

ANDRAGOGICAL APPROACH IN DEVELOPING EDUCATIONAL INTERNSHIP E-MODULES TO IMPROVE ECONOMIC EDUCATION STUDENT'S CAREER ADAPTABILITY

Dyah Perwita¹, Trisno Martono², Mintasih Indriayu^{3*}, Sudarno⁴

¹⁻⁴ Faculty of Teacher Training and Education, Sebelas Maret University, Indonesia

*Email corresponding author: mintasih_indri@staff.uns.ac.id

Abstract

In today's dynamic labor market, career adaptability has emerged as a critical competency for university students, particularly those enrolled in economic education programs. This study explores the integration of an andragogical approach in the development of educational internship e-modules as a strategy to enhance students' career adaptability. Employing a Systematic Literature Review (SLR) methodology, the research synthesizes findings from peer-reviewed publications indexed in reputable academic databases over the past decade. The review is structured around three core themes: (1) the theoretical foundations and efficacy of andragogy in higher education settings, (2) best practices in the design and implementation of e-learning modules for internship programs, and (3) the determinants of career adaptability among economic education students. The findings underscore that e-modules grounded in andragogical principles—such as self-directed learning, experiential engagement, and alignment with learners' future career goals—significantly strengthen students' adaptive capacities in navigating career transitions. Furthermore, the inclusion of reflective activities, mentorship elements, and real-world simulations within the e-modules is found to promote autonomy, self-efficacy, and proactive career development. This study advances both theoretical understanding and practical application by proposing a conceptual framework for designing andragogy-oriented internship e-modules tailored to the developmental needs of economic education students. The findings emphasize the imperative of aligning instructional design with adult learning principles to effectively equip students for success in a rapidly changing economic landscape.

Keywords: Andragogy; Career Adaptability; E-Module; Educational Internship; Systematic Literature Review.

INTRODUCTION

Skills are one of the important factors in getting a job. In the era of globalization and digital transformation, college graduates, especially education students, are expected to have soft skills in the form of career adaptability skills. Career adaptability is one part of career construction theory. According to Savickas (2012) Career construction theory consists of three parts: life theme, vocational personality, and career adaptability. Career adaptability includes an individual's ability to plan, explore career opportunities, and adapt skills to the needs of the education industry (Savickas, 2019). Career adaptability is crucial in the school-to-work transition, especially in the face of changes in the labor market due to automation and digitization (Schmidpeter & Winter-Ebmer, 2021). According to Smaldone et al. (2022) Adaptability in a dynamic work environment is needed for individuals to remain relevant in the competitive workforce. If career adaptability increases, one's readiness to make job decisions also increases (Ojala et al., 2023).

Along with competitive labor competition, the integration of technology in adult learning environments has become increasingly significant. This trend is driven by the need to enhance

instructional strategies and adapt to the evolving demands of the information age (Wang, 2020). Higher education institutions are facing demographic changes, with a growing number of adult learners who balance work and study. This shift necessitates a reevaluation of educational missions and the development of policies to support lifelong learning (Kasworm, 2020). The knowledge economy emphasizes the importance of lifelong learning for adult learners to remain competitive in the global market (Tan, 2015). This context underscores the need for educational programs that are responsive to the needs of adult learners, such as educational internship e-modules for economics education students.

Educational internship e-modules are digital tools designed to enhance the learning experience of economics education students by integrating practical internship experiences with academic learning. These modules can provide a structured and interactive platform for students to document their work, receive feedback, and develop essential skills. Therefore, a learning approach that develops students' independence is needed, namely the andragogy approach. The novelty in this research is to integrate the andragogy approach into the learning process. In addition, the integration of experience, and problem-based orientation have not been widely integrated into the design of teaching practice e-modules (Knowles, 1984). Andragogical approach developed by Knowles (2018) emphasizes that adult learners more effectively study through direct experience, reflection, and active involvement in the learning process. Andragogy, the theory and practice of adult education, is a well-established concept that has evolved significantly over the years (Cooke, 2015). Andragogy refers to the method and practice of teaching adult learners, emphasizing the unique needs and characteristics of adult education. The andragogical approach is relevant in the context of educational internship e-modules, as it aligns with the self-directed learning preferences of adult students. The implementation of andragogy approach in internships e-modules can help students more actively manage their learning, improve their conceptual understanding, and strengthen their career adaptability (Merriam & Bierema, 2020).

This research aims to explore the integration of an andragogical approach in the development of educational internship e-modules as a strategy to enhance students' career adaptability. This research introduces andragogical approaches to integrating technology with adult learning theories, providing a fresh perspective on instructional design and takes a culturally sensitive approach to understanding the learning values and approaches of adult learners from diverse backgrounds. This research anticipates future trends in adult education and proposes adaptive learning models to prepare learners for the evolving demands of the knowledge economy (Morris, 2019). This research is expected to contribute to Career Construction Theory (Savickas, 2012) and Multimedia Learning Theory (Mayer, 2009) applied in teaching practice modules. The results of this study can be a reference for the development of andragogy-based learning modules in teaching practice programs, as well as enrich the study of career adaptability in higher education. In addition, this research also provides insight for academics and researchers in developing innovative teaching materials based on digital technology.

LITERATURE REVIEW

The Andragogical Research

The term andragogy emerged between 1929 - 1948 in America since the publication of the American Journal for Adult Education, a journal related to adult education, but andragogy began to be formulated into a new theory since the 1970s by Malcolm Knowles (Knowles, 1984). Etymologically, andragogy comes from the Latin language which consists of 2 words, namely "andros" which means adult and "agogos" which means to lead or serve. Andragogy can be defined as a science and art that helps adult learners in participating in learning activities (Putri & Artha, 2023). The andragogical approach, which focuses on adult education, emphasizes the involvement of adult learners in organizing their own learning process. This approach contrasts with traditional pedagogical methods that are more teacher-directed and suited for younger learners (Bojiah et al., 2025). Andragogy is

recognized for its learner-centric nature, promoting self-directed learning and lifelong education (Popova, 2021). Learners with stronger self-directed learning skills are most likely to review previously learned course material (Jivet et al., 2020). self-directed learning and lifelong education have been widely applied in various contexts, including online education, where it helps create a learner-centered environment. Key andragogical strategies can be applied as follow:

1. Flipped Classroom

The flipped classroom model aligns well with andragogical principles by using classroom time for applying knowledge and critical thinking rather than passive lectures. This method has shown increased performance and knowledge retention, particularly in graduate medical education (French et al., 2020).

2. Virtual Education

The COVID-19 pandemic accelerated the adoption of virtual education, which has proven beneficial for adult learners by improving accessibility and engagement through reduced travel costs and increased audio-visual options (Beary et al., 2025). Strategies such as using chat functions, breakout rooms, and applying Bloom's taxonomy have been effective in virtual food safety education.

3. E-Learning Tools

The integration of e-learning tools like Discussion Boards, Blogs, and e-modul supports the andragogical approach by facilitating both content contribution and appraisal (Wang et al., 2018). These tools enhance student engagement and participation in online and hybrid courses.

There are six principles of andragogy education, which are described as follows:

1. Why and How: For adult learners, it is important for them to know the "why" of what they are learning and "how" they can apply the new knowledge.
2. Experience: adults enter new learning environments with experiences that inform their identity and abilities.
3. Self-concept: the majority of adults have moved on to the concept of self-directed learning, a state that greatly influences self-awareness.
4. Readiness: adult education should be accessible, flexible and easy to implement.
5. Problem Orientation: A focus on problems and practical solutions is essential for an adult learning environment.
6. Intrinsic Motivation: For andragogy to be most effective, it is important to provide intrinsic or internal motivation to adults by recognizing success and promoting increased self-esteem and confidence.

Andragogical approach according to Knowles et al., (1998) is described as follow in figure 1:

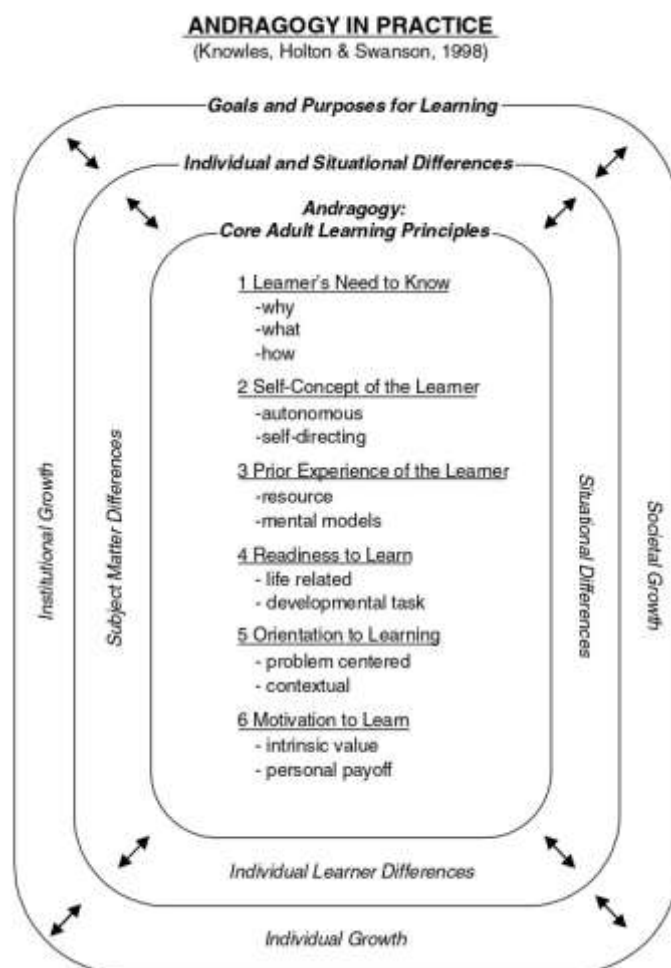


Figure 1. Andragogy in Practice

Internship E-Modules

E-modules is one of the e-learning tools. Specifically, Internship e-modules are digital platforms designed to facilitate the documentation and monitoring of students' internship experiences. These modules provide a structured way for students to report their work and for supervisors to oversee the internship process (Juhana et al., 2018). The COVID-19 pandemic has accelerated the adoption of e-internships, which simulate real working conditions through case studies and computer-based learning environments (Januszewski & Grzeszczak, 2021). E-modules enhance the learning experience by incorporating interactive tools and multimedia, making the transfer of knowledge and skills more effective (Norizan et al., 2018). Internship e-modules are increasingly being utilized to provide students with practical experience in a flexible and accessible manner (Fakhry et al., 2023), also can effectively enhance students' knowledge and confidence (Cevik & Abu-Zidan, 2025). According to Logan et al. (2021) the utilization of e-modules in teaching practice or educational internships programs can provide experiences to help students develop self-regulatory behaviors such as self-efficacy and metacognitive strategies to promote deep learning.

Career Adaptability

Career adaptability is a person's readiness to deal with tasks before they enter the workplace, as well as readiness to deal with adjustments caused by changes in conditions in the workplace and the workforce, both predictable and unpredictable (Savickas & Porfeli, 2012). Career adaptability is a psychosocial resource that helps individuals manage career transitions and challenges. It is crucial

for student success and employability (A. E. Santos & de Oliveira, 2020). Higher education levels and employment are positively related to higher career adaptability. Additionally, career guidance services and parental support play significant roles in enhancing career adaptability among vocational high school students (Ambiel et al., 2022). Career adaptability is also linked to various positive career outcomes, including job satisfaction, employability, and life satisfaction (Rudolph et al., 2017). There are 4 elements of career adaptability:

1. Career concern

The concern that individuals have about their careers can be built by having an optimistic and well-planned perspective on everything that will happen in their future by looking at the experiences they have had in the past and their current situation (Hasanah et al., 2024).

2. Career control

According to Arastaman (2019) *career control* refers to control of an individual's vocational future in terms of decision-making, assertiveness, locus of control, autonomy and self-determination.

3. Career curiosity

Career curiosity is a sense of curiosity about one's career so that he has a lot of relevant information so that he is more enthousiastized about the career choices that will be pursued or that are currently owned (Anggraini & Syakarofath, 2023)

4. Career confidence

In the context of careers, confidence is defined as a sustained interest in the workplace and curiosity about oneself and one's work, so career confidence is also defined as the confidence one has in making career decisions (Cameron, 2023).

Career adaptability is visualized with the following model:



Figure 2. Career Adaptability Visualization

Source: Santos (2017)

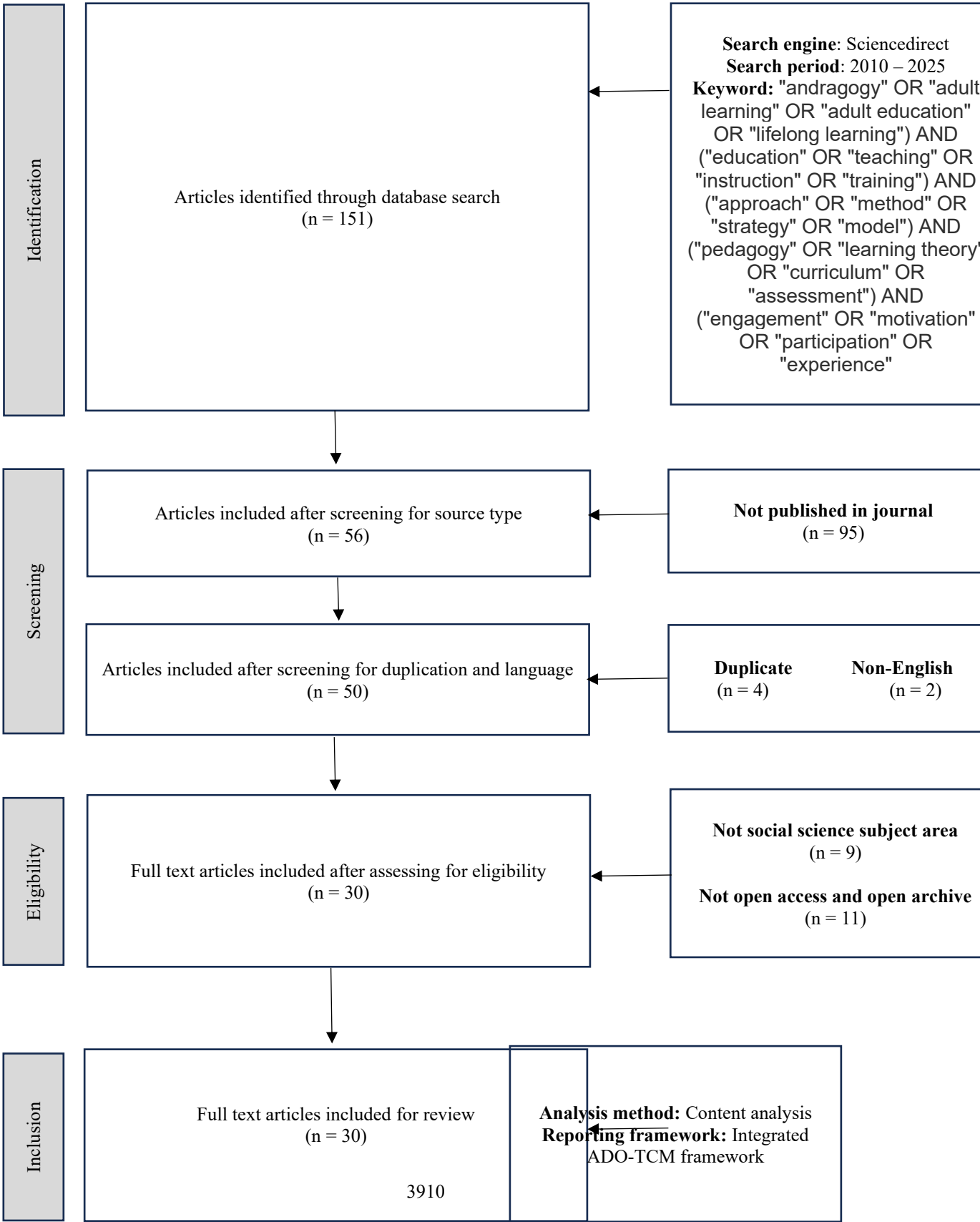
Table 1. Dimension of Career Adaptability

Dimensions	Definition	Behaviors
Career Concern	Individual is oriented to and involved in preparing for the future.	Thinking about the future, planning career paths, recognizing the impact of today's decisions on tomorrow, becoming aware of needed choices.
Career Control	The extent to which individuals take responsibility and ownership over their future.	Decision-making autonomy, self-discipline, persistence, accountability, doing what's right for oneself.
Career Curiosity	The extent to which individuals explore possible selves and future scenarios.	Investigating options, observing different work styles, exploring opportunities, being inquisitive about roles and growth areas.
Career Confidence	The extent to which individuals feel capable of pursuing aspirations and overcoming career-related obstacles.	Solving problems, overcoming obstacles, learning new skills, performing tasks well, having belief in one's own abilities.

Source: Savickas, (2005, 2012, 2013, 2019); Savickas & Porfeli, (2012)

RESEARCH METHODS

This research used Systematic Literature Review (SLR) and conducted according to the Scientific Procedures and Rationales for Systematic Literature Reviews protocol (SPAR-4-SLR) protocol (Paul et al., 2021).



The review is designed to comprehensively collect, filter, evaluate, and synthesize existing studies related to andragogy and adult learning. The population is All academic articles related to andragogy, adult education, lifelong learning, and related instructional strategies published from 2010 to 2025, which is there are 151 articles were found using a search strategy on the ScienceDirect database, covering the period 2010–2025. The search included combinations of terms related to *andragogy*, *adult learning*, *internships e-modules*, and *lifelong learning education*. From the 151 articles, 56 articles remained after excluding 95 articles that were not published in academic journals. After removing 4 duplicate articles and 2 non-English articles, 50 articles remained. Further filtering excluded 9 articles not related to social science and 11 articles that were not open access or not in open archives, leaving 30 articles for full-text review. The selected articles (n=30) were analyzed using Content Analysis, a qualitative method to identify patterns, categories, and themes across the literature. Findings were reported using the Integrated ADO-TCM framework (an approach integrating Antecedents, Decisions, Outcomes with Theories, Contexts, and Methodologies).

RESULTS AND DISCUSSION

The finding of this research show that e-modules rooted in andragogical principles such as self-directed learning, experiential engagement, and relevance to learners' future careers significantly contribute to students' career adaptability. Furthermore, the integration of reflective activities, mentoring elements, and real-world simulations within e-modules is found to foster autonomy, confidence, and proactive career planning. Andragogical principles that contributed to career adaptability include:

1. Self-Directed Learning (SDL)

Students set personal development goals, engage in independent projects, and take ownership of their learning journey, developing autonomy, critical thinking, and lifelong learning habits. Schrage et al., (2025) emphasizes a shift from traditional, teacher-centered methods to a learner-centered, experiential, and self-directed approach aligned with the career adaptability needs of adult learners. Ryan et al., (2025) also emphasizes the studio-based education model grounded in *heutagogy* (self-determined learning). The studies on Edcamps (Carpenter & Linton, 2016, 2018) revealed that these unconference-style professional development events are highly valued by educators for being voluntary, self-directed, and collaborative. (van der Stap et al., 2024) investigated blended learning strategies for adult learners in higher education. The study emphasized that adult learners thrive when instructional designs support self-directed learning, allow autonomy, and clearly demonstrate relevance to professional practice. Terblanche et al., (2025) explain that accounting educators acknowledged the need for further training in critical thinking pedagogy and explicitly linked SDL to enhanced critical reasoning and workplace readiness.

2. Experiential Learning

In the humanistic philosophy of adult learning (Scholtz, 2024) experiential learning is a central component, along with psychological safety and learner-centered facilitation. Through hands-on projects with organizations like UNICEF, simulations, and consulting engagements, students bridge theory and practice, enhancing their readiness for dynamic business challenges. The Living Lab Learning Framework (Bhatta et al., 2025) reinforces these themes by promoting co-creation and mutual learning among diverse stakeholders in real-world contexts. By integrating constructivist, experiential, and social learning theories, the framework ensures that participants

are actively engaged and learning is tailored to complex, interdisciplinary problems. There is the shift in international business education towards active, case-based, and project-based learning, that reflecting an effort to bridge academic theory with practical, industry-relevant skill development (Calma et al., 2024). Furthermore, adaptive learning environment, facilitated by digital tools, also emphasizes accessibility and diversity as drivers of engagement and motivation, reinforcing learners' resilience and readiness for lifelong learning and career transitions (De Anna et al., 2015).

3. Relevance to Future Careers

The teacher mentoring self-efficacy scale study (Tickell & Klassen, 2024) highlighted that mentoring contributes to both mentors' and mentees' self-efficacy and professional identity. The developmental feedback and mastery experiences in mentoring, central to Bandura's social cognitive theory, mirror experiential learning that strengthens confidence and adaptability in career transitions. The "Students as Partners" (SaP) model reported by Maharajan et al., (2025) empowers pharmacy students by involving them in curriculum co-design, making learning more aligned with their career aspirations. Courses are tailored to align with students' job contexts and leadership aspirations, with SDG integration ensuring content relevance to global and local sustainability issues. This alignment fosters motivation and job-related competency growth. Jensen & Ottesen, (2022) analyzed teaching practices in leadership education using Actor-Network Theory and found that connecting abstract concepts to professional practice, often through discussions, collaborative problem-solving, and structured reflection, was central to effective learning.

Al Issa et al., (2024) emphasized the integration of reflective, experiential, and interdisciplinary learning strategies such as real-life case studies, collaborative projects, and critical thinking. The integration of andragogical principles not only enriched the students learning experience but also enhanced students' adaptability, leadership readiness, and ethical orientation. Walmsley & Wraae, (2022) suggesting that fostering identity development, agency, and emancipatory thinking not only aligns with adult learning principles but also equips students to question and shape their career trajectories meaningfully.

CONCLUSION

This study aimed to explore the integration of andragogical principles in developing educational internship e-modules to enhance the career adaptability of economic education students, using a systematic literature review guided by the SPAR-4-SLR protocol. The review reveals that adult learning strategies, particularly self-directed learning, experiential engagement, and career relevance, are critical to preparing students for an increasingly dynamic and complex labor market. The integration of these principles into e-modules not only fosters autonomy and problem-solving but also strengthens students' ability to navigate career transitions, adapt to workplace demands, and align learning with personal and professional goals.

IMPLICATIONS

The findings of this review carry practical implications for curriculum designers, educators, and policymakers in higher education. First, internship e-modules should be intentionally designed to empower students as active agents in their own learning, incorporating reflective tasks, project-

based experiences, and real-world problem-solving scenarios. Second, institutions should provide faculty development programs to ensure educators are equipped to facilitate adult learning effectively. Third, partnerships with industry stakeholders can help ensure module content remains relevant to evolving career competencies and labor market expectations.

LIMITATIONS

Despite its contributions, this study is limited by the scope of literature included, which may not fully represent all geographic or institutional contexts. Additionally, the absence of empirical testing on a developed e-module limits the ability to evaluate the direct impact of such interventions on student outcomes. As a conceptual and literature-based study, the findings offer guidance but not definitive evidence of effectiveness.

FUTURE RESEARCH

Future studies should focus on the design, implementation, and empirical evaluation of internship e-modules grounded in andragogical principles. Mixed-method or longitudinal research could explore the actual impact of these modules on students' career adaptability across different educational and cultural contexts. Furthermore, investigating the role of digital platforms and technologies in supporting adult learning strategies within internship programs would provide valuable insights for module development and policy formulation.

BIBLIOGRAPHY

- Al Issa, H. E., Thai, M. T. T., & Nguyen, H. (2024). A systematic mapping of social entrepreneurship education: A call for increased collaboration, ethics, and research frameworks. *International Journal of Management Education*, 22(3), 101025. <https://doi.org/10.1016/j.ijme.2024.101025>
- Ambiel, R. A. M., Martins, G. H., & Salvador, A. P. (2022). Differences in career adaptability according to education and employment status. *Interacao Em Psicologia*, 26(2), 190–198. <https://doi.org/10.5380/riep.v26i2.77840>
- Anggraini, G. A., & Syakarofath, N. A. (2023). Bagaimana Peran Adaptabilitas Karir terhadap Work Engagement Karyawan Milenial di Provinsi Jakarta? *Jurnal Ilmiah Psikomuda Connectedness*, 3(1), 12–25.
- Arastaman, G. (2019). Vocational Identity and Career Construction in Education. In *Reconsidering the Career Construction in Modern Era* (p. 15). Turki: IGI Global Publishing House.
- Beary, M. A., Dicaprio, E., Feng, Y., Chang, E. A. B., Dunn, L. L., Padilla-Zakour, O. I., & Snyder, A. B. (2025). Virtual Food Safety Education Programs Reveal Significant Opportunities for Accessible and Effective Distance Learning. *Food Protection Trends*, 45(1), 8–18. <https://doi.org/10.4315/FPT-23-030>
- Bhatta, A., Vreugdenhil, H., & Slinger, J. (2025). A living lab learning framework rooted in learning theories. *Environmental Impact Assessment Review*, 114(March), 107894. <https://doi.org/10.1016/j.eiar.2025.107894>
- Bojiah, J., Alfiras, M., & Jebasingh, R. V. A. (2025). Review of the Need for Andragogical Inclusion in Higher Education. In W. AlDhaen, E., Braganza, A., Hamdan, A., Chen (Ed.), *Sustainability with Artificial Intelligence (AI): Challenges and Opportunities*. Springer Cham. https://doi.org/https://doi.org/10.1007/978-3-031-71318-7_22
- Calma, A., Suder, G., & Kenworthy, T. P. (2024). Focus on education: Taking stock of key themes, topics, trends and communities in international business and international management

- education research. *International Journal of Management Education*, 22(1), 100902. <https://doi.org/10.1016/j.ijme.2023.100902>
- Cameron, A. (2023). *Career Curiosity (Or: How to Find Out Things About Work You Don't Know Yet)*. Careers Perspectives from the University of Bath Careers. <https://blogs.bath.ac.uk/careers/2023/12/08/career-curiosity-or-how-to-find-out-things-about-work-you-dont-know-yet/>
- Carpenter, J. P., & Linton, J. N. (2016). Edcamp unconferences: Educators' perspectives on an untraditional professional learning experience. *Teaching and Teacher Education*, 57, 97–108. <https://doi.org/10.1016/j.tate.2016.03.004>
- Carpenter, J. P., & Linton, J. N. (2018). Educators' perspectives on the impact of Edcamp unconference professional learning. *Teaching and Teacher Education*, 73, 56–69. <https://doi.org/10.1016/j.tate.2018.03.014>
- Cevik, A. A., & Abu-Zidan, F. M. (2025). Online Extended Focused Assessment with Sonography for Trauma (EFAST) Course Enhanced Knowledge and Perceived Confidence among Medical Trainees during The COVID-19 Pandemic Disaster. *World Journal of Emergency Surgery*, 20(1). <https://doi.org/10.1186/s13017-025-00604-8>
- Cooke, N. A. (2010). Becoming an Andragogical Librarian: Using Library Instruction As A Tool to Combat Library Anxiety and Empower Adult Learners. *New Review of Academic Librarianship*, 16(2), 208–227. <https://doi.org/10.1080/13614533.2010.507388>
- De Anna, L., Canevaro, A., Ghislandi, P., Striano, M., Maragliano, R., & Andrich, R. (2014). Net@ccessibility: A research and training project regarding the transition from formal to informal learning for university students who are developing lifelong plans. *Alter*, 8(2), 118–134. <https://doi.org/10.1016/j.alter.2014.02.002>
- Fakhry, H., Nicho, M., Bataineh, E., & Girja, S. (2023). The Evaluation of Internship in the Digital Information Age: A Case Study. *International Journal of Online Pedagogy and Course Design*, 14(1). <https://doi.org/10.4018/IJOPCD.333630>
- French, H., Arias-Shah, A., Gisondo, C., & Gray, M. M. (2020). The Flipped Classroom in Graduate Medical Education. *NeoReviews*, 21(3), e150–e156. <https://doi.org/10.1542/neo.21-3-e150>
- Hasanah, R., Munawwaroh, I., Qushwa, F. G., & Agus R, A. H. (2024). Pengembangan Career Adaptability Melalui Inovasi Sumber Daya Manusia. *EDUKASIA: Jurnal Pendidikan Dan Pembelajaran*, 5(1), 169–178. <https://doi.org/10.62775/edukasia.v5i1.734>
- Januszewski, A., & Grzeszczak, M. (2021). Internship of Accounting Students in the Form of E-Learning: Insights from Poland. *Education Sciences*, 11(8). <https://doi.org/10.3390/educsci11080447>
- Jensen, R., & Ottesen, E. (2022). Unfolding teaching practices in higher education courses: Cases from school leadership programs. *International Journal of Educational Research*, 112(August 2021), 101919. <https://doi.org/10.1016/j.ijer.2021.101919>
- Jivet, I., Scheffel, M., Schmitz, M., Robbers, S., Specht, M., & Drachsler, H. (2020). From Students With Love: An Empirical Study on Learner Goals, Self-Regulated Learning and Sense-Making of Learning Analytics in Higher Education. *Internet and Higher Education*, 47(July), 100758. <https://doi.org/10.1016/j.iheduc.2020.100758>
- Juhana, A., Abdullah, A. G., Somantri, M., Aryadi, S., Zakaria, D., Amelia, N., & Arasid, W. (2018). E-Portfolio Web-based for Students' Internship Program Activities. *IOP Conference Series: Materials Science and Engineering*, 306(1). <https://doi.org/10.1088/1757-899X/306/1/012003>
- Kasworm, C. (2020). Adult Workers as Learners in the USA Higher Education Landscape. In T. (eds) Slowey, M., Schuetze, H.G., Zubrzycki (Ed.), *Inequality, Innovation and Reform in Higher Education*. Springer, Cham. https://doi.org/https://doi.org/10.1007/978-3-030-28227-1_15
- Knowles, M. S. (1984). *Andragogy in Action: Applying Modern Principles of Adult Education*. San Francisco, CA: Jossey Bass.
- Knowles, M. S. (2018). The Modern Practice of Adult Education. In *Education for Adults and Other*

- Essays* (pp. 9–34). New York: Cambridge The Adult Education Company.
<https://doi.org/10.7312/kepp90968-001>
- Knowles, M. S., Holton, E. F., & Swanson, R. A. (1998). The Adult Learner. In *The Definitive Classic in Adult Education and Human Resource Development. 6th edition*. Burlington, USA: Elsevier.
- Logan, R. M., Johnson, C. E., & Worsham, J. W. (2021). Development of An E-Learning Module to Facilitate Student Learning and Outcomes. *Teaching and Learning in Nursing, 16*(2), 139–142.
<https://doi.org/10.1016/j.teln.2020.10.007>
- Maharajan, M. K., Sivapalan, S., & Rajiah, K. (2025). Empowering students in curriculum design and pedagogy: Perceptions of pharmacy students as partners; A qualitative study. *Currents in Pharmacy Teaching and Learning, 17*(4), 102280. <https://doi.org/10.1016/j.cptl.2025.102280>
- Mayer, R. (2009). *Pembelajaran Multimedia*. Cambridge: Cambridge University Press.
<https://doi.org/https://doi.org/10.1017/CBO9780511811678>
- Merriam, S. B., & Bierema, L. L. (2020). *Adult Learning: Linking Theory and Practice*. Jossey-Bass.
- Morris, T. H. (2019). Adaptivity Through Self-Directed Learning to Meet the Challenges of Our Ever-Changing World. *Adult Learning, 30*(2), 56–66. <https://doi.org/10.1177/1045159518814486>
- Norizan, N. A. M., Taib, S. M., & Zakaria, N. (2018). E-internship System with Genetic Algorithm. *2017 IEEE Conference on E-Learning, e-Management and e-Services, IC3e 2017, 44–48*.
<https://doi.org/10.1109/IC3e.2017.8409236>
- Ojala, J., Nikander, A., Aunola, K., De Palo, J., & Ryba, T. V. (2023). The Role of Career Adaptability Resources in Dual career Pathways: A Person-Oriented Longitudinal Study Across Elite Sports upper Secondary School. *Psychology of Sport and Exercise, 67*(May 2022), 102438.
<https://doi.org/10.1016/j.psychsport.2023.102438>
- Paul, J., Lim, W. M., O’Cass, A., Hao, A. W., & Bresciani, S. (2021). Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR). *International Journal of Consumer Studies, 1*(April), 1–16. <https://doi.org/10.1111/ijcs.12695>
- Popova, I. (2021). The Development Strategy of Russia’s System of Additional Professional Education. In *Learning Never Ends... Spaces of Adult Education: Central and Eastern European Perspectives* (pp. 274–281). <https://doi.org/10.31338/uw.9788323552062.pp.273-281>
- Putri, N. R. M., & Artha, I. K. A. J. (2023). Penerapan Pendekatan Andragogi dalam Meningkatkan Partisipasi Belajar Peserta Didik Program Kesetaraan Paket C di SKB Negeri Surabaya. *J=PLUS: Jurnal Mahasiswa Pendidikan Luar Sekolah, 12*(1), 119–127.
- Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior, 98*, 17–34. <https://doi.org/10.1016/j.jvb.2016.09.002>
- Ryan, A., Morel, C., Goodman, J., Hermes, J., Rehman, M. A., Louche, C., Keranen, A., & Juntunen, M. (2025). Learning to learn differently: Studio-based education for responsible management. *International Journal of Management Education, 23*(3).
<https://doi.org/10.1016/j.ijme.2025.101177>
- Santos, A. E., & de Oliveira, M. C. (2020). Análise da adaptabilidade de carreira em estudantes concluintes do ensino superior. *Interacao Em Psicologia, 24*(1), 489–500.
<https://doi.org/10.5380/PSI.V24I1.62877>
- Santos, A. I. de J. C. S. (2017). Life Designing and Career Adaptability in Management and Psychology. *Universidade De Lisboa*.
- Savickas, M. L. (2005). The Theory and Practice of Career Construction. In *Career Development and Counseling: Putting Theory and Research to Work* (pp. 42–70). Hoboken, NJ: John Wiley.
- Savickas, M. L. (2012). Career Construction. *Encyclopedia of Career Development, 85–88*.
- Savickas, M. L. (2013). The 2012 Leona Tyler Award Address: Constructing Careers—Actors, Agents, and Authors. *The Counseling Psychologist, 41*(4), 648–662.
<https://doi.org/10.1177/0011000012468339>
- Savickas, M. L. (2019). Career Construction Theory and Practice. *Career Development Quarterly, 67*(3), 233–245.

- 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>
- Schmidpeter, B., & Winter-Ebmer, R. (2021). Automation, Unemployment, and The Role of Labor Market Training. *European Economic Review*, 137(June 2020). <https://doi.org/10.1016/j.eurocorev.2021.103808>
- Scholtz, G. (2024). Exploratory study of the humanistic philosophy of adult learning as principal philosophy for leadership development. *International Journal of Management Education*, 22(2), 100949. <https://doi.org/10.1016/j.ijme.2024.100949>
- Schrage, B., Maheshwari, G., & Velasquez, S. (2025). Broadening the competencies of MBA students in Vietnam: Integrating andragogical approaches with sustainable development goals. *International Journal of Management Education*, 23(3), 101217. <https://doi.org/10.1016/j.ijme.2025.101217>
- Smaldone, A., Ippolito, M., Lagger, B., & Pellicano, C. (2022). Adaptability in Dynamic Work Environments: A Critical Review. *International Journal of Organizational Psychology*, 19(4), 55–72.
- Tan, P. L. (2010). A Non-western Investigation of Adult Learners' Professional Development Engagement in Higher Education: A Culturally Sensitive Perspective. In *Career Development Book*. London: King's Learning Institute, King's College.
- Terblanche, A., van Rooyen, A. A., & Enwereji, P. C. (2025). When teachers become learners: Challenges with the integration of critical thinking into accounting curricula. *Thinking Skills and Creativity*, 58(March), 101878. <https://doi.org/10.1016/j.tsc.2025.101878>
- Tickell, R. M., & Klassen, R. M. (2024). Developing the Teacher mentoring self-efficacy scale (TMSES) using the Delphi method and exploratory factor analysis. *Teaching and Teacher Education*, 139(June 2023), 104452. <https://doi.org/10.1016/j.tate.2023.104452>
- van der Stap, N., van den Bogaart, T., van Ginkel, S., Rahimi, E., & Versendaal, J. (2024). Towards teaching strategies addressing online learning in blended learning courses for adult-learners. *Computers and Education*, 219(May), 105103. <https://doi.org/10.1016/j.compedu.2024.105103>
- Walmsley, A., & Wraae, B. (2022). Entrepreneurship education but not as we know it: Reflections on the relationship between Critical Pedagogy and Entrepreneurship Education. *International Journal of Management Education*, 20(3), 100726. <https://doi.org/10.1016/j.ijme.2022.100726>
- Wang, V. (2010). *Integrating Adult Learning and Technologies for Effective Education: Strategic Approaches*. IGI Global Scientific Publishing. <https://doi.org/10.4018/978-1-61520-694-0>
- Wang, Y., Koong, K. S., & Sun, J. (2013). E-learning Tools for Andragogy: A Scale Model of Technology-based Active Learning. *International Journal of Services and Standards*, 8(3), 214–229. <https://doi.org/10.1504/IJSS.2013.057234>