language education backgrounds and careers as Arabic language education lecturers at a university in Indonesia, both PTKIN and PTKIS, as for the informant data based on the year of birth is as follows:

Table 2. Grouping of Millennial Generation Based on Year of Birth

Birth Year	Male	Female
1983	1	-
1986	1	-
1987	2	3
1988	2	2
1989	2	-
1990	4	2
1991	5	-
1992	2	-
1993	1	-
1994	1	-
1996	1	-
Total	**22**	**7**

As for the placement of assignments as Arabic language education lecturers, it can be said that the 29 informants as a whole are spread across various types of universities in Indonesia, including 11 PTKIN and 13 PTKIS, 17

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[37] Mattew Miles, "B., Huberman, A., M., & Saldaña, J.(2014). Qualitative Data Analysis: A Methods Sourcebook," *Qualitative Data Analysis: A Methods Sourcebook*, n.d.

informants came from PTKIN and 12 informants came from PTKIS. Overall, all of them admit that they cannot be separated from the use of network-based learning technology in this day and age due to technological advances, so in several domains of Arabic language learning, lecturers are helped by being facilitated in access to material and delivery of material, so that overall they use network-based learning technology in the teaching and learning process in class and outside the classroom, both offline and online.

Face-to-Face Feedback-Based Material Delivery Technology

In learning Arabic, all millennial generation lecturers as informants have used several network-based applications face-to-face; the most popular and frequently used applications are Zoom Meeting and Google Meet, which have flexible access, are easier to obtain, and are already popular among students. Among the forms of utilization are as follows:

1. **Zoom Meeting**, Most millennial lecturers recognize that Zoom provides easy access and flexibility in organizing online Arabic learning sessions; they say that Zoom's simple interface and intuitive features make it easy for lecturers and students to use. Millennial lecturers also highlighted the importance of Zoom's video conferencing feature, which allows for active interaction between lecturers and students; then, the use of the camera allows for facial expressions and body language gestures that support a better understanding of Arabic material. Thenimmediate feedback can be given visually and verbally, creating a more dynamic learning environment. Millennial generation lecturers actively utilize Zoom's special features, such as screen sharing, virtual whiteboards, and breakout rooms. They also use screen sharing to show Arabic learning materials more clearly, while breakout rooms are used for small group discussions and interactive exercises. Several lecturers also reported technical challenges, especially related to unstable internet connections or other technical issues. However, some shared strategies to overcome these challenges, such as providing students access to technical tutorials and preparing backup plans. Some lecturers chose to record learning sessions using the Zoom recording feature. This provides dual benefits, namely as reference material for students and as an evaluation tool for lecturers to improve the quality of their learning.

2. **Google Meet**, Millennial generation lecturers stated that Google Meet provides easy access, especially since it is integrated with G Suite. The availability of collaboration features, such as Google Docs and Google Slides, facilitates the Arabic learning process by allowing real-time sharing of materials and documents. In addition, Google Meet also allows lecturers to create interactive and collaborative learning experiences. With features such as live chat and simultaneous document collaboration, lecturers can encourage students' active participation in Arabic discussions. Lecturers also highlighted the usefulness of Google Meet's voice and video features in enhancing the online Arabic learning experience. With verbal and visual communication, lecturers can deliver material more effectively and facilitate two-way interaction. In addition, one of the advantages of Google Meet is that it is not time-limited, just like Zoom Meeting, which is not premium, meaning that Google Meet provides flexibility of time and place in Arabic language learning. However, like Zoom meetings, there are technical challenges, such as internet connection problems or difficulty using the tool. However, some also provide practical solutions, such as providing technical guidance to students and scheduling technical sessions before the start of learning.

With the findings obtained from the interviews of millennial generation lecturers in the utilization of Zoom Meeting and Google Meet in Arabic language learning, it can be concluded that these two applications are not only very reliable tools for organizing online learning sessions but also provide a variety of ease of access, flexibility, and special features that support a dynamic learning experience. Millennial lecturers demonstrate creativity and resilience in the face of technical challenges, and their practical strategies provide evidence that the use of Zoom Meeting and Google Meet not only overcomes obstacles but also opens up opportunities to improve the quality of Arabic language learning. Thus, the results of this study highlight the importance of integrating network-based technology in the context of Arabic language learning in the digital era, creating a more responsive, interactive learning environment that aligns with the needs of today's students.

Non-Face-to-Face Direct Feedback-Based Material Delivery Technology

In this case, millennial lecturers are more inclined to use applications that have been used by all students and are known to work mechanisms, such as the Whatsapp and Telegram applications. Almost all millennial lecturers, as informants in this study, use Whatsapp as a very popular application in this regard, while a small proportion choose telegram. Among the forms of utilization are as follows :

1. **Whatsapp**, Millennial generation lecturers use WhatsApp as a non-face-to-face material delivery tool. They utilize WhatsApp groups to present materials, discuss topics, and give assignments to students. They argue that WhatsApp provides a platform for direct feedback between lecturers and students. Lecturers can provide clarification, answer questions, and provide additional guidance quickly via text or voice messages. In addition, the flexibility of WhatsApp in providing non-face-to-face materials allows students to access materials anytime and anywhere, according to their time. WhatsApp groups allow lecturers to facilitate collaboration and discussion between students. They can assign group work, support student-to-student interaction, and stimulate discussion-based learning. Some challenges include the high volume of messages and the risk of losing focus on the material. Lecturers provide solutions by designing short, clear messages and using multimedia to support understanding. Lecturers actively use voice recording and multimedia on WhatsApp to deliver material more dynamically. This includes pronunciation of words, use of phrases in context, and presentation of materials that support audiovisual capabilities.

2. **Telegram,** Millennial generation lecturers tend to form Telegram groups as a collaborative space for Arabic language material delivery. This group serves as a platform where lecturers can deliver materials, assign tasks, and facilitate discussions between students. In the context of Non-Face-to-Face Direct Feedback-Based Material Delivery, Telegram is used by lecturers to upload learning materials, either in the form of text, document files, or multimedia. Lecturers provide explanations and give feedback through text or voice messages. Telegram allows lecturers to give feedback quickly and interactively. Lecturers can respond to student questions, provide clarification, and provide additional real-time support.

Lecturers actively use Telegram's multimedia features, such as sending images, audio, and video, to support Arabic learning materials. This enriches students' learning experience and helps them understand the concepts presented. Telegram is used to manage schedules and provide announcements related to learning. Through Telegram groups, lecturers convey information regarding materials to be delivered, assignments, and other activity schedules. Some challenges include the high volume of messages and the risk of losing students' focus. Lecturers overcome this by composing clear messages, using a good structure, and providing separate announcements to manage information.

Indirect Feedback-Based Material Delivery Technologies

Based on the nature or type of content, indirect feedback-based technologies can be classified into three categories: technologies that use audio content, audio-visual content, and text content.

1. **Audio**, from the collection of information, there has been no use of certain applications in this section, almost all millennial lecturers still rely on the whatsapp application in delivering audio-based material, but the application is not included in the technology of providing indirect feedback-based material. However, there are several computer media, especially in delivering istima' material such as mp3 that is used in this section.

2. **Audio Visual**, millennial generation lecturers actively create learning video content for Arabic language materials. They utilize YouTube's recording, editing, and uploading features to present explanations, presentations, and demonstrations involving audio-visual elements. YouTube provides high flexibility of access for students. Lecturers upload learning videos so that students can access materials anytime and anywhere according to their needs, facilitating self-directed learning. Lecturers use YouTube analytics data to understand student engagement levels. This includes information on the number of views, view duration, and which parts of the video are most viewed. This data helps lecturers evaluate the effectiveness of learning materials. The challenges faced involved technical aspects such as recording quality and internet connectivity. Lecturers respond by improving their technical skills,

choosing appropriate upload times, and providing alternatives if students experience access issues.

3. **Teks**, In this case, millennial-generation lecturers create educational blogs or websites containing text-based materials for learning Arabic. They establish a digital presence using WordPress, Blogger, or specialized learning websites. These materials include articles, instructions, text analysis, links to online resources, or discussions on specialized topics. Also, some present text-based materials like e-books or digital documents that students can download. These e-books can be guides, lecture materials, or collections of reading materials relevant to the learning topic. E-books provide the advantage of high accessibility and portability. Lecturers upload e-books to the learning platform or provide a download link, allowing students to access the materials easily on various devices and anywhere.

Evaluation Technology

Evaluation technology refers to a system that allows the presenter to compile evaluation questions along with the answer key so that the system can automatically assess students' answers. In this study, researchers found several uses of evaluation technology used by millennial lecturers, including the following:

1. **Google Form**, Millennial lecturers consistently emphasized the ease of use of Google Forms. They stated that the simple and intuitive interface makes creating a quiz or evaluation quick and easy. Lecturers positively responded to the answer key generation feature in Google Forms. They can easily determine the correct answers and let the system automatically score the participants according to the predefined criteria. This speeds up the assessment process and provides quick feedback. Lecturers highlighted the usefulness of the Google Form integrated monitoring and data analysis tools. They can view overall statistics, rank participants, and gain insights from frequently answered correctly or common mistakes participants make. Some lecturers described how using Google Forms can increase interactivity in the evaluation process. They can embed additional elements of images, videos, or links, making the evaluation more engaging and contextualized for participants. Lecturers and

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students more widely use Google Forms, so its use is more massive than other platforms.

2. **Quizizz**, Millennial generation lecturers feel that Quizizz provides a more interactive and engaging evaluation experience than traditional methods. The game and competition elements make the evaluation process more fun for participants. Lecturers emphasized the ease of creating evaluation questions in Quizizz. The intuitive interface allows presenters to quickly construct questions, including multiple-choice, short-answer, and image-based questions. Lecturers highly appreciated the automatic scoring feature in Quizizz. After participants answer the questions, the system scores them instantly and provides instant feedback. This helps in providing information about participants' understanding in real time. Some lecturers stated that they appreciated the ability to customize quizzes in Quizizz. They can set time limits, specify correct answer options, and customize quiz settings according to their learning needs. Lecturers recognized the usefulness of the data analysis features in Quizizz. They can view in-depth reports on the individual and group performance of participants. This information assists presenters in evaluating learning effectiveness and identifying areas that require further attention. Unlike some other platforms, Quizizz can be accessed without installing a dedicated app. Participants can take the quiz by simply using their device and accessing it through a browser. Quizizz provides flexibility in learning modes. In addition to the individual game mode, there is also an option to play in multiplayer, where participants can compete directly. Quizizz provides a "Quizizz Smashes" feature that allows presenters to collaborate with existing quizzes. This provides more flexibility in sharing materials with fellow educators.

3. **Kahoot**, Millennial generation lecturers stated that the use of Kahoot provides a gaming learning experience. Game elements, such as limited time and leaderboard, create a competitive atmosphere and increase participant engagement. Lecturers appreciated the ease of creating evaluation questions in Kahoot. The user-friendly interface allows presenters to construct multiple-choice or short-answer questions quickly. The quiz creation process in Kahoot is considered intuitive. Lecturers praised the automatic scoring feature in Kahoot. After

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participants answer the questions, the system scores them instantly and displays the participants' rankings. This creates healthy competition and provides instant feedback. Lecturers highlighted the flexibility of settings in Kahoot. They can set time limits, choose question display layouts, and adapt quizzes according to learning needs. These settings give control to the presenter. Some lecturers emphasized that Kahoot provides room for creative aspects of learning. They can include images or videos as part of the questions, making the quiz more dynamic and interesting. Kahoot allows the quiz to integrate music and sound, enhancing the user experience. Kahoot also has fast gameplay and an attractive appearance.

4. **Quizlet**, Millennial generation lecturers highlight the ease of creating evaluation questions on Quizlet. They can quickly create question-and-answer cards and customize the question format according to learning needs. Lecturers appreciate the variety of question formats that can be created on Quizlet. In addition to multiple choice questions, presenters can use short fill-in questions, matching questions, or create terms with their definitions. These variations help in creating a more comprehensive evaluation. Some lecturers revealed that Quizlet's repetition and memorization features help learners reinforce their understanding. After answering a question, learners can use the customizable repetition feature to ensure better understanding. Some of the advantages of this platform are Flashcard-based learning, repetition settings, easy access and offline availability, large user community.

5. **Wizer.me**, Millennial generation lecturers highlighted the ease of creating interactive activities on Wizer.me. They can develop evaluation questions by adding multimedia elements, such as images, videos, and audio, which make evaluation activities more interesting. Lecturers appreciated the variety of question formats that can be implemented in Wizer.me. In addition to multiple-choice questions, presenters can construct matching questions, match images with text, and add drag-and-drop-based questions, providing variety in the evaluation process. The auto-grading feature in Wizer.me received positive feedback from lecturers. Once a participant answers a question, the system provides feedback automatically, including scoring the answer and providing detailed information to the participant regarding their performance. Some

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lecturers highlighted the ability to customize the activity settings in Wizer.me. They can set a time limit, specify the number of attempts allowed, and set a maximum score to increase flexibility. Some advantages of Wizer.me are the attractive design and the ability to create learner portfolios and track learner progress.

Dedicated Platform

Unlike previous technologies not designed for learning purposes, specialized platform technologies are generally created exclusively to meet distance education needs optimally. In this study, researchers found several uses of specialized platforms used by millennial lecturers, including the following:

An example of platform-specific technology is Moodle. Moodle is a specialized platform, but it provides more features for customization and configuration of the teaching system. To do this, basic technical knowledge of information system management is required. The majority of millennial generation lecturers recognize the use of Moodle as the main platform for Arabic language learning. Moodle is considered an effective tool to manage various online learning activities. Lecturers use Moodle to post learning materials in various formats, including PDFs and videos. This creates flexibility in the presentation of materials for students. Moodle is utilized as a tool to evaluate students. Lecturers create questions that students must complete as a form of evaluation, providing further insight into their understanding of the material. Moodle is appreciated for providing easy access and centralized management. All learning activities, including attendance, assignments, materials, and online meetings, can be accessed in one place. In addition to Moodle, many lecturers use E-Learning partly provided by their respective campuses or from certain foundations in learning Arabic.

Based on the research results, learning occurs through the construction of knowledge by individuals based on their experiences and perceptions. The use of specialized platforms such as Moodle, YouTube, and blogs in delivering materials and facilitating discussions is an effort to build knowledge through students' active interaction with learning content, which aligns with what is built through constructivism theory. On the other hand, the concept of learning

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technology shows that technology integration can improve the effectiveness and efficiency of learning. The use of Google Forms, Quizizz, Kahoot, and specialized platforms such as Moodle are examples of the application of this concept. Lecturers utilize automation features, instant feedback, and data analysis to improve the evaluation and teaching process.

In addition, millennial lecturers actively use network-based applications such as WhatsApp, Telegram, Zoom Meeting, and Google Meet to create student engagement. Features such as video conferencing, discussion groups, and immediate feedback increase student interaction and participation in Arabic language learning. This indicates that using apps such as Quizizz, Kahoot, and Quizlet, which offer play and interactivity, creates an active and engaging learning atmosphere. Students are not only recipients of information but also actively involved in the learning process.

With distance learning becoming more widespread, especially during the pandemic, millennial-generation lecturers use specialized platforms and network-based applications to provide flexible access and facilitate Arabic language learning without physical presence. This is in line with the principles of distance learning. Also, using game elements, such as those found in Quizizz, Kahoot, and feedback-based learning platforms, can be linked to motivation theory. These elements can increase students' intrinsic motivation to learn Arabic through fun and challenging ways. In Arabic language learning, millennial-generation lecturers utilize technology to deliver materials through a problem-based approach. The use of videos, blogs, and specialized platforms allows the presentation of material in a real context, stimulating problem-solving and deeper understanding.

CONCLUSION

Millennial lecturers predominantly use Zoom Meeting and Google Meet for face-to-face material delivery due to their ease of use and student familiarity. Similarly, WhatsApp and Telegram are favored for non-face-to-face feedback. In terms of indirect audio feedback, no specific platform is highlighted, with reliance on applications like WhatsApp. Millennial lecturers actively create video content on YouTube for audio-visual aspects, and for text, some prefer WordPress, Blogger, or specialized websites. Evaluation

technologies include Google Form, Quizizz, Kahoot, Quizlet, and Wizer.me, chosen for their attractive presentations and practicality. Despite utilizing e-learning from education units, Moodle is the primary choice for millennial lecturers without campus-specific e-learning availability. The study suggests that millennial educators in higher education should enhance their knowledge of platforms for diverse Arabic language learning, emphasizing efficiency and flexibility, benefiting Generation Z students who inherently rely on technology.

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