14th ISCA 2024

Development of E-Modules in Higher Education: Challenges and Opportunities for Enhancing Career Adaptability

Dyah Perwita [1], Trisno Martono[2], Mintasih Indriayu[3*], Sudarno[4]

[1] Universitas Sebelas Maret, dyah.perwita@student.uns.ac.id , Indonesia
[2] Universitas Sebelas Maret, trisnomartono@staff.uns.ac.id , Indonesia
[3*]Universitas Sebelas Maret, mintasih_indri@staff.uns.ac.id , Indonesia
[4] Universitas Sebelas Maret, sudarno68@staff.uns.ac.id Indonesia
*corresponding author

ABSTRACT

The development of e-modules in higher education has emerged as an innovative strategy to enhance learning in the digital era. Beyond providing flexible access to educational materials, e-modules play a crucial role in fostering career adaptability—an essential skill for students navigating an increasingly dynamic global workforce. This study examines the challenges and opportunities in developing e-modules to support students' career adaptability. Key challenges include limited technological infrastructure, disparities in digital competencies among lecturers and students, and resistance to transitioning from conventional learning methods to digital platforms. Conversely, the opportunities presented by e-modules include personalized and self-directed learning, enhanced accessibility to resources, and increased student engagement through interactive and multimedia-based instruction. Effective integration of e-modules into higher education curricula requires not only technological readiness but also pedagogical strategies that align with students' needs. With well-designed implementation, e-modules can serve as a powerful tool to equip students with the adaptability skills required to meet future career demands.

Keywords: E-Module; Higher Education; Career Adaptability; Digital Learning; Educational Technology; Skill Development

1. Introduction

1.1 Research Background

The advancement of Information and Communication Technology (ICT) has significantly influenced various sectors, including education (Huraerah et al., 2023). Higher education institutions, as key players in producing competitive graduates, must continuously innovate to keep pace with technological developments. One promising innovation is the use of e-modules, which provide flexible, interactive, and self-directed learning experiences (Yassi et al., 2024). These digital learning tools enhance content delivery through multimedia, simulations, and interactive assessments that foster student engagement and comprehension (Hadianto & Festiyed, 2020). The development of e-modules has great potential to enhance learning quality, particularly by increasing flexibility and ensuring material accessibility at any time and place (Kurniawan et al., 2023).

The adoption of e-modules is aligned with the shift towards competency-based education, where students are encouraged to develop 21st-century skills, including critical thinking, collaboration, and problem-solving (Suryaman & Rahim, 2022). However, the implementation

of e-modules in higher education encounters several challenges, including inadequate technological infrastructure, digital literacy gaps, and resistance to change among educators and students (Bates & Sangrà, 2019). In Indonesia, the Ministry of Education has implemented policies to promote digital learning, including e-module development. Despite these efforts, several challenges persist, such as limited infrastructure and inconsistent adoption across institutions, which hinder effective implementation (UNESCO, 2023)

In the context of higher education, e-modules are also considered to improve learning efficiency, both in terms of lecturers and students (Mckenney & Reeves, 2017). While e-modules present significant opportunities, their development and implementation in higher education still face notable challenges. In recent years, the transition from conventional to digital learning methods has required a change in mindset and adaptation that is not easily accomplished (Chastanti et al., 2024: 10). The Ministry of Education, Culture, Research, and Technology (Kemendikbudristekdikti) has actively promoted digital learning through initiatives such as the Merdeka Belajar program. As part of this effort, over 2,000 e-modules have been developed across various universities to support the digitalization of higher education in Indonesia (Kemendikbudristekdikti, 2023).

The effectiveness of e-modules has been demonstrated in various disciplines, including medical education (Cary et al., 2024; Villatoro et al., 2019), nursing education (Rohr et al., 2022), science (Hutasoid et al., 2024; Ihsan et al., 2024; Dahlia et al., 2024), technology and education (Surya et al., 2023). In the context of education, several studies have shown that e-modules are very effective in courses related to pedagogy and teaching methodology, such as Learning Design, Learning Evaluation, and Educational Psychology. In these courses, e-modules not only enhance students' theoretical understanding, but also provide opportunities for practical simulations that are relevant to conditions in the field through the integration of technology such as teaching videos and project-based evaluation (Kadir & Sari, 2022). The use of e-modules fosters independent learning, enabling students to develop competence in designing technology-based instruction. This skill is essential for educators in the digital era (Lastri, 2023). The use of e-modules in Educational Technology courses also studies how technology can be integrated effectively in learning (Sutiono, 2021). With more interactive and flexible learning, students can develop critical thinking, problem solving, and digital literacy skills (Surya et al., 2023).

Higher education graduates who have good adaptation skills, such as self-learning ability, digital literacy, and critical and collaborative thinking, have a greater chance of adapting to the dynamics of the job market. These competencies prepare students to be more employable and minimize the skills gap that is often the main cause of unemployment among university graduates (BPS, 2023). Therefore, e-modules not only enhance learning effectiveness but also play a crucial role in developing students' adaptability skills. This, in turn, is expected to reduce the unemployment rate and enhance graduates' competitiveness in the job market.

1.2 Research Purposes

This study aims to explore the challenges and opportunities in developing e-modules and their impact on students' career adaptability in the digital era.

1.3 Scope of Research

This article belongs to the scope of Human Resources (HR) development, especially the Development of E-Modules in Higher Education to Improve Students' Career Adaptability.

1. Literature Review

2.1 Career Adaptability Skill

The transition period from school to work is a crucial moment that requires adjustment (Agustini, 2022). Savickas & Porfeli, (2012) defines career adaptation skills as a psychosocial construct that demonstrates an individual's resources to handle work transitions, career developmental tasks and personal trauma related to career or work roles. According to Sholihah & Eryandra (2024) Career adaptability skills acquired by individuals to face and solve problems that arise in the world of work are also able to help improve work performance. There are four dimensions in career adaptation skills, namely concern, control, curiousity, and confidence (Savickas & Porfeli, 2012). Concern is a condition where individuals realize the importance of the future career. After that, control gives individuals control over behavior so that they are able to carry out their responsibilities in building a career (Creed et al., 2009). Furthermore, curiousity is encourages individuals to explore so that they can increase their experience, abilities and knowledge to help the work process (Tandiayuk et al., 2022). Finally, confidence allows individuals to face various challenges that become obstacles in the workplace (Riskiyanti et al., 2022).

2.2 E-Modul

E-modules are electronic versions of modules where access and use are conducted through electronic devices such as computers, laptops, tablets or even smartphones (Mardhotillah & Kholijah, 2023). Research-based learning modules are applied at the university level so that students can learn independently. Currently, e-modules are commonly used in learning in higher education because lecturers need learning materials that are not monotonous so that students are more interested in learning and can be accessed anytime and anywhere through their electronic devices (Prima et al., 2024). The use of e-modules can accommodate complete material with interactive media such as video, audio, animation and other interactive features that can be played and replayed anytime and anywhere (Dahlia et al., 2024). Interactive e-modules can increase focus and help students understand the material because they can display several animations to explain microscopic and abstract concepts that cannot be explained in detail by printed textbooks (Ihsan et al., 2024).

2. Research Methodology

This research employs a systematic literature review approach to synthesize findings from national and international sources on career adaptability and e-module development. The analysis follows four steps:

a. Identifying and collecting relevant literature on e-modules and career adaptability.
b. Categorizing materials based on key themes and challenges.
c. Synthesizing findings to highlight trends and effective strategies.
d. Presenting conclusions to guide future research and implementation.

To enhance reliability, this study integrates empirical findings from case studies and best practices in higher education, offering practical insights for policymakers and educators (Rahman et al., 2023; Cary et al., 2024). Researchers searched and analyzed empirical studies from various national and international scientific articles relevant to the topic of adaptability skills and e-module development at the tertiary level from 2015 to 2024. The search was conducted through electronic academic databases such as ScienceDirect, Emerald, ResearchGate, and Google Scholar using appropriate keywords. In addition, researchers also

used the help of publish or perish software, then, the analysis in this literature review follows four sequential steps, namely: 1) Finding and collecting relevant materials on how e-modules are developed in student learning that can contribute to improving career adaptability skills; 2) Reducing and categorizing the collected materials to fit the topic discussed; 3) Analyzing and synthesizing the information in depth to gain insights from the collected materials; and 4) Presenting the final conclusion as the concluding stage of the literature review process.

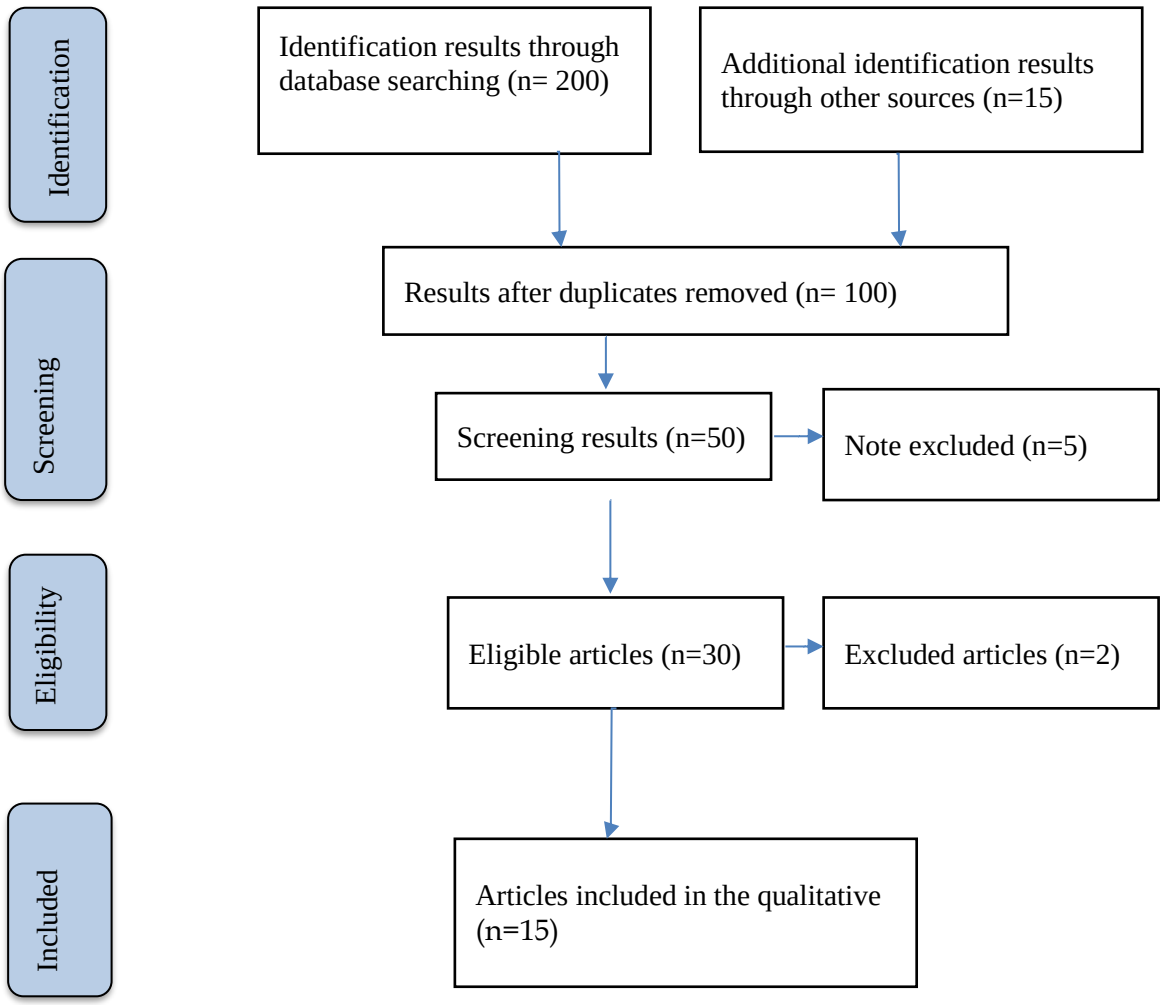

Figure 1. Data Collection Techniques

From the identification process, 215 articles were found, then we removed duplicate examples from the Example Set by comparing all examples with each other based on the specified attributes so that only one of all duplicate examples was kept, then 100 articles were obtained. At the screening stage, the relevance of the articles was selected by looking at the abstract, so 50 articles were obtained but there were 5 article notes that were not included. After that, content analysis was conducted. According to Andriani, (2022), content analysis is important to do so that the expected research results are in line with related topics. After going through the eligibility stage of content analysis, 15 articles were included in this study.

Inclusion and exclusion criteria were used to determine whether the data found could be feasibly used in SLR research or not (Saputra & Ikasari, 2023).
An article was considered eligible for selection if it met the following criteria:

1. The articles used were for the period from 2015 - 2024.
2. The article was retrieved from electronic academic databases such as ScienceDirect, Emerald, ResearchGate, and Google Scholar.
3. The data used is limited to articles related to the keywords adaptability skills and e-module development

3. Results

The literature study process resulted in several articles related to the challenges and opportunities of developing e-modules to improve students' career adaptability skills as follows:

Table 1. Research Result

No	Writer (Year)	Name of Journal	Result
Challenges in E-Module Development			
1	DeWitt et al., (2015)	Procedia - Social and Behavioral Sciences	The use of e-modules for deaf students in higher education needs to be supported with facilities that suit their needs, namely with padlet-based e-modules that allow for communication between deaf students.
2	Novrianti et al., (2018)	Journal of Educational Studies	E-modules for computer-based learning courses for students of the educational technology study program increase the absorption of material by students because e-modules can be accessed in class and outside the classroom.
3	Hadianto & Festiyed (2020)	Journal of Physics: Conference Series	Adaptive contextual-based Integrated Science learning e-modules can improve the digital literacy of education students as a competency needed to compete in the 21st century.
4	Rahman et al., (2023)	Indonesian Journal of Educational Science (IJES)	There is an increase in the learning outcomes of Biology Education Study Program students in the Biology Learning Innovation course through the application of PjBL assisted by E-Modules due to wide accessibility.
5	AlShaikh et al., (2024)	Heliyon	The development of AI-based e-modules can be done by integrating Automatic Speech Recognition (ASR) using Whisper from OpenAI and Google's Large Language Model (LLM) Bard to enhance students' learning experience as it utilizes the principles of Cognitive Theory of Multimedia Learning (CTML).

Opportunities in E-Module Integration			
6	Sutiono (2021)	Baturaja Journal of Educational Technology	E-modules in the Introduction to Educational Technology course can make students more enthusiastic in participating in learning delivered by lecturers, if designed in line with the procedures and syllabus of the study program.
7	Rohr et al., (2022)	Journal of Pathology Informatics	The development of e-modules in the cytopathology and pathology of thyroid surgery course was well received by students and was able to streamline learning because the module was equipped with guided narratives, formative and summative interactive quizzes.
8	Cary et al., (2024)	Journal of Surgical Research	The American College of Surgeons Committee on Trauma developed a trauma triage criteria (TCEM) education e-module that can improve the confidence and accuracy of emergency medical service (EMS) providers in performing triage.
9	Hutasoid et al., (2024)	Biogeneration	The development of ethnobotany-based e-modules, by integrating digital technologies such as interactive illustrations, short videos, and Augmented Reality (AR) can improve student understanding, especially with features that enhance the visualization of the material.
10	Anom et al., (2024)	Quality Assurance Journal	The development of 2D animation-based e-modules for introductory taxation courses makes it easier for students to understand and increase the attractiveness of learning. It is also effective in enhancing students' creativity
Impact on Career Adaptability			
11	Villatoro et al., (2019)	Academic Pathology	A case-based asynchronous interactive module administered to medical students at Thomas Jefferson University, department of Pathology, Obstetrics and Gynecology demonstrated improvement in the interpretation of routine clinical scenarios as well as increased effective decision-making.
12	Nagelli et al., (2023)	Journal of Taibah University Medical Sciences	The development of an Interprofessional Education E-module on autism spectrum disorders, which incorporates interprofessional competencies and their application among health professional

			students will assist in providing data and information needed to intervene but must pass complex evaluation methods in its development.
13	Kurniawan et al., (2023)	Indonesian Journal of Physics Education	Feature-lesson-based e-modules for physics learning multimedia practicum courses make students have logical thinking skills.
14	Provvidenza et al., (2024)	PEC Innovation	TeachABI e-modules are suitable for improving adaptability of individuals with Acquired Brain Injury (ABI) by providing a multi-modal approach (e.g., use of case studies, videos) and facilitating the adoption of innovations.
15	Helmi (2024)	Journal of Social Sciences Research and Education	Development of electronic modules based on problem-based learning for the Indonesian Community Studies course helps students develop critical thinking skills and learning independence.

4. Discussion

Challenges in E-Module Development

Several challenges hinder the effective development and implementation of e-modules in higher education:

a. Technological Infrastructure: Many institutions, particularly in developing countries, face limitations in internet connectivity, access to digital devices, and technical support (Chastanti et al., 2024).
b. Digital Literacy: Both students and lecturers require training to effectively utilize e-modules for optimal learning outcomes (Bates & Sangrà, 2019).
c. Content Development: Designing engaging and pedagogically sound e-modules demands expertise in instructional design and multimedia integration (Sutiono, 2021).
d. Adoption Resistance: Transitioning from traditional to digital learning requires mindset shifts among educators and students (Nagelli et al., 2023).

Opportunities in E-Module Integration

Despite these challenges, e-modules present significant opportunities for enhancing digital learning:

a. Personalized Learning: E-modules allow students to learn at their own pace, catering to diverse learning needs (Provvidenza et al., 2024).
b. Enhanced Accessibility: Digital modules provide learning opportunities beyond physical classrooms, improving inclusivity (DeWitt et al., 2015).
c. Increased Engagement: Interactive features, such as simulations, videos, and quizzes, make learning more dynamic (Hutasoid et al., 2024).

Impact on Career Adaptability

E-modules contribute to career adaptability by fostering independent learning, digital literacy, problem-solving abilities, and critical thinking. These skills prepare graduates to navigate the

complexities of modern workplaces and adapt to evolving industry demands (Savickas & Porfeli, 2012; Helmi, 2024).

5. Conclusion

E-modules hold significant potential in transforming higher education by fostering students' career adaptability. However, their effectiveness depends on robust technological infrastructure, educator training, and curriculum alignment. Addressing existing challenges and leveraging opportunities in digital learning will enhance students' preparedness for future careers. To maximize the benefits of e-modules, institutions must focus on content accuracy, pedagogical relevance, and interactive learning. Future research should explore empirical validations through case studies and pilot implementations to further strengthen the effectiveness of e-modules in higher education.

References

Agustini, D. W. (2022). Faktor-Faktor yang Mempengaruhi Career Adaptability : Personality , Emotional Intelegence dan Work Value (Suatu Kajian Literature Review Manajemen Sumber Daya Manusia). *Jurnal Ekonomi Manajemen Sistem Informasi*, *3*(6), 613–620. https://dinastirev.org/JEMSI/article/view/1100%0Ahttps://dinastirev.org/JEMSI/article/download/1100/665

AlShaikh, R., Al-Malki, N., & Almasre, M. (2024). The Implementation of The Cognitive Theory of Multimedia Learning in the Design and Evaluation of an AI Educational Video Assistant Utilizing Large Language Models. *Heliyon*, *10*(3), e25361. https://doi.org/10.1016/j.heliyon.2024.e25361

Andriani, W. (2022). Penggunaan Metode Sistematik Literatur Review dalam Penelitian Ilmu Sosiologi. *Jurnal PTK Dan Pendidikan*, *7*(2). https://doi.org/10.18592/ptk.v7i2.5632

Anom, I. G. A., Ardriani, N. N. D., & Santiago, G. A. (2024). Pengembangan E-Modul Berbasis Animasi 2D Mata Kuliah Perpajakan Untuk Meningkatkan Kreatifitas Mahasiswa. *Jurnal Penjaminan Mutu*, *10*(1), 65–72.

Bates, A. W., & Sangrà, A. (2019). *Managing Technology in Higher Education: Strategies for Transforming Teaching and Learning*. New Jersey: John Wiley & Sons.

BPS. (2023). Statistik Pendidikan 2023. In *Statistik Pendidikan 2023* (Vol. 12). https://www.bps.go.id/id/publication/2022/11/25/a80bdf8c85bc28a4e6566661/statistik-pendidikan-2022.html

Cary, R. R., Geller, J. E., Rallo, M. S., Teichman, A. L., Englert, Z. P., Pierre, P., Murphy, T., Falcon, L., Narayan, M., & Choron, R. L. (2024). Implementation of an Education Module to Improve Emergency Medical Service Provider Accuracy and Confidence in Trauma Triage. *Journal of Surgical Research*, *303*, 241–247. https://doi.org/10.1016/j.jss.2024.09.014

Chastanti, I., Layyinnati, I., Srimulat, F. E., Fiqri, C. I., Syafriyeti, R., Afriani, D. T., Ernawati, E., & Jannah, N. (2024). Inovasi Pembelajaran dan Pendidikan Teknologi untuk Peningkatan Kualitas Pendidikan. In *Bandung: CV Bildung Nusantara*. http://repo.iain-tulungagung.ac.id/5510/5/BAB 2.pdf

Creed, P. A., Fallon, T., & Hood, M. (2009). The Relationship Between Career Adaptability, Person and Situation Variables, and Career Concerns in Young Adults. *Journal of Vocational Behavior*, *74*(2), 219–229. https://doi.org/10.1016/j.jvb.2008.12.004

Dahlia, Nasution, M., & Mubarrak, J. (2024). Pengembangan E-Modul Berbasis Flip Html 5 Materi Kloning Hewan Mata Kuliah Bioteknologi Mahasiswa Semester V. *Jurnal Ruang Inovasi Pendidikan*, *1*(1), 21–32.

DeWitt, D., Alias, N., Ibrahim, Z., Shing, N. K., & Rashid, S. M. M. (2015). Design of a Learning Module for the Deaf in a Higher Education Institution Using Padlet. *Procedia - Social and Behavioral Sciences*, *176*, 220–226. https://doi.org/10.1016/j.sbspro.2015.01.464

Hadianto, A., & Festiyed. (2020). Meta Analysis The Use of E-modules Based on Research Based Learning Models. *Journal of Physics: Conference Series*, *1481*(1). https://doi.org/10.1088/1742-6596/1481/1/012067

Helmi, D. (2024). Pengembangan E-Modul Berbasis Problem Based Learning Pada Mata Kuliah Kajian Masyarakat Indonesia. *Jurnal Penelitian Dan Pendidikan IPS*, *18*(1), 19–27.

Huraerah, A. J. A., Abdullah, A. W., & Rivai, A. (2023). Pengaruh Teknologi Informasi Dan Komunikasi Terhadap Pendidikan Indonesia. *Jurnal of Islamic Education Policy*, *8*(2), 133–146. https://dx.doi.org/10.31958/jaf.v11i2.10548

Hutasoid, L. R., Almawaddah, M., & Rijal, S. (2024). Inovasi Pembelajaran Etnobotani melalui E-Modul: Studi Analisis Persepsi Mahasiswa pada Keanekaragaman Tumbuhan dalam Prosesi Pernikahan Adat Bugis. *Biogenerasi*, *10*(1), 227–232.

Ihsan, M. S., Husain, P., & Fauziah, N. (2024). Analisis Kemampuan Literasi Sains Mahasiswa pada Pembelajaran Kimia Dasar Menggunakan E-modul Interaktif. *Jurnal Ilmiah Profesi Pendidikan*, *9*(2), 1384–1388. http://jipp.unram.ac.id/index.php/jipp/article/view/1964%0Ahttp://jipp.unram.ac.id/index.php/jipp/article/download/1964/1291

Kadir, N., & Sari, Y. (2022). The Effectiveness of E-modules in the Learning of Educational Planning and Evaluation. *Journal of Educational Sciences*, *6*(1), 112–121.

Kemendikbudristekdikti. (2023). Laporan Tahunan: Transformasi Pendidikan Digital Di Indonesia. *Laporan Tahunan: Transformasi Pendidikan Digital Di Indonesia*, *4*(2), 1–88.

Kurniawan, B. R., Rahmawati, I., & Fawaiz, S. (2023). E-Module Implementation by Using Feature-Lesson-Based of Moodle in Physics Learning Multimedia Practices for Students of Prospective Physics Teacher. *Jurnal Pendidikan Fisika Indonesia*, *19*(1), 76–88. https://doi.org/10.15294/jpfi.v19i1.37176

Lastri, Y. (2023). Pengembangan Dan Pemanfaatan Bahan Ajar E-Modul Dalam Proses Pembelajaran. *Jurnal Citra Pendidikan*, *3*(3), 1139–1146. https://doi.org/10.38048/jcp.v3i3.1914

Mardhotillah, B., & Kholijah, G. (2023). Implementasi Project Based Learning dengan Pengembangan E-modul dalam Perkuliahan Matematika Preneurship untuk Meningkatkan Kemampuan Analisis Data dan Resiliensi Mahasiswa. *Journal on Education*, *05*(04), 17856–17867.

Mckenney, S., & Reeves, T. C. (2017). Educational Design Research. *Handbook of Information Technology in Education: Professional Learning and Development of Teachers*, *May*, 3.

Nagelli, S. S., Mohammed, C. A., Nayak, B. S., & George, A. (2023). Design and Validation of an Interprofessional Education Module to Enhance Interprofessional Competencies Among Students From Healthcare Professions. *Journal of Taibah University Medical Sciences*, *18*(6), 1662–1671. https://doi.org/10.1016/j.jtumed.2023.08.007

Novrianti, Hendri, N., & Rahmi, U. (2018). E-Modul Computer Based Learning Sebagai E-Resource Digital Literacy Bagi Mahasiswa. *Journal of Educational Studies*, *3*(1), 58–71.

Prima, R., Jufri, & Hutagol, R. (2024). E-Modul Riset Operasi Materi Metode Simpleks Mahasiswa Pendidikan Teknologi Informasi (PTI) Universitas Rokania. *Jurnal MediaTIK*, *7*(2), 15–20. https://doi.org/10.59562/mediatik.v7i2.2247

Provvidenza, C. F., Al-Hakeem, H., Ramirez, E., Rusyn, R., Kingsnorth, S., Marshall, S., Mallory, K., & Scratch, S. E. (2024). Exploring the adaptability of TeachABI as an online professional development module for high school educators. *PEC Innovation*, *4*, 100299. https://doi.org/10.1016/j.pecinn.2024.100299

Rahman, S. R., Firman, & Yunus, M. R. K. (2023). Peningkatan Hasil Belajar Mahasiswa Melalui Penerapan Project Based Learning (PjBL) Berbantuan E-Modul. *Indonesian Journal of Educational Science (IJES)*, *6*(1), 31–37.

Riskiyanti, I. Y., Sunawan, & Mulawarman. (2022). Traditional Belief and Career Competence: Mediation Effects of Career Adaptability. *Jurnal Bimbingan Konseling*, *11*(1), 67–75.

Rohr, J. M., Mukherjee, M., Donnelly, A., Sprinkle, S., Martinez Duarte, E., & Yuil Valdes, A. (2022). Successful Integration of Thyroid Cytopathology and Surgical Pathology Education in an E-module Format. *Journal of Pathology Informatics*, *13*(July), 100–124. https://doi.org/10.1016/j.jpi.2022.100124

Saputra, A., & Ikasari, I. H. (2023). Systematic Literatur Review : Analisis Sistem Informasi Penjualan. *JORAPI : Journal of Research and Publication Innovation*, *1*(3), 633–638.

Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and Measurement Equivalence Across 13 Countries. *Journal of Vocational Behavior*, *80*(3), 661–673. https://doi.org/10.1016/j.jvb.2012.01.011

Sholihah, M., & Eryandra, A. (2024). Adaptabilitas Karir Karyawan Organisasi Retail Ditinjau dari Adversity Quotient. *Jurnal Diversita*, *10*(1), 54–62. https://doi.org/10.31289/diversita.v10i1.11622

Surya, T., Marwiyah, & Hasan, S. (2023). Enhancing Teacher Competencies Through E-Learning Modules in Teacher Education Programs. *International Journal of Education and Learning*, *12*(3), 88–97.

Suryaman, M., & Rahim, R. (2022). E-learning and E-modules for Adaptive Career Learning in Higher Education. *International Journal of Advanced Computer Science and Applications*, *13*(5), 187–193.

Sutiono, E. (2021). Pengembangan E-Modul Mata Kuliah Pengantar Teknologi Pendidikan

Menggunakan Aplikasi Sigil. *Baturaja Journal of Educational Technology*, *5*(2), 332. https://doi.org/10.54895/bajet.v5i2.1216

Tandiayuk, S., Bellani, E., Fabiola Susanto3, A., & Firmansyah, F. (2022). The Effectiveness of Career Adaptability Training For Final Year Students. *Jurnal Manajemen Bisnis*, *9*(1), 215–220. https://doi.org/10.33096/jmb.v9i1.137

UNESCO. (2023). The Global Education Monitoring Report Technology in Education – Southeast Asia Technology in Education: A Case Study on Timor-Leste. *Global Education Monitoring Report*, *1109*, 1–65.

Villatoro, T., Lackritz, K., & Chan, J. S. Y. (2019). Case-Based Asynchronous Interactive Modules in Undergraduate Medical Education. *Academic Pathology*, *6*, 2374289519884715. https://doi.org/10.1177/2374289519884715

Yassi, A. H., Abbas, H., & Sahib, H. (2024). Improving University Students ' Learning Achievement Using an Interactive-Based E-Module of Translation Technology Through Online and Blended Learning. *English Languange & Literature International Conference*, *6*(1), 232–249.