

Andragogues' Readiness to Design the Educational Process in the System of Non-formal Adult Education in Ukraine as a Resource for Sustainable Development

Larysa Lukianova

<https://orcid.org/0000-0002-0982-6162>

Ivan Ziaziun Institute of Pedagogical Education and Adult Education, National
Academy of Pedagogical Sciences of Ukraine, Kyiv, Ukraine

Igor Radomski

<https://orcid.org/0000-0003-2452-0898>

Ivan Ziaziun Institute of Pedagogical Education and Adult Education, National
Academy of Pedagogical Sciences of Ukraine, Kyiv, Ukraine

Abstract

This article presents the results of an action-research-oriented study on andragogues' readiness to design the educational process in non-formal adult education in Ukraine in the context of reorienting education towards sustainability. This orientation is reflected in the active involvement of the researchers – as members of the Ukrainian Adult Education Association and practitioners in the field of adult education – in the professional community under study, as well as in the practice-oriented focus of the findings aimed at supporting the further development of andragogical expertise. The study is based on a questionnaire survey of 35 members of the Ukrainian Adult Education Association. The findings reveal both sustainable and unsustainable aspects of educational design practice, particularly regarding content selection, learning formats, assessment approaches, and partnership with adult learners. More than half of the respondents report a need to deepen their competencies in educational design. Communication, empathy, and creativity emerge as personally meaningful qualities influencing educational quality and sustainability-oriented practice. The article highlights institutional and personal conditions shaping educational design and argues for systematic professional development and cross-sectoral cooperation. The results contribute to a more holistic understanding of andragogues' professional readiness and support the development of Education for Sustainable Development in contexts of social transformation.

Keywords: Andragogues, educational process design, non-formal adult education, readiness for educational design, sustainable development.

Introduction

Today, individual development through formal, non-formal, and informal education forms the foundation of sustainable development. For Ukraine, amidst war and profound social transformations, adult education has become a critical tool for adaptation, social cohesion, and national recovery. European integration, digitalization, and the challenges of military aggression necessitate qualitative shifts in lifelong learning (Lukianova & Kravchenko, 2025). This directly correlates with the 2030 Agenda and the achievement of the Sustainable Development Goals (SDGs) (United Nations, 2015).

There is a broad consensus today that the SDGs cannot be achieved without education that is equitable, high-quality, inclusive, and sustained throughout the lifespan (Heasley et al., 2020; Nketsia et al., 2020; Sunthonkanokpong & Murphy, 2019). In this context, Education for Sustainable Development (ESD) is understood as an educational approach focused on developing individual human potential for knowing, being, acting, and living together in accordance with the principles of sustainability (Hopkins et al., 2020).

Following the adaptation of the SDGs to the national context (Government of Ukraine, 2019), education in Ukraine has been identified as a vital instrument for strategic management and sustainable development (Verkhovna Rada of Ukraine, 2018). In line with SDG 4, the priority is to ensure inclusive, equitable, and lifelong quality education for all (Ministry of Economic Development, Trade and Agriculture of Ukraine, 2020). As adult learning is transversal to all global goals, it underpins initiatives aimed at raising awareness and enhancing professional capacities across every dimension of sustainable development (Ebner & Motschilnig, 2019).

An active role in the development of adult education in Ukraine as an important instrument for advancing ESD is played by the Ukrainian Adult Education Association (UAEA). The Association's primary mission is to foster the development of the adult education system in Ukraine, promote a learning society, support non-formal adult education, facilitate international cooperation, and provide training and professional support for specialists working in the field of adult education. In 2016, the UAEA became a member of the European Association for the Education of Adults (EAEA) (Lukianova, 2025, p. 199).

Consequently, adult education serves as both a transversal goal and a key instrument for achieving the SDGs (Ebner & Motschilnig, 2019). Participation in non-formal learning is increasingly recognized as an essential component of lifelong education, fostering the development of both individuals and society (Vaculíková et al., 2024).

The expediency of this study is driven by the imbalance between the academic focus on formal education and the growing global demand for non-formal learning (Karanikola & Panagiotopoulos, 2023; Lockhart, 2016). In this context, the International Council for Adult Education (ICAE) emphasizes the need to: (1) strengthen institutional structures (specifically community learning centers); (2) recognize the role of educators and improve their working conditions and professional training; and (3) develop evidence-based curricula adapted to the needs of adult learners (ICAE, 2020, p. 13).

Against this backdrop, the present study focuses on examining the readiness of andragogues to design the educational process within the system of non-formal adult

education in Ukraine, taking into account that participation in non-formal education can expand individuals' opportunities by enhancing self-confidence, employability, and the ability to exercise greater control over everyday life (Boyadjieva & Ilieva-Trichkova, 2023).

The aim of the study is to examine the readiness of andragogues to design the educational process within the system of non-formal adult education as a resource for sustainable development. The tasks of the research include: (1) to analyze andragogues' approaches to the provision of educational services in the context of non-formal adult education in Ukraine; (2) to examine the self-assessed level of theoretical and methodological readiness of andragogues – members of the Ukrainian Adult Education Association – to design the educational process in non-formal adult education in Ukraine; (3) to identify and analyze the barriers and challenges encountered by andragogues in the design and implementation of the educational process in non-formal adult education.

To achieve the aim, the study addresses the following research questions:

1. How do andragogues perceive their level of theoretical and methodological readiness for designing the educational process (instructional design) in the non-formal sector?
2. What are the primary methodological gaps and barriers that hinder the effective design and implementation of educational activities by andragogues in Ukraine?
3. In what ways does the design of the educational process in non-formal adult education contribute to the achievement of SDGs in the context of current social transformations?

Research Methodology

The methodological framework of the study is based on a combination of holistic, learner-centered and competence-based approaches, which make it possible to account for the professional experience, motivation and reflective practices of adult participants in the educational process.

To achieve the aim of the study, a combination of theoretical and empirical methods was employed. The theoretical methods included an analysis of academic literature, regulatory and policy documents, and international strategic initiatives in the field of adult education and sustainable development, which made it possible to define the conceptual foundations of the study.

The empirical component consisted of a questionnaire survey conducted among members of the UAEA who were actively engaged in non-formal adult education. The questionnaire included closed-ended questions addressing the forms of organization of the educational process, barriers and challenges in educational design, as well as self-assessment of professional readiness. The inclusion of practitioners with more than ten years of experience in adult education contributed to a more in-depth interpretation of the findings.

The study has an applied orientation and focuses on the empirical exploration of andragogues' professional readiness to design the educational process in non-formal adult education. The results may be used to inform the improvement of professional development program and educational policy in the field of adult education. Data were

collected in the first half of 2024.

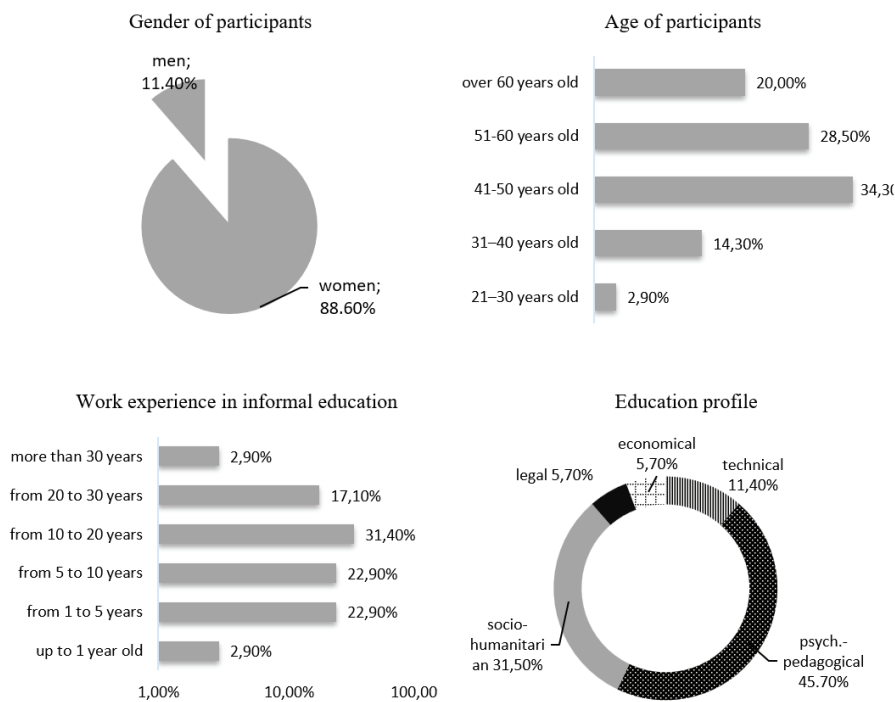
Participants. The authors organized and conducted a questionnaire survey to examine the self-assessed readiness of andragogues – members of the UAEA – to design the educational process in non-formal adult education in Ukraine as an important instrument for ESD. Personalized invitations to participate in the survey were sent via email to all UAEA members (48 legal entities and 41 individual members).

In total, 35 UAEA members participated in the survey. All respondents were actively involved in non-formal adult education in Ukraine and possessed sufficient theoretical and practical experience in this field. The reduced participation rate among invited respondents can be explained by objective circumstances related to the ongoing war, including military actions, forced displacement, and the temporary suspension of professional activities.

All participants provided informed consent to take part in the study. The sample was formed using a non-probability purposive sampling strategy, based on criteria of accessibility, professional engagement in non-formal adult education, and interest in the research topic.

The participant profile indicates a predominance of women (88.6%), representatives of the 40–60+ age group (82.8%), and respondents with diverse educational backgrounds: psychological and pedagogical (45.7%), socio-humanitarian (31.5%), technical (11.4%), legal (5.7%), and economic (5.7%). The majority of participants carried out their educational activities in urban settings (97.1%). A comprehensive overview of the participant profile is presented in Figure 1.

The sample included andragogues with varying levels of professional experience in non-formal adult education, ranging from less than one year to over 30 years. Most respondents reported between 5 and 30 years of professional experience (71.4%), reflecting the inclusion of both early-career and highly experienced practitioners. This diversity of professional experience enabled the identification of common trends as well as specific needs of andragogues at different stages of their professional careers (see Figure 1).

Figure 1*Generalized Profile of Survey Participants (Source: Developed by the authors)*

The majority of respondents carried out their educational activities within educational institutions of various forms of ownership (over 50%) and in a wide range of civil society and non-governmental organizations (over 40%).

Data collection tool. The data collection instrument was a structured questionnaire developed by the authors. It consisted of 25 closed-ended questions grouped into four thematic sections:

1. General and socio-demographic characteristics of the respondents;
2. Characteristics of educational provision in non-formal adult education in Ukraine;
3. Andragogues' theoretical and methodological readiness for designing the educational process in non-formal adult education;
4. Challenges and constraints encountered in the design and implementation of the educational process in non-formal adult education.

The questionnaire was administered online via Google Forms after participants had been informed about the purpose of the study.

Data collection procedures. Participants were informed about the aim of the study, and anonymity and confidentiality of the collected data were guaranteed. Given the wartime context of data collection, particular attention was paid to the ethical dimensions of researcher-participant interaction. As members of the professional community under study, the researchers maintained an established relationship of trust with the

respondents. Personalized email invitations were accompanied by a brief explanation of the research relevance to the current challenges facing adult education in Ukraine. Participants were assured of their right to withdraw at any stage, and the voluntary nature of participation was emphasized throughout the process. This relational and context-sensitive approach to data collection reflects the researchers' commitment to ethical practice and their awareness of the vulnerabilities experienced by professionals working under conditions of war and social disruption.

Contribution of the authors to the elaboration of the article. The first author, who serves as Chair of the Board of the UAEEA, was responsible for the methodological design of the study, including the development of its conceptual framework and the logic of the empirical analysis. She contributed to the interpretation and synthesis of the findings within the context of contemporary theories of andragogy and education for sustainable development, and was responsible for drafting and academically editing the final version of the manuscript.

The second author, a member of the UAEEA, was responsible for the organization and implementation of the empirical study, including data collection among the Association members, initial data processing, systematization, and visualization of results.

Both authors contributed to the discussion of the results and approved the final version of the manuscript.

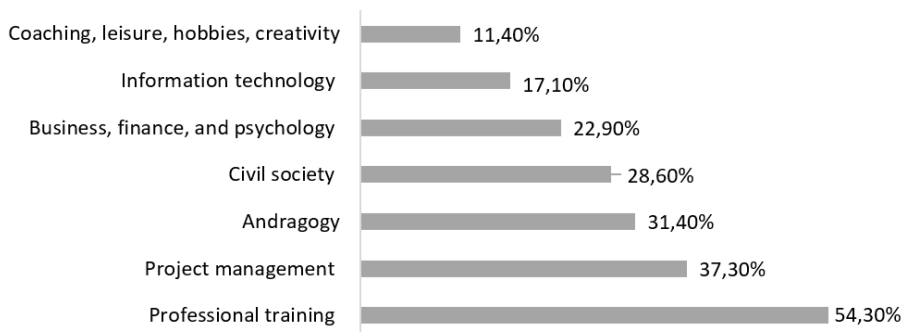
Results

This section presents the results of the questionnaire in accordance with the research tasks.

Analysis of Andragogues' Approaches to the Provision of Educational Services in the Context of Non-formal Adult Education in Ukraine

The survey results indicate that andragogues work with various age groups of the adult population; however, the most represented groups are those aged 36–45 and 46–50. A significant proportion of respondents also reported working with adults aged 51–55 and 25–35, which indicates that non-formal adult education is primarily oriented toward economically and professionally active age groups. At the same time, participation of adults aged 56–65 and over 65 in non-formal education programs is less widespread, which may indicate limited involvement of older age groups in educational initiatives.

The priority areas of activity in the field of non-formal adult education identified by the respondents are presented in Figure 2.

Figure 2*Priority Areas in Informal Adult Education (Source: Developed by the authors)*

The most popular forms of non-formal adult education identified by the respondents are presented in Table 1.

Table 1*Types of Non-formal Adult Education Organizations Using Andragogues – Members of the UAEA*

Type of informal adult education organizations	Number of respondents who actively use this type of informal education (N=35)
Short-term courses, seminars, training sessions	27
Distance learning	19
Training in professional programs, advanced training	17
Blended learning	11

Source: Developed by the authors

The data presented in Table 1 indicate that the most widespread forms of non-formal adult education are short-term courses, seminars, and training sessions, which reflects andragogues' focus on practice-oriented learning formats and the rapid updating of professional competences.

Self-assessment of the Theoretical and Methodological Readiness of Andragogues to Design the Educational Process in Non-formal Adult Education

According to the results of the self-assessment (Table 2), the majority of respondents indicated that they partially had theoretical knowledge regarding the essence, characteristics, and procedures of designing the educational process in non-formal adult education and were oriented toward further professional learning. At the same time,

about one third of the respondents considered that they had this knowledge at a high level.

Table 2
Self-assessment of Andragogues – Members of the UAEA – of Their Theoretical Knowledge

	I know perfectly well, I can share my experience with colleagues	I know to some extent, I need additional information	My knowledge is superficial; I need systematic training
Self-assessment of one's theoretical knowledge regarding the essence and characteristics of the technology of designing the educational process in informal adult education	12 (34.3%)	22 (62.8%)	1 (2.9%)
Self-assessment of one's theoretical knowledge of procedures for designing educational processes in informal adult education	11 (31.4%)	20 (57.2%)	4 (11.4%)

Source: Developed by the authors

The overwhelming majority of respondents (94.3%) indicated that they directly engaged in designing the educational process in non-formal adult education. At the same time, almost half of them emphasized the need for additional training in this area. About half of the respondents had already completed specialized courses related to designing the educational process, while other respondents had acquired relevant knowledge fragmentarily or had no such learning experience.

Respondents identified the joint activity of the andragogue and the adult learner as the key mechanism for developing the concept of educational projects. Most of the participants noted that they constantly or to some extent involved learners in the joint design of the educational process, in particular when determining the forms and methods of instructional work.

The majority of respondents stated that the management and teams of non-formal adult education institutions at which they worked predominantly or partially supported their professional activities, including in the area of educational process design.

Respondents also emphasized the importance of the personal qualities of an andragogue –specifically communicativeness, empathy, creativity, and self-demandingness – as significant factors for the effective design of the educational process.

Table 3 lists personal qualities of an andragogue prioritized by the respondents with regard to their relevance for high-quality design of the educational process in the system of non-formal adult education.

Table 3

Priority of Personal Qualities of an Andragogue Necessary for High-Quality Design of the Educational Process in the System of Non-formal Adult Education

Personal qualities of an andragogue	Priority among respondents (N=35)
Demandingness towards oneself and other participants in the educational process	15
Sociability	14
Friendliness, empathy	14
Creativity, striving to implement unconventional approaches	13
Dedication to acquiring the knowledge and skills necessary for the high-quality design of the educational process in informal adult education	12
Confidence in positive results	11
Constructiveness in understanding the need for changes in educational activities and improving the types, forms, and methods of teaching	7

Source: Developed by the authors

Regarding the requirement to improve skills in designing the educational process in non-formal adult education, more than half of the respondents reported a need for further development of educational design skills, while only one fifth of the participants assessed their level as sufficient to disseminate their own experience among colleagues.

Barriers and Challenges in Designing and Implementing the Educational Process in Non-formal Adult Education

Table 4 provides the answers analyzed to identify the barriers and challenges that arise in the process of designing and implementing the educational process in non-formal adult education.

Table 4

Study of Complications Arising During the Design and Implementation of the Educational Process in Non-formal Adult Education

Complications that may arise during the design and implementation of the educational process	I constantly feel difficulties	I feel some difficulties	I rarely feel difficulties	I don't feel any difficulties
Difficulties in designing the educational process (goals and content of education, learning opportunities for adult learners, learning conditions, formulation of educational tasks)	1 (2.9%)	15 (42.8%)	16 (45.7%)	3 (8.6%)
Difficulties in selecting and structuring educational material in a logical sequence, selecting the optimal forms of presenting its content in accordance with specific goals and objectives	-	16 (45.7%)	15 (42.8%)	4 (11.5%)
Difficulties in determining possible (given the conditions of the educational process) technological methods of teaching	-	14 (40%)	17 (48.5%)	4 (11.5%)
Difficulties in developing criteria and assessment parameters that can be used to objectively diagnose the learning outcomes of adult learners	2 (5.7%)	18 (51.4%)	10 (28.6%)	5 (14.3 %)

Source: Developed by the authors

The survey results indicate that the vast majority of respondents rarely or only partially encounter difficulties when designing and implementing the educational process in non-formal adult education. All respondents noted that they engaged in self-analysis and self-assessment of their design outcomes, with over half doing so on a consistent basis and the remainder doing so partially or occasionally.

Discussion

Empirical results. Adult education in Ukraine is increasingly clearly positioned as an instrument for achieving the SDGs, in particular SDG 4 “Quality Education,” which is confirmed by the results of the empirical study conducted.

The activities of andragogues in the field of non-formal adult education are multi-vector and dynamic in nature, as evidenced by the age, disciplinary, and professional diversity of the respondents. More than 70% of those surveyed have significant professional experience, and the profiles of their activities cover psychological and pedagogical, socio-humanitarian, technical, and economic fields.

The study reveals that while individuals aged 35–55 are the most active participants in non-formal education, engagement among those over 65 remains alarmingly low. This disparity highlights a lack of inclusivity and underscores the need for tailored educational formats that align with the cognitive motivation and social needs of older adults. Expanding lifelong learning for the 65+ cohort is essential for fostering social

activity and mental well-being, consistent with the SDGs.

Non-formal adult education in Ukraine is primarily driven by pragmatic motivations. Vocational training (54.3%) and project management (37.3%) emerge as leading fields, reflecting a high demand for skills aligned with labor market requirements. Significant interest in andragogy suggests a growing awareness of adult learning methodologies, while civil society (28.6%), business/psychology (22.9%), and IT (17.1%) indicate a steady pursuit of social engagement and personal growth. Conversely, leisure and coaching (11.4%) hold the lowest priority.

This hierarchy is shaped by the socio-economic challenges of the ongoing Russian aggression, favoring rapid, practically-oriented formats like short-term and distance courses. Such trends align with global research highlighting a shift towards work-related non-formal learning (Boeren & Holford, 2016; Desjardins et al., 2016; Rubenson, 2018; Vaculíková et al., 2024).

Distance learning ranks as the second most popular format, driven by the mobility and professional commitments of adult learners. Together with professional development programs and the rising trend of blended learning, these formats reflect a strong alignment with labor market demands. Within the framework of ESD, this underscores the necessity for deliberate instructional design. Priority should be given to fostering critical thinking, collaborative learning, and meaningful feedback, consistent with current research findings (Jekabsone & Gudele, 2023).

The prevalence of short-term learning formats underscores a pragmatic and results-oriented demand for rapid upskilling. While the adoption of distance learning reflects the adaptability of andragogues to digital environments, the lower frequency of blended learning suggests a lack of methodological support and infrastructure. This aligns with the survey results: despite a high level of involvement in designing educational programs (94.3%), nearly half of the respondents (45.7%) express a need for further professional training to deepen their theoretical expertise. Consequently, there is a clear disparity between practical engagement in instructional design and the formal methodological preparation of practitioners.

The personal qualities of an andragogue, especially empathy, communication skills, cognitive flexibility, and tolerance, are pivotal to the design and implementation of non-formal adult education. These traits enable practitioners to tailor educational content and methods to the individual experiences and life situations of learners, which is particularly vital during periods of crisis. By fostering an atmosphere of trust and parity-based partnership, an andragogue creates a safe learning environment where adults engage as equal participants. In a broader sense, this approach not only motivates personal growth but also strengthens social capital and trust as core components of sustainable development.

The study indicates that challenges in instructional design stem not from a lack of basic knowledge, but from a need for clear algorithms for content development, evaluation criteria, and methods for tailoring programs to specific learner groups. While most practitioners report few difficulties with the logical organization of material, a significant proportion seek to expand their expertise in design technologies that exceed their current practical experience (Arcas & Sánchez, 2024). This underscores the necessity for systemic

professional development and enhanced resource support.

A key strength of the surveyed andragogues is their high level of professional self-reflection, with over 90% regularly evaluating their design outcomes. This readiness for continuous improvement enables the prompt adjustment of educational practices and provides a solid foundation for implementing collaborative learning formats.

The authors' value reflection. The empirical findings prompt a re-evaluation of andragogy, shifting from a mere knowledge-transfer model to a framework for "sustainable living". Within this study, "sustainability" is defined as a value-based orientation rooted in responsibility, partnership, and critical thinking. This conceptualization aligns with the data, specifically the high demand for collaborative instructional design and learner-centered approaches.

In the current climate, andragogy increasingly functions as a strategic component of sustainable development and a form of "soft power". It enhances the adult learner's capacity for adaptation and critical engagement with socio-economic shifts. This is reflected in the educators' focus on flexible, short-term, and practically-oriented formats, which are essential for navigating rapid societal changes.

Lifelong professional development transcends the mere updating of knowledge; it is an integral part of a broader social process where adults act as agents of change and creators of a resilient, sustainable environment. Consequently, andragogy emerges as the foundation of a culture of sustainability – one that fosters adaptability, mutual support, and openness. Its primary objective is to facilitate the responsible growth of individuals capable of shaping their own developmental trajectories, their communities, and the environment amidst constant transformation. This is underscored by the research findings, which link effective instructional design not only to methodology but to the ability to cultivate trust-based, collaborative engagement with adult learners.

Preparing andragogues for instructional design transcends mere technical methodology; its essence lies in operationalizing the substance of sustainability. Only a competent educator can effectively implement the principles of ESD in practice. Consequently, systemic professional development, interdisciplinary approaches, and the establishment of communities of practice are essential for enhancing the quality of non-formal adult education and investing in sustainable human potential. This aligns with the research findings, which indicate that the challenges faced by practitioners stem not from a lack of fundamental knowledge, but from a need for methodological support, clear design algorithms, and robust assessment frameworks.

Our research confirms that the readiness of andragogues for instructional design depends on their ability to perceive professional practice through the lens of sustainable development. Conducting this study amidst war and socio-economic instability has challenged us to redefine the roles of researchers and educators within a broader societal framework. The pragmatic orientation of non-formal education identified in our results reflects the impact of the conflict, where adults focus on acquiring the practical competencies essential for economic and social resilience.

We have concluded that non-formal education in Ukraine can only serve as a catalyst for sustainable development if andragogues integrate personally meaningful values and a culture of sustainability into the learning process. Our engagement in international

initiatives and consultations with practitioners has demonstrated that the key to a profound understanding of sustainability lies in bridging individual experience with global educational approaches.

In this sense, the study has served not merely as an empirical analysis but as an act of value-based self-determination. It has illuminated that sustainability in adult education is more than a strategic goal; it is a daily professional choice made by every andragogue. This choice is reflected in the ability to cultivate learning environments where innovation and tradition, individual and societal needs, and local and global perspectives converge. Consequently, our reflective synthesis is not an isolated theoretical exercise, but an analytical consolidation of empirical findings, allowing for the interpretation of an andragogue's readiness for instructional design through the lens of sustainable development.

Conclusions and Recommendations

This study has enabled a comprehensive assessment of the readiness of andragogues for instructional design within Ukraine's non-formal adult education system. The empirical data confirm that most practitioners have already integrated elements of the project-based approach into their activities, possess a fundamental theoretical grounding, and demonstrate high motivation for professional growth. However, a significant gap between practical experience and methodological preparation remains; key areas for further development include systematic content selection, diversifying learning formats, refining assessment technologies, and establishing authentic partnerships with adult learners.

The research results confirm that non-formal adult education is evolving into a strategic instrument for achieving the SDGs. It contributes directly to:

- SDG 4 (Quality Education): by promoting lifelong learning opportunities;
- SDG 8 (Decent Work and Economic Growth): through the rapid adaptation of skills to market demands;
- SDG 10 (Reduced Inequalities): by fostering inclusivity and accessibility in education.

Furthermore, non-formal learning exerts a cross-cutting influence on SDG 5 (Gender Equality), SDG 11 (Sustainable Cities and Communities), and SDG 16 (Peace, Justice, and Strong Institutions).

Based on the analysis performed, the following key findings have been identified:

- *High Professional Activity.* An overwhelming 94.3% of respondents have successfully integrated project-based design into their practice. This demonstrates their capacity to tailor education to adult needs, a vital condition for meeting SDGs 4 and 8. Such engagement ensures lifelong learning focused on sustainability, competitiveness, and social mobility.
- *Demand for Professional Growth.* Over half of the respondents (54.3%) seek deeper expertise in instructional design. This high level of self-reflection and openness to improvement aligns with SDGs 4 and 8, ensuring high-quality staff training for both the labor market and non-formal education.

- *Demand for Flexible Formats.* The preference for practically-oriented learning demonstrates the capacity of non-formal education to respond swiftly to social shifts and labor market dynamics, directly aligning with SDG 8.
- *Human-Centricity and Inclusivity.* Collaborative planning with participants (94.3%) significantly contributes to SDG 10. This approach ensures equitable access to education, fosters social cohesion, and creates an inclusive learning environment.
- *Development of Value-Based Competencies.* Empathy, communication, and responsibility are identified as pivotal for instructional design. These traits foster a culture of trust and social partnership, aligning with SDG 16 and enhancing civic resilience.
- *Role in Social Transformations.* In times of war, non-formal education serves as a vital resource for psychosocial recovery and economic mobility. As a tool for social cohesion, it facilitates the integration of vulnerable groups and the development of resilient communities, directly addressing SDGs 11 and 16.

Consequently, this study has not only assessed the andragogues' readiness for instructional design but also identified non-formal education as a fundamental driver of sustainable development. Lifelong learning and the cultivation of critical thinking provide the basis for economic resilience and social cohesion.

Limitations of the study. The survey was conducted within a single country during active hostilities, which limited the number of respondents. The possibility of socially desirable responses cannot be excluded, which may have influenced some of the research results.

Further research areas include: (1) the analysis of regional barriers and adaptive educational practices; (2) case studies of successful andragogical experiences to develop methodological models; (3) comparative studies incorporating EU best practices; (4) the development of educational policies for systemic support and cross-sectoral collaboration.

These research findings contribute to the global discourse on ESD, demonstrating the resilience of andragogy in crisis conditions. The study has underscored the potential of non-formal adult education as a space where empirical practice, personal values, and sustainability strategies converge to build a more resilient future.

References

- Arcas, B. R., & Sánchez, T. F. G. (2024). La formación inicial del profesional de la educación de personas adultas. [Initial training for adult education professionals] *Revista Brasileira de Educação*, 29, e290130. <https://doi.org/10.1590/S1413-24782024290130>
- Boeren, E., & Holford, J. (2016). Vocationalism varies (a lot): A 12-country multivariate analysis of participation in formal adult learning. *Adult Education Quarterly*, 66(2), 120–142. <https://doi.org/10.1177/0741713615624207>
- Boyadjieva, P., & Ilieva-Trichkova, P. (2023). Adult education as a pathway to empowerment: Challenges and possibilities. In J. Holford, P. Boyadjieva, S. Clancy, G. Hefler, & I. Studená (Eds.), *Lifelong learning, young adults and the challenges of disadvantage in Europe*

- (pp. 119–141). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-14109-6_7
- Desjardins, R., Melo, V., & Lee, J. (2016). Cross-national patterns of participation in adult education and policy trends in Korea, Norway, and Vietnam. *Prospects*, 46(1), 149–170. <https://doi.org/10.1007/s11125-016-9384-3>
- Ebner, G., & Motschilnig, R. (2019). *Manifesto for adult learning in the 21st century: The power and joy of learning*. European Association for the Education of Adults (EAEA). https://eaea.org/wp-content/uploads/2019/04/eaea_manifesto_final_web_version_290319.pdf
- Government of Ukraine. (2019). *Sustainable Development Goals and Ukraine*. <https://www.kmu.gov.ua/en/cili-stalogo-rozvitku-ta-ukrayina-eu>
- Heasly, B., Lindner, J., Iliško, D., & Salite, I. (2020). From initiatives, to insights, to implementation of the sustainability and securitability agenda for 2030. *Discourse and Communication for Sustainable Education*, 11(1), 1–4. <https://doi.org/10.2478/dcse-2020-0001>
- Hopkins, C. A., Michelsen, G., Salite, I., Siegmund, A., Wagner, D. A., Yokoi, A., Fischer, D., Kohl, K., Razak, D. A., & Tilleczeck, K. (2020). Sustainability as a purpose on the new path of learning for the future. In UNESCO, *Humanistic futures of learning: Perspectives from UNESCO Chairs and UNITWIN Networks* (pp. 58–62). UNESCO.
- International Council for Adult Education. (2020). *Adult learning and education (ALE): Because the future cannot wait. Contribution of the International Council for Adult Education (ICAE) to UNESCO's Futures of Education initiative*. https://www.dvv-international.de/fileadmin/files/Inhalte_Bilder_und_Dokumente/Materialien/Partnerpublikationen/Cover_ICAE_-_Futures_of_ALE_FINAL.pdf
- Jekabsone, I., & Gudele, I. (2023). Online adult education for sustainable development: The analysis of the consequences of the Covid-19 pandemic in Latvia. *Journal of Teacher Education for Sustainability*, 25(1), 155–167. <https://doi.org/10.2478/jtes-2023-0010>
- Karanikola, Z., & Panagiotopoulos, G. (2023). Adult education and globally engaged trainers: The case of vocational training institutes. *Education Sciences*, 13(4), 362. <https://doi.org/10.3390/educsci13040362>
- Lockhart, A. (2016). *Non-formal and informal programs and activities that promote the acquisition of knowledge and skills in areas of Global Citizenship Education (GCED) and Education for Sustainable Development (ESD)* [Background paper]. Global Education Monitoring Report 2016. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000245625>
- Lukianova, L. (2025). *Adult education: Contemporary strategies and practices in Ukraine and abroad* (2nd ed.). Talkom.
- Lukianova, L., & Kravchenko, O. (2025). *Financing adult education in local communities in Ukraine: Research report*. Talkom.
- Ministry of Economic Development, Trade and Agriculture of Ukraine. (2020). *Sustainable Development Goals: Ukraine. Voluntary national review*. https://planipolis.iiep.unesco.org/sites/default/files/ressources/Ukraine_VNR_2020.pdf
- Nketsia, W., Opoku, M. P., Saloviita, T., & Tracey, D. (2020). Teacher educators' and teacher trainees' perspective on teacher training for sustainable development. *Journal of Teacher Education for Sustainability*, 22(1), 49–65.

2020-0005

- Rubenson, K. (2018). Conceptualizing participation in adult learning and education: Equity issues. In M. Milana, S. Webb, J. Holford, R. Waller, & P. Jarvis (Eds.), *The Palgrave international handbook on adult and lifelong education and learning* (pp. 337–357). Palgrave Macmillan.
- Sunthonkanokpong, W., & Murphy, E. (2019). Quality, equity, inclusion and lifelong learning in pre-service teacher education. *Journal of Teacher Education for Sustainability*, 21(2), 91–104. <https://doi.org/10.2478/jtes-2019-0019>
- United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development* (A/RES/70/1). https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf
- Vaculíková, J., Kalenda, J., & Kočvarová, I. (2024). Participation in non-formal adult education within the European context: Examining multilayer approach. *Frontiers in Education*, 9, 1380865. <https://doi.org/10.3389/feduc.2024.1380865>
- Verkhovna Rada of Ukraine. (2018). *On the Strategy of Sustainable Development of Ukraine until 2030* (Draft Law No. 9015). <https://ips.ligazakon.net/document/JH6YF00A?an=332>

Correspondence concerning this paper should be addressed to Igor Radomski, Associate Professor, Candidate of Pedagogical Sciences, Leading Research Scientist, Department of Andragogy, Ivan Ziaziun Institute of Pedagogical Education and Adult Education, National Academy of Pedagogical Sciences of Ukraine, 9 Maksym Berlinsky Street, 04060, Kyiv, Ukraine. Email: radomski@ukr.net