

AS

Andragoške
studije

Časopis za proučavanje
obrazovanja i učenja
odraslih

Andragogical
Studies

Journal for the Study of
Adult Education and
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Andragoške studije su časopis za proučavanje obrazovanja i učenja odraslih, naučne orijentacije, posvećen teorijsko-koncepcijskim, istorijskim, komparativnim i empirijskim proučavanjima problema obrazovanja odraslih i celoživotnog učenja. Časopis reflektuje i andragošku obrazovnu praksu, obuhvatajući širok spektar sadržaja relevantnih ne samo za Srbiju već i za region jugoistočne Evrope, celu Evropu i međunarodnu zajednicu. Časopis je tematski otvoren za sve nivoe obrazovanja i učenja odraslih, za različite tematske oblasti – od opismenjavanja, preko univerzitetskog obrazovanja, do stručnog usavršavanja, kao i za učenje u formalnom, neformalnom i informalnom kontekstu.

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ČLANCI

ARTICLES

Oyeyemi Ololade Aitokhuehi¹

Organisational Structure of Open and Distance Learning (ODL) at Nigerian Universities

Abstract: The emergence of Open and Distance Learning (ODL) in Nigeria was driven by demographic shifts, increasing enrolment rates and the need for lifelong learning. The primary objectives of ODL are to provide second-chance access to quality education and promote equity by extending educational opportunities to individuals who might otherwise be excluded. ODL also leverages the expertise of existing educators, thereby helping to mitigate both internal and external brain drain in the country's tertiary institutions. The Nigerian National Universities Commission (NUC) has accredited five single-mode and twenty-nine dual-mode ODL institutions. This paper explores the underlying rationale, historical development and key activities of ODL institutions in Nigeria. The establishment of ODL has significantly influenced the field of adult education, enhancing access to learning, fostering innovation and collaboration, capitalising on technology-driven advantages and improving the acceptance of ODL programmes, while promoting greater autonomy.

Keywords: access, enrolment mode, open and distance learning (ODL), Nigeria

Organizaciona struktura otvorenog i učenja na daljinu na univerzitetima u Nigeriji

Apstrakt: Pojava otvorenog i učenja na daljinu (*Open and Distance Learning*, ODL) u Nigeriji bila je podstaknuta demografskim promenama, sve većim stopama upisa i potrebom za celoživotnim učenjem. Prvenstveni cilj ODL je da se na taj način obezbedi „druga šansa“ za pristup kvalitetnom obrazovanju i unapredi pravičnost pružanjem mogućnosti za obrazovanje pojedincima koji bi inače iz njega bili isključeni. U sistemu ODL se koristi stručnost postojećih predavača, što doprinosi ublažavanju i unutrašnjeg i spoljnog odliva mozгова iz visokoškolskih ustanova u zemlji. Nigerijska Nacionalna komisija za univerzi-

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tete (NUC) akreditovala je pet institucija koje realizuju ODL i dvadeset devet institucija koje realizuju i ODL i konvencionalno visokoškolsko obrazovanje. U ovom se radu istražuju osnovni razlozi, istorijski razvoj i ključne aktivnosti institucija koje realizuju ODL u Nigeriji. Uspostavljanje ODL je značajno uticalo na oblast obrazovanja odraslih, budući da se njime povećava dostupnost učenju, podstiču inovacije i saradnja, koriste prednosti tehnologija i poboljšava prihvaćenost ODL programa, a istovremeno se promoviše i veća autonomija.

Ključne reči: pristup, način upisa, otvoreno i učenje na daljinu (ODL), Nigerija

Introduction

Nigeria, with a population of over 232 million, is the most populous nation in Africa. Its population is projected to reach approximately 440 million by 2050 (Itasanmi, 2020; Pontianus & Oruonye, 2021; Worldometer, 2025). The country spans a landmass of about 923,768 square kilometres and is home to over 274 ethnic groups. Nigeria comprises 36 states, with Abuja serving as the Federal Capital Territory (FCT).

Education is the cornerstone of national development. It empowers individuals, shapes their values and equips them with the skills needed to contribute meaningfully to societal progress. As scholars have argued, genuine national development requires a significant proportion of the population to be well-educated and trained. Education involves the positive application of knowledge to cultivate citizens who value justice, flexibility, fairness, knowledge and efficient and effective use of resources (Balarin & Milligan, 2024). It is therefore essential to create avenues that enable broad access to education, rendering the concept of Open and Distance Learning (ODL) a timely and valuable initiative within Nigerian society.

Policy Framework for Education in Nigeria

A nation's policy framework serves as a blueprint for shaping its education system as a means of driving national development. To formulate a meaningful policy, a country must first identify its core philosophy and national goals. According to Jegede (2016), key considerations should include:

- a. What kind of citizens does the nation seek to develop?
- b. Where should the nation be in the next ten to fifteen years in terms of human capital, resource development and infrastructure?

- c. What are the guiding principles for communal engagement, freedom, social justice and inclusion to foster diversity?
- d. How should the nation engage with other countries in the global community?

Educating citizens remains one of the most critical development agendas for countries worldwide ... and Nigeria is no exception. The National Policy on Education outlines five core goals of Nigeria's Philosophy of Education, placing emphasis on the pursuit of a democratic society where equality, equity and social justice thrive towards building a self-reliant and interdependent economy in a competitive world because the citizens have opportunities to fully develop their potentials, innovate and contribute meaningfully to making the nation great (Enokela, 2022).

In articulating the National Policy on Education, the Federal Government of Nigeria recognised education as the most powerful tool for societal transformation. Lasting socio-economic change, it acknowledged, can only be achieved through an educational revolution (Federal Republic of Nigeria, 2013; Olayiwola et al., 2010). The NUC serves as the regulatory body overseeing Open and Distance Learning (ODL) in Nigerian universities. It is responsible for regulating all university-based ODL programmes and has developed official guidelines that constitute the Federal Government's policy on ODL.

In 2024, Nigeria's Federal Minister of Education, Professor Tahir Mammam, inaugurated a three-day stakeholders' roundtable in Abuja to review and adopt the draft stand-alone National Policy on Open, Distance and e-Learning (NUC, 2024). The roundtable aimed to address key issues such as the participation of ODL students in the Law School and the National Youth Service Corps (NYSC) scheme, a one-year mandatory national service programme providing recent university graduates with employment opportunities. The Federal Government's ODL policies have been developed to tackle challenges in the ODL system, especially quality assurance.

The Main Goals of Open and Distance Education

Open and Distance Education (ODE) plays a vital role in advancing Nigeria's educational goals. In 2009, the NUC issued guidelines for the implementation of Open and Distance Learning (ODL) in the country. These guidelines outlined the available educational options for citizens who have completed senior secondary education. According to the policy published by the NUC (Aboderin & Govender, 2019; Jimoh, 2013), the objectives of ODE include:

- i. Promoting quality and equitable access to education for individuals who cannot afford formal education or who belong to vulnerable groups in society;
- ii. Providing specialised certificate courses for employees to meet evolving workplace demands;
- iii. Ensuring standardisation of curricula, particularly at the tertiary education level;
- iv. Leveraging expert teachers across sectors and workplaces to mitigate the impact of internal and external brain drain in tertiary institutions.

Concept of Open and Distance Learning (ODL)

Open and Distance Learning (ODL) plays an important role in Nigeria's educational landscape and various scholars have offered differing definitions of the concept. According to the Commonwealth of Learning (COL, 2020), ODL provides distance education (DE) opportunities designed to reduce or eliminate physiological, social, economic, environmental and other barriers ... such as prior learning, employment status, workplace commitments, disability or incarceration ... that may hinder access to quality education. In essence, the "openness" in ODL represents a deliberate effort to remove unnecessary obstacles to accessing learning.

Distance Education (DE), meanwhile, refers to a teaching and learning process in which the teacher and learner are separated in time and/or space and instruction is delivered using simple multimedia tools. DE involves two-way communication and may occasionally include face-to-face sessions for tutorials or peer interaction. COL clarifies that open learning and distance learning are not synonymous, but that they are complementary concepts that are often used together under the umbrella of Open and Distance Learning.

ODL, therefore, represents an educational mode in which the facilitator and the learner are physically separated, relying on various media, including print and digital technologies, to support the learning process (Akpereka & Okudare, 2018; Jegede, 2016). It is a flexible model that enables individuals to pursue academic advancement without being physically present in a traditional classroom setting. ODL has recently gained significant popularity due to technological advancements and the growing demand for accessible education (Kılınç et al., 2021).

One of the key advantages of ODL is the flexibility it offers learners to set their own pace and schedule. This is especially beneficial for individuals with work obligations, family responsibilities, or other constraints limiting their ability to attend conventional universities. A range of technologies and platforms

allows students to access learning materials, communicate with instructors and peers and submit coursework from the comfort of their homes.

Importantly, ODL has the capacity to reach a broader audience, including individuals living in remote areas. It also promotes lifelong learning by enabling people to upgrade their knowledge and skills through higher education, aligned with their personal circumstances and lifestyle.

The NUC has accredited the following five open universities in Nigeria to offer distance learning programmes (NUC, 2025a):

- a. National Open University of Nigeria (NOUN) is a federal institution operating as a single-mode university delivering ODL. NOUN currently operates over 72 study centres across the country.
- b. Miva Open University in Abuja is a private online university offering both undergraduate and graduate programmes.
- c. Iconic Open University in Sokoto is a fully operational private institution offering open, distance and e-learning. Its main campus and headquarters are in Sokoto. The university combines online theoretical instruction with in-person practical sessions at designated learning centres, enabling students to study from their preferred locations.
- d. Al-Muhibbah Open University in Abuja is a private open university featuring multiple study centres and access to e-library resources.
- e. West Midlands Open University in Ibadan is an NUC-approved provider of ODL programmes.

A number of other federal, state and private universities have embraced ODL, providing various courses and programmes to meet diverse educational needs. This system is called a dual-mode system and it comprises both conventional learning and ODL. Table 1 below lists universities in Nigeria offering ODL. There are fifteen federal, six state and eight private ODL universities.

Table 1. List of approved Distance Learning Centres (DLCs) at Nigerian universities as of April 2025

S/N	UNIVERSITIES	ODL CENTRES	Status
1	University of Ibadan, Ibadan, Oyo State	Distance Learning Centre	Federal
2	Obafemi Awolowo University, Ile-Ife, Osun State	Centre for Distance Learning	Federal
3	University of Lagos, Akoka, Lagos State	Distance Learning Institute	Federal
4	University of Maiduguri, Maiduguri, Borno State	Centre for Distance Learning	Federal
5	Modibbo Adama University of Technology, Yola, Adamawa State	Centre for Distance Learning	Federal
6	University of Abuja, Abuja	Centre for Distance Learning and Continuing Education	Federal

S/N	UNIVERSITIES	ODL CENTRES	Status
7	University of Nigeria Nsukka, Enugu State	UNN Centre for Distance and e-Learning	Federal
8	Ahmadu Bello University Zaria, Kaduna	Distance Learning Centre ABU, Zaria	Federal
9	Federal University of Technology, Minna, Niger, State	Centre for Open Distance and e-Learning	Federal
10	University of Ilorin, Kwara State	Centre for Open and Distance Learning	Federal
11	Usmanu Danfodio University, Sokoto	Centre for Open and Distance Education (CODE)	Federal
12	University of Benin, Edo State	Centre for Distance Learning and Research Institute	Federal
13	University of Calabar, Cross River State	Centre for Open Distance and e-Learning	Federal
14	University of Port Harcourt, Rivers State	Centre for Open Distance and e-Learning	Federal
15	Federal University of Technology, Akure, Ondo State	Open and Distance Learning Centre	Federal
16	Ladoke Akintola University of Technology, Ogbomoso, Osun State	LAUTECH Distance Learning Centre	State
17	Lagos State University, Lagos State	Lagos State University Open and Distance Learning	State
18	Olabisi Onabanjo University, Ago-Iwoye Ogun State	Open and Distance Learning Centre	State
19	Enugu State University of Science and Technology, Enugu State	Open and Distance Learning Centre, Agbani	State
20	Ignatius Ajuru University of Education, Portharcourt, Rivers State	Institute of Distance Education	State
21	Nasarawa State University, Nasarawa State	Centre for Open Distance and e-Learning	State
22	Joseph Ayo Babalola University Osun State	JABU Centre for Distance Learning	Private
23	Babcock University, Ilishan, Ogun State	Centre for Open Distance and e-Learning	Private
24	Afe Babalola University, Ado-Ekiti, Ekiti State	Open and Distance Learning Centre	Private
25	Igbinedion University, Edo State	Centre for Open and Distance Learning	Private
26	Mountain Top University, Ogun State	Open and Distance Learning Centre	Private
27	Delta State University, Abraka, Delta State	Centre for Open Distance and e-Learning	Private
28	Covenant University, Ogun State	Centre for Open Distance and e-Learning	Private
29	Nile University, Abuja	Centre for Distance Learning	Private

Source: NUC, 2025b

Understanding the concept of ODL empowers future learners to make informed decisions about their educational pathways and to explore the wide range of opportunities available. ODL provides a flexible and accessible route to educational success both to those pursuing a degree, acquiring new skills and those advancing professional development.

Rationale for ODL in Nigeria

Several scholars have articulated the rationale for establishing ODL centres in Nigeria. It has been widely argued that ODE is essential to strengthening the conventional education system, which is struggling to meet the demands of a growing population. The number of higher education institutions remains inadequate compared to the large number of individuals seeking to further their education (Adamu, 2022; Jegede, 2016; Nworgu et al., 2021). These scholars broadly categorise the justification for ODL into three key areas: demographic changes, rising enrolment and lifelong learning.

Demographic Changes: The socio-political and economic challenges of delivering education to Nigeria's large population, amidst limited financial and other resources required to meet developmental requirements, are substantial. Sustained population growth and increasing demand for education at all levels have made ODL a necessary complement to the traditional system. According to projections by the United Nations Department of Economic and Social Affairs (2014) and the African Development Bank (2014), Africa is expected to have the world's largest workforce in the coming decades. At the same time, the continent is experiencing a rapid youth population growth rate, exceeding 60 per cent.

Additionally, there are a lot of unemployed young people in Africa, particularly in Nigeria, who will need an alternative to the conventional educational system. ODL presents a viable alternative to conventional education. The urgent need to provide Education for All (EFA) remains critical regardless of location or social context. In line with SDG 4, ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all requires fair access to appropriate learning and life skills programmes (United Nations, 2015).

Rising Enrolment: The increasing demand for enrolment in tertiary education has made the adoption of ODL in Nigeria a necessity. The Joint Admissions and Matriculation Board (JAMB) administers the Unified Tertiary Matriculation Examination (UTME), which serves as the entrance examination for secondary school leavers seeking admission into higher education

institutions. However, the average university admission rate has remained at approximately 33%, as shown in Table 2 below. This situation underscores the urgent need for a more practical, reliable, effective and cost-efficient educational alternative ... one that ODL is well positioned to provide. According to the data presented in Table 2, more than 60% of qualified applicants are denied admission, not due to a lack of academic credentials, but because of serious infrastructural and resource limitations. Traditional lecture halls and classrooms can only accommodate a finite number of students at any given time and in any specific location, making it impossible to meet the growing demand through conventional means alone.

Table 2. Admission Trend in UTME (JAMB)

Year	Number of Applicants	Number of Candidates Admitted	% Admitted
2015	1,475,600	522,856	35%
2016	1,592,462	598,837	37%
2017	1,722,269	582,681	33%
2018	1,653,127	587,781	36%
2019	1,886,509	619,397	33%
2020	1,949,983	551,553	28%
2021	1,351,284	429,351	32%
2022	1,761,262	693,398	39%
2023	1,595,779	639,263	40%
2024	1,992,660	397,000***	20%***

*** (Estimated Number and Percentage Admitted)

Source: Joint Matriculation Admission Board (JAMB) (2025)

ODL has helped alleviate the shortage of spaces for continuing tertiary education in Nigeria.

Lifelong Learning is the third key justification for ODL and has gained significant international attention. It is increasingly being integrated into national curricula around the world. Central to this concept is the idea that learning should be a continuous, lifelong pursuit ... accessible, flexible and adaptable ... supporting the development of a “learning society” or “knowledge society.” The global shift toward ODL reflects a growing awareness that individuals must constantly adapt to changes in all aspects of life. In today’s rapidly evolving world, lifelong learning is essential for navigating everyday challenges. It should not be viewed merely as a privilege or even a right, but rather as a necessity for everyone, regardless of age, to effectively cope with the rapid rate of change that we encounter daily in the workplace, the classroom, the home, the local community and global society.

History of Open and Distance Learning in Nigeria

The origins of ODL can be traced back to the period when shorthand was taught through correspondence by Anna Tickner and Caleb Phillips. In 1728, Caleb Phillips placed an advertisement for students in the *Boston Gazette*. According to reports, Sir Isaac Pitman created the first distance learning course in the contemporary sense in 1843 (Taylor, 2001). By providing feedback on quizzes, assignments and exams, he encouraged creativity in his students. With its external degree programme, which was founded in 1828 and chartered in 1858, the University of London was reportedly the first university to provide distance learning programmes at the higher education level (University of London, n.d).

Distance learning in American higher education started in 1873 at Illinois Wesleyan University, where President Samuel Fallows promoted an “external degree” programme inspired by the University of London. The programme allowed students to earn their bachelor’s and graduate degrees in absentia (Distance Educator, n.d). Programmes like the Chautauqua Literary and Scientific Circle, which offered mailed home-study and diploma courses, helped popularise correspondence education. The broader Chautauqua movement, named after Chautauqua Lake in New York, became a cornerstone of adult education in the late 19th and early 20th centuries (Hartinger & Thal, 2005).

The International Conference for Correspondence Education (ICCE), a global association for distance education, held its first meeting in 1938. This organisation later evolved into the International Council for Open and Distance Education (ICDE), now headquartered in Stockholm, Sweden (Holmberg, 2005; ICDE, 2023). The emergence of dedicated institutions for open and distance learning, commonly referred to as open universities, began with the establishment of the United Kingdom Open University (UKOU). Founded by the Labour Government under Prime Minister Harold Wilson, the UKOU served as a model for similar institutions around the world (Daniel, 2011). It inspired the creation of other open universities, including Athabasca University in Canada and the Canada Open University, both established in 1970 (Garrison & Anderson, 2003). Similarly, Spain established its National Open University in 1972 (López et al., 2021), while Germany founded FernUniversität in Hagen in 1974 (Moore & Kearsley, 2012).

In Nigeria, the roots of ODL can be traced back to correspondence education at the General Certificate of Education (GCE) level, which was a prerequisite for admission to the University of London. The concept of distance education in Nigeria was later formalised with the establishment of the National Teachers’ Institute (NTI) in Kaduna in 1976, which was granted full legal status

in 1987 as an independent distance learning institution. NTI became Nigeria's first dedicated distance education institution, created to address the shortage of qualified teachers needed to implement the Universal Primary Education (UPE) scheme launched in 1976. The Institute later supported the Universal Basic Education (UBE) programme introduced in 1999. Its initial focus was on training second grade (TC II) teachers.

The Nigerian Certificate in Education (NCE) programme was introduced in 1990 following the decision to make the NCE the minimum qualification required for teaching in Nigeria. The Institute also introduced the Post Graduate Diploma in Education (PGDE) programme in 2005 (Fayomi et al., 2015). Earlier, in 1974, the University of Lagos started the Correspondence and Open Studies Unit, which was renamed the Correspondence and Open Studies Institute (COSIT) in 1999 and eventually became the Distance Learning Institution (DLI) in 2004 (DLI, University of Lagos, 2020). The DLI aims to provide university education across a range of disciplines to help meet the country's human resource needs in areas such as teaching, law, accounting, nursing and technical education.

The University of Ibadan entered the field of distance education through its External Study Programme (ESP), which was later renamed the Centre for External Studies (CES) and is now known as the Distance Learning Centre (DLC). Established in 1988 by the University Senate within the Department of Adult Education, the programme was designed to provide working teachers with opportunities to enhance their knowledge and skills through in-service training. This initiative enabled participants to progress from holding an NCE certificate to earning a full university degree. Similarly, the University of Abuja introduced comparable programmes and established its Centre for Distance Learning and Continuing Education in 1992 (Mohammed, 2017).

The history of ODL in Nigeria is marked by the establishment of the National Open University of Nigeria (NOUN). Initially founded in 1983 as the National Open University (NOU) by an act of the National Assembly, it was conceived as the country's first tertiary institution dedicated to distance learning. Its creation was driven by the Federal Government's recognition that the growing demand for education could no longer be met through traditional, in-person methods alone (Ubabudu, 2023). However, shortly after its inception, the institution was temporarily shut down and in 1984, the military government, which had replaced the civilian administration, suspended the legislation under which the Open University had been established (Ajadi et al., 2008).

Years after its closure, the renewed push to establish the Open University was largely motivated by the need to fill the gap created by the Federal Government's crackdown on the poor-quality outreach centres of several conventional universities across the country. This decision was also driven by the desire to harness emerging advancements in Information and Communications Technology (ICT), which had begun to transform instructional delivery in distance education. These factors ultimately led to the revival of the previously suspended NOUN Act (Fayomi et al., 2015; Oyekan & Peter, 2017).

NUC's Key Guidelines on ODL in Nigeria

Rationale for ODL: As stated in the National Universities Commission (NUC) publication, the rationale for introducing ODL in Nigeria is to guide distance learning practices in line with international standards and global best practices. The NUC outlined a "code of good practice" that specifies performance standards related to teaching and learning through the ODL mode, including the provision of adequate learning support (NUC, 2024).

Philosophy of ODL: The philosophy underpinning ODL in Nigeria is grounded in clear commitments to accessibility, flexibility and lifelong learning. These core principles must be explicitly articulated and are intended to guide the implementation and operation of ODL systems across the country.

Eligibility to Offer Degree Programmes through the ODL Mode: The NUC has defined eligibility criteria for Nigerian universities wishing to offer degree programmes via the ODL mode. Dual-mode universities (i.e., those offering both conventional and distance education) are required to apply to the NUC for either revalidation or accreditation as ODL institutions, depending on their status. All universities intending to run degree programmes through ODL must submit an application to the NUC and undergo an evaluation process. This includes an assessment of both human and material resources, including learning support facilities, to ensure that they can adequately deliver teaching and learning. Only universities accredited by external and internal experts will be authorised to offer programmes within their verified areas of competence (NUC, 2024).

Scope of ODL Activities (Subjects/Academic Disciplines Offered): Each university applying to run ODL programmes must demonstrate its capacity to deliver instruction in specific disciplines or specialisations. In light of existing technological and infrastructural limitations in the country, the following academic fields are currently approved for delivery through the ODL

mode: Education, Administration /Management Sciences, Social Sciences, Arts/ Humanities and Applied Sciences

Entry Requirements: According to the ODL guidelines, all candidates seeking admission into degree programmes offered via the ODL mode must meet the minimum national entry requirements for university admission (Inegbedion et al., 2016).

Nature of ODL: The NUC stipulates that all academic programmes delivered through ODL must utilise interactive texts as a primary method of instruction. These should be supplemented with electronic resources such as CD-ROMs, DVDs, USB drives, e-books, simulations, etc. ODL should be implemented in its authentic form, meaning that learners should not be required to attend traditional face-to-face classes except where clearly justified ... such as for examinations, occasional facilitation sessions, or practicum requirements.

Delivery of ODL Programmes: The NUC (2024) issued the following recommendations on the delivery of ODL at Nigerian universities:

- a. Pedagogy: ODL programmes shall follow a pedagogical model that does not rely on face-to-face interaction but is instead facilitated through appropriate resources. Learning objectives should be clearly defined and each programme must include well-written study guides that are regularly reviewed and updated.
- b. Admission: Students should be able to sign up for classes at any study centre in Nigeria or the rest of the world with a uniform level of service.
- c. The study centre system ought to provide students with both social and academic support. Study centres should serve as learning community hubs and comply with established standards for equipment and facilities.
- d. Cost-effective provision of study facilities should be encouraged through partnerships, such as shared “university centres.”
- e. Students are expected to have access to ICT tools to support their learning. All study centres must ensure functional internet connectivity for applicable programmes.
- f. Continuous assessment (CA). Assessment must include both continuous and summative components: Continuous assessment should consist of at least one graded task for every 40 hours of study. It should include six tutor-marked assignments (TMAs) and computer-marked assignments (CMAs), designed to promote learning through feedback. Summative assessment (examinations, portfolios, etc.) must

- validate learning outcomes and be conducted with integrity. External moderation should be incorporated for quality assurance.
- g. Assessment tasks should take up 10% of total study time. Both continuous assessment and final examinations contribute to the final course grade.
 - h. Marking and feedback should be provided promptly ... ideally within three weeks. ICT solutions may shorten this timeline. These timeframes are essential to maintaining the credibility of ODL qualifications.
 - i. ICT-based automated assessment can reduce workload, but institutions must employ sufficient qualified staff to oversee tutoring, resource development, assessment and programme delivery. Each programme should have at least six academic staff members, though staff may be shared across programmes. The staffing mix should follow NUC guidelines for academic ranks: Senior Lecturer: Lecturer I: Lecturer II and below = 20:35:45. Staff must be qualified in both the subject matter and ODL pedagogy. There should be student counsellors on hand to provide information, advice and guidance (IAG). Each cluster of up to four programmes should have at least two administrative staff and each study centre must include at least one Senior Lecturer and IT support personnel. External or internal technical support must also be available.
 - j. Academic Support and Tutoring: Each academic programme must maintain a tutor-to-student ratio of 1:50. Tutors should be trained in ODL delivery or hold recognised ODL credentials. Various communication channels (e.g. mail, phone, email) should be used to meet students' needs. Feedback on assignments and examinations must meet international standards, be timely (within three and ten weeks, respectively) and provide constructive guidance on strengths, weaknesses and areas for improvement.
 - k. Information, Advice and Guidance (IAG). IAG services should reflect national policy and best practices, while complying with institutional policy and the Learner Support Framework. Students should have access to information, advice and guidance about the programmes (including counselling services).
 - l. Administration: There must be verifiable evidence of sound logistics supporting ODL programme delivery. This includes availability of relevant software, consistent power supply and academic guidance. A robust Management Information System (MIS) should enable ongoing programme monitoring and evaluation.

- m. Efficiency: Institutions must provide verifiable evidence of learner participation and outcomes, demonstrating the effectiveness of each academic programme.

Case Study: Distance Learning Institute, University of Lagos, Nigeria

Table 3 below provides a concise overview of the ODL programme offered by the Distance Learning Institute (DLI) at the University of Lagos, Nigeria. The University of Lagos is presented as a case study to illustrate the outcomes and observed results of best practices in establishing ODL centres in Nigeria.

Table 3. Outcomes of NUC's Implementation Framework at DLI (University of Lagos, Nigeria)

Attribute	Description	Results
Philosophy and Objectives	• Aligned with the university's overall policy	Yes
	• Objectives clearly stated	Yes
	• Fully consistent with the philosophy of ODL	Yes
Admission	• In line with national minimum admission requirements	Yes
Curriculum	• In line with Minimum Academic Standards	Yes
Pedagogy/ Learning Resources	• Learning objectives (LOs) are clearly defined in the Self-Learning Materials (SLMs).	Yes
	• Pedagogical approaches in SLMs are appropriate to meet the Los	Yes
	• Study guides effectively guide learners through the SLMs	Yes
	• SLMs are updated frequently, at least once every 5 years	Yes
	• SLMs are tailored to ODL: interactive, comprehensive, accessible, contemporary and learner-friendly	Yes
	• Learning resources (LRs) incorporate ICT.	Yes
	• LRs meet international standards (e.g. e-learning).	Yes
	• LRs are relevant to the programme provided (e.g. labs, studios and practice placement).	Yes
	• Creativity/innovation in LR provision.	Yes
Assessment	• Continuous assessment promotes learning through feedback and meets national standards, including tutor-marked assignments (TMAs) and computer-marked assignments (CMAs).	Yes
	• Summative assessment verifies achievement of learning objectives.	Yes
	• Assessment process demonstrates integrity (e.g. quality assurance, exam procedures, academic honesty)	Yes
	• Evidence of external moderation is available.	Yes

Attribute	Description	Results
Staffing	• Adequate number of qualified academic staff responsible for programme leadership, resource development, assessment and tutor supervision (minimum of six per programme, though staff may serve multiple programmes)	Yes
	• Faculty possess appropriate subject expertise and ODL pedagogical skills	Yes
	• Student advisors (IAG) are available	Yes
	• Minimum of two administrative staff for up to four academic programmes; technical support is available (in-house or outsourced)	Yes
	• Study centres comply with national staffing policy, including presence of IT support and at least one Senior Lecturer	Yes
Academic Learning Support	• Tutor-to-student ratio of 1:50 is maintained	Yes
	• Tutors are trained in ODL methods through workshops, seminars and conferences	Yes
	• Multiple communication channels are used (mail, phone, email, etc.) to support student needs	Yes
	• Marking and feedback meet international standards	Yes
	• Feedback on assignments and examinations is provided promptly (within 3 and 10 weeks, respectively)	Yes
Information, Advice and Guidance (IAG)	• IAG is consistent with institutional policy and the Learner Support Framework aligned with national policy	Yes
	• Programme-specific IAG is available, as are student counselling services	Yes
Administration	• Verifiable evidence of strong logistical support for ODL academic programmes	Yes
	• Robust institutional support relevant to the programme is available (e.g. software, power supply, guidance).	Yes
	• A functional Management Information System (MIS) is in place for programme monitoring	Yes
Efficiency	• Verifiable data on student input/output rates is available	Yes
Employer Feedback	• Evidence of feedback from employers of graduates	Yes
Viability	• Viability demonstrated through effective provision and utilisation of necessary resources (staff, infrastructure, study centres, funding).	Yes

Source: Distance Learning Institute (DLI), University of Lagos (2020)

Note

To be granted **full accreditation status**, a programme must achieve a minimum score of 70% in each of the following core areas:

- Pedagogy and Learning Resources
- Academic Learning Support and Information, Advice and Guidance (IAG) (combined)

- Assessment
- Staffing

The University of Lagos DLI has received full accreditation for all courses approved under its ODL programme, confirming compliance with the NUC accreditation policy.

Impact of ODL Good Practices on Adult Education at Nigerian Universities

Launch of ODL by Nigerian universities has impacted the practice of adult education in several ways:

Access: ODL has helped bridge university admission gaps, expanding access to higher education for both learners and institutions. Individuals who previously may have lacked the opportunity to attend tertiary institutions have benefited immensely. Many ODL centres have graduated students working full-time and individuals who may not have been able to attend traditional classes alongside younger students. For their part, institutions have gained a more extensive student body, generating additional revenue for universities.

Technology-Driven Advantages: The use of technology has enhanced participation in ODL programmes. Learners can participate asynchronously or synchronously, offering greater flexibility in the teaching-learning process. Technology has also helped develop new and effective teaching methods. Many ODL centres have advanced equipment and media to improve learner engagement and retention. Additionally, universities have benefitted from streamlined processes for enrolment, result management and other learner services.

Innovation and Collaboration: The establishment of ODL institutions has encouraged innovation and collaboration within the university system, fostering a sense of connection and community among ODL stakeholders.

Accreditation: Regular accreditation of ODL programmes has enhanced their acceptance and credibility. By ensuring adherence to quality assurance standards, accreditation aligns local programmes with international benchmarks for adult and youth learning systems (UNESCO Institute for Lifelong Learning and the Commonwealth of Learning, 2021).

Flexibility and Learner-Centred Approaches: ODL programmes offer unparalleled flexibility in learning schedules, allowing adult learners to balance their studies with their professional and personal responsibilities. This learner-centred

approach respects the autonomy of adult learners and accommodates their diverse lifestyles, a core principle of andragogy (Augustine, 2016).

Autonomy: The enforcement of good practices by the NUC has promoted the autonomy of Nigerian higher education institutions. This, in turn, has promoted a more accountable and efficient university system, motivating both learners and institutions toward greater productivity.

Promotion of Lifelong Learning: ODL has played a critical role in institutionalising the concept of lifelong learning. By providing continuous learning opportunities, it enables adults to reskill or upskill, thereby responding to the dynamic demands of the labour market and fostering a culture of ongoing personal and professional development.

What Made a Practice a Good One?

- a. Efficient and effective teaching methods and technologies,
- b. Accessibility of ODL programmes
- c. Inclusivity of learners in ODL programmes
- d. Reduced learner attrition rates
- e. Robust learner and institutional support systems ... Pre-enrolment support, ongoing academic support, help-desk support, post-programme support, monitoring and impact measurement, completion assistance and alumni tracking (tracer studies).
- f. Conducive learning environment. Learners can attend classes from the comfort of their homes or workplaces. Technology has made the learning experience more interactive, enjoyable and engaging for both learners and instructors.
- g. Diverse Self-Learning Resources (SLRs) in various media formats, including:
 - Printed Course Modules
 - Audio recordings (radio lectures and voice-over modules on rewritable CDs)
 - Audiovisual resources
 - o Studio-recorded virtual course facilitation videos
 - o Screen recordings using CAMTASIA
 - Learning Management System (LMS)
- h. Course Module Development (CMD), providing learners with a deeper understanding of the subject matter.
- i. Prompt and effective feedback systems.

- j. Open Educational Resources (OER) Policy has expanded access to quality learning materials. Benefits include easy dissemination and expansion and regular updating of course content, improved material circulation, cost reduction for both learners and institutions and continual enhancement of learning resources
- k. Flexibility.

Lessons Learnt

- a. The Federal Government, ODL centres and society must collaborate to ensure the provision of adequate and high-quality education for all. Numerous testimonies of transformed lives resulting from the establishment of ODL centres across the country highlight the significant impact of this initiative.
- b. Ongoing advocacy is essential to dispel misconceptions about ODL and promote its wider acceptance among stakeholders.
- c. The National Universities Commission (NUC) has played a crucial role in regulating the establishment and accreditation of ODL centres. Its oversight has contributed to greater order, quality assurance and credibility in the higher education system.
- d. Regular accreditation exercises help uphold high academic standards, thereby enhancing the relevance and value of ODL to society.
- e. Both employers and the broader society have over the years come to recognise and accept the certificates awarded to ODL graduates as valid and credible qualifications.

Conclusion

ODL in Nigeria has made significant progress over the years. The NUC plays a key role in enforcing policies governing the establishment and operation of ODL centres, particularly in response to emerging educational needs. Nigeria's ODL structure comprises federal and state open universities, private ODL institutions and distance learning centres housed within conventional universities. These institutions collectively work to provide accessible and flexible education to a broad range of learners, including working professionals, students in rural areas and individuals unable to attend traditional universities due to various constraints. The establishment of ODL centres provided accessible and quality education to a diverse population and is continuously evolving to meet the changing needs

of learners and the demands of society. The ODL system has opened access to university education, combated enrolment challenges and ensured that Nigeria's lifelong learning needs are satisfied.

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International Mobility of University Academic Staff as an Adult Learning Experience: Connecting Theory to Practice

Abstract: The study explores academic mobility experiences of university faculty members from the perspective of learning, focusing on adult learning as a core dimension of staff mobility. Ten qualitative interviews with faculty members were conducted to gauge their perceptions of academic mobilities as meaningful learning experiences and provoke reflective thinking about their learning styles, motivation, role of prior experience, and personal and professional development as facets of the learning process embedded in a new academic, cultural, and institutional context. The interviews were approached using deductive thematic analysis, while adult learning theories shaped the theoretical framework for this exploratory research.

Keywords: adult learning, academic mobility, university faculty

Međunarodna mobilnost univerzitetskog akademskog osoblja kao iskustvo učenja odraslih: povezivanje teorije i prakse

Apstrakt: U studiji se istražuju iskustva akademske mobilnosti univerzitetskog osoblja iz perspektive učenja, sa fokusom na učenje odraslih kao ključnu dimenziju mobilnosti. Sa članovima akademskog osoblja je sprovedeno deset kvalitativnih intervjua kako bi se ispitala njihova viđenja akademskih mobilnosti kao značajnih iskustava učenja i podstaklo reflektivno razmišljanje o njihovim stilovima učenja, motivaciji, ulozi prethodnog

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iskustva te o ličnom i profesionalnom razvoju kao aspektima procesa učenja u novom akademskom, kulturnom i institucionalnom kontekstu. Intervjui su analizirani metodom deduktivne tematske analize, dok su teorije o učenju odraslih oblikovale teorijski okvir ovog istraživanja.

Ključne reči: učenje odraslih, akademska mobilnost, univerzitetsko osoblje

Introduction

Academic mobility of university students and staff has been on the cutting edge of higher education research for several decades. Mobility of the faculty is approached from various perspectives; most commonly, it is regarded as part of the universities' internationalization efforts, aimed at enriching learning and teaching practices, fostering internationalization at home, development of university staff and establishment of international cooperation between educational institutions (Knight, 2008; Vlad, 2021). The process of learning at the individual or institutional levels in the context of the faculty's academic mobility is less commonly discussed by the scholars; even when learning is considered part of mobility, greater emphasis is put on the tangible outcomes of the learning. The dominant practical approach to staff academic mobility from the institutional perspective triggers inquiry focusing on the participants' takeaways from their mobility experiences, and provoking discussion on how the faculty members' academic profiles benefit, which takeaways they can integrate into their professional portfolios back home and how, and which novel teaching and research methods, know-hows, professional knowledge, attitudes, upgraded skills and competences they bring home and adopt (Brandenburg et al., 2020; Vlad, 2021). Learning and creation of new knowledge are regarded more as an outcome of the mobility rather than as a process, so the "how" and "why" of the learning of academic mobility participants are often overlooked. Application of learning theories and, specifically, adult learning theories, can accentuate learning as a process in this context and enrich scholarly conversation on the topic of university staff academic mobility. Therefore, this study is aimed at bridging the gap between the academic mobility experiences of the university faculty they perceive as a learning process and the adult learning theories as a conceptual framework and strives to answer the following research questions: How do university faculty perceive their academic mobility experiences as a learning experience? and In which ways can adult learning theories be applied to support the learning experiences of university faculty during academic mobility?

Theoretical Framework

Internationalization as a context

Internationalization of higher education is a globally acknowledged framework for scholarly discussion on international activities of universities, including academic mobility of students and academic and administrative university staff that shapes the global context for this study (Knight, 2008; Vlad, 2021). Since the 1990s, academic mobility of university faculty has been discussed as part of university internationalization efforts that impacting on the university's reputation and rankings, promoting cross-border academic collaboration, fostering internationalization at home and contributing to quality teaching and learning (Horváth et al., 2020). Mobility of the faculty is regarded not only as their professional development, but also as contribution to global knowledge creation and transfer, cultural exchange and diversity, and it contributes to overall improvement of the quality of education and research (Alemu, 2020). A large share of the scholarly discussion on the topic is embedded in the European educational context due to well-developed and promoted EU mobility schemes and initiatives, such as the Erasmus+ program, where the impact of mobility on university internationalization, academic practices and curricula elaboration, professional development of academic staff, and social engagement of academia are constantly assessed (Brandenburg et al., 2020; Horváth, 2020; Janson et al., 2009). Only a few researchers address the issues of university internationalization and academic mobility of the faculty through the educational or pedagogic lenses (Wihlborg, 2009). Learning experiences of the teaching, non-teaching and administrative staff resulting from participation in mobilities are left behind the scenes and usually taken for granted, and only a few researchers highlight learning and educational outcomes of academic staff mobility as one of the important elements or effects of international academic mobility programs and projects (Ball, 2019; Horváth et al., 2020).

The core role of learning

There are only a few studies that focused on, acknowledged, and explored the central role of learning in international trainings and mobility programs. For instance, the Evaluation and Impact Studies reported by the Institute of International Education (IIE, 2024) tried to identify the educational impact of mobility, namely the effect of the international training programs that were regarded as a step towards individual, organizational and social change, where learning was conceptualized as an important transformative process. The overseas fellowship

programs were addressed with the adapted Kirkpatrick model of training evaluation applied to assess the effectiveness of individual academic experience (Kirkpatrick, 1976). The applicability of the Kirkpatrick model for assessing learning outcomes in different contexts, including higher education, has been discussed in literature (Kirkpatrick & Kirkpatrick, 2009; Praslova, 2010). The model incorporates 4 main phases (Fig. 1).

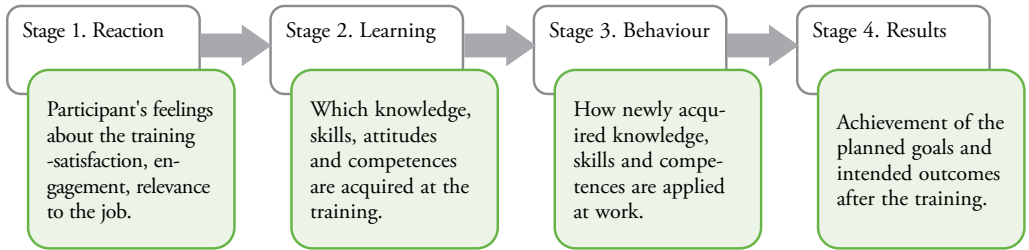


Figure 1. Adapted Kirkpatrick 4-stage model of training evaluation (Kirkpatrick, 1976)

Along with other elements, the model outlines the central position of knowledge acquisition and application as a part of learning and internalizing the newly gained knowledge in a training program that relates to teacher training (Alsalamah & Callinan, 2021) and faculty academic mobility. However, although this model acknowledges the core role of learning in the international training experience, it cannot be used as a comprehensive tool for exploring learning during academic mobility as a process, as it was constructed to measure the outcomes of training experiences as the main indicator, while the aim of this study is to shed more light on the learning process *per se*. Furthermore, it does not consider informal learning, which is one of the core learning dimensions in academic mobility experiences.

Stier (2004) offers another conceptual approach for addressing the ambiguity of internationalization in higher education and academic mobility. He introduces three so-called ideologies, three principally different lenses for underpinning university internationalization practices such as instrumentalism, idealism and educationalism – which are generally aligned with the classical epistemic approaches but fitted into the internationalization context. Unlike the former two, educationalism does not approach university international activities either as a pragmatic tool for standardization and revenue-gaining or as a commitment to social prosperity, but with particular focus on learning and development as a core process, and stresses “lifelong learning, beyond organized education, strongly emphasizing the value of *learning itself*” (p. 343), prioritizing intercultural competences, sensitivity and respect for cultural diversity among the main objectives of international activities,

which is very relevant to university academic mobility. It provides further evidence of the importance of more systematic research of learning as an intrinsic part of mobility in light of the fact that the available studies are vague and fragmented.

Learning theories

It is reasonable to start a discussion of the mobility experiences through the lens of the adult learning theories with the epistemological conceptualization of learning and reference to learning theories. Although there is no generally agreed definition of learning as a concept in educational sciences and psychology, many researchers agree that learning is a process of transformation connected to gaining knowledge and experience that result in changing of understandings, skills, behaviors, beliefs and attitudes (Carlile & Jordan, 2005; De Houwer et al., 2013; Fenwick & Tennant, 2020). Ambrose et al. (2010) define learning as “a process that leads to change, which occurs as a result of experience and increases the potential for improved performance and future learning” (p. 3), emphasizing the importance of understanding learning as a process where learners interpret their explicit and implicit experiences enabling change as a response. Fenwick and Tennant (2020) study adult learning and approach it from four different perspectives – as acquisition of particular knowledge, as something tangible like skills and competences; as a personal reflective and transformative process of constructing own meanings and senses instead of appropriating already existing knowledge; as a practice-based social process built on active worthwhile engagement in the communities of practice rather than individual knowledge construction; and as an even more complex “embodied co-emergent process” (p. 56), emphasizing the contextual nature of learning grounded in the interaction of people, environments, spatial and temporal contexts (Fig. 2).

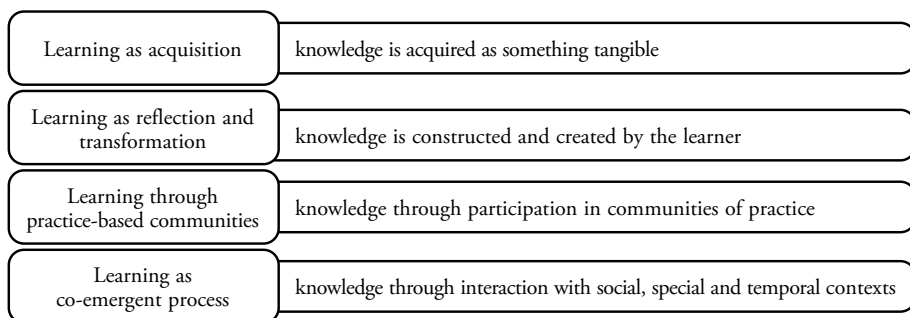


Figure 2. Four perspectives of adult learning, adapted from Fenwick and Tennant (2020)

Each of the perspectives highlights one of the dimensions of learning, and all four allow for deeper understanding of adult learning occurring through the mobility as “the context of a person’s life with its unique cultural, political, physical and social dynamics influences what learning experiences are encountered and how they are engaged” (Fenwick & Tennant, 2020, p. 55). We understand international academic mobility as a complex process that can be described as movement of university staff to a different educational institution situated in a different national and social context for a specific period of time, which means that learning is preconditioned by personal, environmental, spatial, temporal and social factors and their combination at the individual and institutional levels.

In this study, academic mobility is examined as a process of learning and the objects are faculty members, both teaching and research, who are approached as adult learners engaged in the mobility, whose learning is connected, but not limited to academic activities and practices during the mobility experience. Given that faculty members are adults professionally engaged in higher education, their academic mobility experience can be analyzed through the theories of adult learning incorporating principles of andragogy, motivation to learn, experiential learning, transformative learning, and self-directed learning embedded in the social constructivist paradigm. These theories are rooted in the traditional theories of learning that apply to the learning process of diverse adults in dynamic contexts (Bierema, 2019; Fenwick & Tennant, 2020; Merriam & Bierema, 2014; Russ-Eft, 2011), and strive to explain non-formal and informal learning in international settings that applies to faculty mobility experiences. Adult learning theories provide a framework for underpinning and enhancing the learning process and outcomes, as well as professional development of university academic staff engaged in academic mobility (Fenwick & Tennant, 2020; Houle, 1961; Knowles et al., 2005; Kolb, 1984; Merriam & Bierema, 2014; Mezirow, 2006). These conceptual frameworks complement each other by focusing on different dimensions of learning and contribute to a holistic and complex exploration of adult learning practices and experiences that are often overlooked in the faculty mobility process (Bierema, 2019; Knowles, 1950; Knowles et al., 2005; Mezirow, 1997; Tough, 1979).

Methodological Framework

To address the research questions on university faculty members’ perception of academic mobility experiences as learning by and connecting it to adult learning theories, the study included qualitative interviews followed by a thematic analysis as a robust method of qualitative inquiry for studying the individuals’ lived

experiences, including their learning. The qualitative semi-structured interviews allowed for in-depth exploration of the experiences the faculty gained during their mobilities as teachers and researchers, and nuanced individual perceptions through posterior reflection during the conversation, where the interview method provided an opportunity to delve into these intricacies. It offered a way to discover the lifeworld of the university faculty members, including different perspectives and important issues around the topic under discussion (Kvale, 2007), and contextualize their learning experiences in diverse institutional, academic and cultural settings of academic mobility. The interviews helped to capture the context-specific factors like motivations, aspirations, and perceived outcomes that influenced the learning process, providing a richer understanding of adult learning facilitated by the mobility.

The data for the study was collected during online interviews with ten faculty members of Russian universities in 2021...2022, before the war resulting in emergent limitations of international academic cooperation, which negatively affected faculty academic mobility as well. The study applied non-probability sampling that included academics from regional universities holding full-time faculty positions, with different levels of experience, engaged in teaching and research activities, who had at least one experience of international academic mobility participation. Nine of the interviewees were females and one was male, although gender, age, and other demographic characteristics were not considered as substantial factors affecting the learning process during the mobility experience.

The interview protocol included 14 questions about various aspects of academic mobility, including motivation factors, institutional support, perceivable success and the effect of mobility experience on academic practices. Although the interview scenario was developed to answer research questions focused on capturing motivations, expectations and personally perceived outcomes of the faculty's academic mobility experience within the context of university internationalization, the data revealed a new perspective on academic staff mobility due to the selected research strategy. The interview method provided the data collection process with flexibility and dynamics, as the questions could be reorganized and adapted in response to the interviewee's reactions, insights and reflections, so the topic of learning emerged spontaneously in the interview conversations, while the academics' lived experiences were discussed and elaborated. Moreover, the interviews were a reflective process in which the interviewees themselves discovered new meanings, non-evident perspectives, and were encouraged to talk about the emotional aspect of their experience, the transformation of their mindsets and identities, which provided deeper insights and unfolded a new dimension of the study (Kvale, 2007).

The research design incorporated thematic analysis as a well-suited method for identifying themes and patterns from the qualitative data obtained in the interviews. For instance, it encompassed learning as a transformative process, personal and professional motivations to learn, the learners' self-directedness, learning by doing and by immersing into new cultural and institutional contexts. These themes helped to organize, structure and make meaning of diverse and rich information and rationalize the academic staff's learning experiences through the adult learning perspective. The newly identified themes revealed the academic staff's personal learning experiences and their self-perception as learners, as part of their journeys in international academic mobility. Consequently, this study on the learning experiences of mobile faculty members embedded in the adult learning theories was data-driven and aimed at offering a fresh perspective on research into academic staff mobility. Its findings contribute to a deeper understanding and improvement of faculty learning practices during mobility and help to make their mobility experiences more meaningful at the individual level, whereas, from the institutional perspective, the research enhances the value of staff mobility initiatives.

Results and Discussion

Academic mobility of the faculty integrates different types of engagement and professional activities in the host institution, such as teaching, participation in formal trainings, research work or a mix of them, which define the participant's learning experience. As an educational activity, mobility in higher education can be categorized as formal, non-formal or informal type of learning, where the formal one can mostly refer to the mobility of students as it implies formal academic settings, teaching and instruction, standardized educational programs and curricula provided by an educational institution. On the other hand, university staff is mostly engaged in non-formal or informal kinds of learning, where non-formal learning is usually associated with a structured training organized by the host institution, while informal learning is unstructured and contextual learning in the new settings, by which we mean the institutional, social and cultural environment and conditions. As most of the interviewees' mobility experience was not connected to participation in any structured courses or formalized trainings during their time in the host institution, we consider informal learning situated in the spatial, temporal, institutional, cultural and social contexts of the host institution as the most substantial type of learning for this study.

Learning as Development

In scholarly literature, the process of learning is not always referred to and defined as 'learning'; it is often manifested through other descriptors, such as change, development or transformation (Bandura & Walters, 1963; Knowles et al., 2005). Learning was often reflected in a similar way in the interviews ... it was not always defined as learning; rather, it was mentioned and captured as a process of development and transformation:

"Developing myself was very important for me." (Interviewee 5) or

"My experience was part of internal development." (Interviewee 7)

Personal development, as well as professional and academic development, were themes that arose in the conversations. In scholarly discussions, it is associated with diverse areas of development and learning of higher education professionals that include development in the academic role, along with personal development (Dorner & Mårtensson, 2021).

Learning, as part of the academic development process, was acknowledged by all academic staff members; both those who associated themselves more with teaching and with research roles said that they had acquired new competences, knowledge, skills, and adopted new academic practices constituting part of their professional growth:

"As a teacher, I have grown dramatically. It was very unusual, I did not expect it, but it happened." (Interviewee 1), or

"I have done a tremendous amount of work and have made a huge contribution to my doctoral thesis." (Interviewee 4)

Learning as Knowledge Acquisition

In literature, learning as knowledge acquisition is rooted in traditional behaviorist and cognitivist concepts. It is usually referred to as gaining, processing and digesting new information, understanding, or skills through various means, adoption of these cognitive constructs and their application in practice to elaborate the learner's own strategies, behaviors and knowledge applicable in new circumstances and unfamiliar life situations (Fenwick & Tennant, 2020). This can involve learning from experience, studying, observation, communication with others, and utilizing resources such as books, articles and digital sources. From this perspective, knowledge is perceived as a tangible outcome of learning, and an individual comes into possession of this knowledge as a material object. This

process has in recent years been more discussed at the institutional and national levels and referred to as commodification of knowledge, which appears as a response to the development of knowledge society and becomes an important power for cross-border knowledge creation and transfer driven by teachers and researchers on mobility (Alemu, 2020). At the individual level, it does not have that economic connotation and is more related to the personal perception of explicit learning. For instance, acquisition of knowledge was mentioned as “*I brought home the idea*” (Interviewee 9) as if it were a physical object or a souvenir taken home from a trip, and then the participant elaborated and implemented this idea in practice at their home institution, where it resulted in a new study program and became an overt, tangible evidence of learning. Similar patterns can be recognized in most of the interviews where the faculty discussed new teaching methods or research outcomes that they took home. Evidently, having solid and tangible outcomes and takeaways from mobility programs helps and supports the participants’ reflections of their learning, and makes the learning process more visible in this sense at both the personal and institutional levels:

“My idea was serious, but the Vice-Rector for International Relations did not seem to appreciate it at first. Two years later, he apologized to me, said that the idea was great, and needed to be implemented.” (Interviewee 5)

Discussion and acknowledgement of the learning outcomes also supports the emotional response to the mobility experience that can be important for the faculty members’ future decisions on mobility participation, collegial support to other staff planning on taking part in the mobility and generally motivating more active engagement of the academic staff in learning through international activities.

Motivation to Learn

Adults’ motivation is generally need-based and shaped by their life context when they see the practical value of their learning and how it will satisfy their interests and needs (Knowles et al., 2005). Academic mobility as an experience involves a rich variety of contexts – cultural, educational, institutional, and social ... that can influence the participants’ motivation. It is essential to recognize that motivation to participate in a mobility program and motivation to learn during the mobility experience may not always align; learning, without thorough strategic planning, might not be the goal or driving force behind participation in the

mobility program, but rather a parallel process that unfolds alongside it. The rationales behind the decision to take part in a mobility program can be very different: the faculty can be driven personally or professionally or even have formal institutional reasons to participate that are not connected to intrinsic motivation. However, the reasons for mobility should also be considered in the context of learning as they determine the participants' priorities in the mobility and characterizes them as learners who can be goal-oriented, activity-oriented or learning-oriented (Houle, 1961). In most cases, these orientations overlap but are still helpful for identifying a learner's primary motivations. Goal-oriented learners are driven by specific, tangible objectives, which may be related to career advancement, personal development, acquiring a particular skill, or generally achieving a specific outcome. This orientation is linked to clear goal-setting prior to mobility, which is typical for more mature participants, often with prior mobility experience, whose expectations are less vague and whose participation is driven more by professional than by personal reasons. Such participants reflect on the clear connection between their learning efforts and the attainment of their goals, with the relevance of the learning content to their goals is a key factor influencing their engagement. Goal orientation is often associated with the professional engagement of the learner at their home institution and is more common among staff engaged in research, since their mobility goals are more tangible and the outcomes are more measurable, e.g. scientific articles, collaborative projects or dissertations, which positively affects the motivation:

"I wanted to engage in the work of the host department, to gain insight in how the teaching and, more importantly, the research process is conducted there. I was interested personally, and even more professionally." (Interviewee 4) or

"I was lucky – it was that particular innovative research environment that I always wanted to familiarize myself with." (Interviewee 3)

Activity-oriented adult learners are more driven by the social aspect of the process itself, than by achieving learning goals; they enjoy learning activities that they engage in while acquiring knowledge or skills (Houle, 1961). This orientation is more typical for young academics eager to discover the world and acting out of curiosity, deriving pleasure from activities associated with learning through communication. They engage in multiple endeavors in the host institutions and might be interested in experiential learning, hands-on activities, and exploration of various topics without a particular emphasis on achieving specific outcomes. This approach to learning during mobility discloses, on the one hand, the social dimension of learning as social interaction plays a core role for activity-oriented

mobility participants. On the other hand, it can be also explained by environmental and other factors not related to learning. For instance, limited opportunities for professional and leisure travelling may be a robust incentive for mobility participation among faculty from peripheral institutions:

“It was difficult for me to afford trips abroad, and academic mobility provided me with such an opportunity.” (Interviewee 1)

However, activity-oriented mobility participants, who were not so professionally driven, conceptualized themselves as cultural ambassadors of their country more than others and were more likely to engage in various cultural events and enjoy sharing their culture with others and learning about new cultures. Their openness to other cultures and attitudes toward people, which in the context of academic mobility refers to the ability to appreciate and accept diversity, understanding that different cultures may have unique perspectives, values, and practices are developed through learning and gaining new knowledge (Alemu, 2020). More than participants with other motivations, they associated their learning experience with development of intercultural competence and cultural sensitivity that brings into the foreground the cultural dimension of learning as part of the international mobility experience.

“Whenever my host institution organized some international events or activities, I always tried to prove myself as a representative of my country’s culture.” (Interviewee 10)

Activity orientation was also strongly related to the participants’ language competence as the language barrier was a strong hindering factor for engagement in additional activities beyond the mandatory aspects of the mobility program. And vice versa, the faculty members described their interest in participating in various activities during their mobility as a strong impulse to learn the foreign language and develop their language capacity:

“Maybe I would dare to repeat the mobility experience, but I am still critical to my language abilities, my English is perfectly unperfect that makes me feel shy.” (Interviewee 10), or

“My expectations were very much connected to improving my language skills. That is, practicing live speech communication – and it just soared.” (Interviewee 1)

Learning-oriented adult learners are focused on the learning process, which is their primary focus and the main driving force. Such learners are driven by an inner desire to know things and usually have a habit of learning, so the need to

acquire knowledge moves them forward and motivates them to engage in learning activities (Houle, 1961). Learning of a foreign language can often be related to this type of orientation and motivation to learn, as can acquisition of cultural knowledge that overlaps and cannot be clearly distinguished from the learners' activity-based orientation. When they talked about their lived experiences, the interviewees interested in learning the language and culture often mentioned that their orientation to learning was associated with the curiosity that was driving them, and that satisfaction of this curiosity formed their learning-oriented motivation.

“One of my reasons was trivial ... human curiosity. I wanted to see what is over there, and what it's like over there, and what is being done there.” (Interviewee 4)

Evidently, orientations play an important role in forming the particular motivation of the participants; these orientations are not mutually exclusive and individual learners can exhibit combinations of their traits. Mobility experience can accommodate and leverage all orientations, incorporating clear goal-setting for more goal-oriented participants, diversity of activities for more sociable and activity-oriented individuals, and offering cognitive challenges and meeting the demand for knowledge among those oriented to learning as a process. When properly acknowledged and duly addressed, these orientations can help create and support a meaningful learning experience for faculty participating in academic mobility at both the individual and institutional levels.

Self-Directed Learning

Motivation to learn is directly connected to self-directedness of learning of adult professionals. Academic mobility requires faculty to take charge of their own learning and adapt to new environments independently, which is in line with the theory of self-directed learning, where adults take responsibility for identifying their learning needs, setting goals, and pursuing knowledge and skills relevant to their context, personal objectives and professional development goals (Knowles, 1975). Self-directedness of learning is not something set by default; rather, it is achieved through the effort of the learner (Tough, 1979). Proactive behavior and enthusiasm of the learner are among the requirements for successful learning, while reactive behavior inhibits learning (Knowles, 1975). Engaged in academic mobility, faculty members develop self-directed learning skills by navigating unfamiliar territories, seeking out resources, and engaging in independent inquiry.

However, it must be noted that personal responsibility, autonomy, intrinsic motivation and definition of the goals are the factors necessary for making meaning of the mobility experience:

“Mobility is anyways enriching; however, it is meaningful if you keep in mind why you are taking part in it.” (Interviewee 6)

In other words, to make learning deliberate, mobility participants need to develop a mindful and strategic approach to their mobility experience. Self-directed learning in the mobility context starts with intentional planning (choosing the mobility program or destination, courses, trainings and cultural events), elaborating learning content and time management (setting the balance between structured training, teaching or research, and self-study), and self-assessment of the learning outcomes (diaries, reflections, reports) (Merriam & Bierema, 2014). Tough (1979) adds alternative perspectives to self-directed learning, where a learner is responsible not only for making decisions about the learning content, place, time and outcomes of learning, but also for prior assessment of their own knowledge, skills and learning needs, as well as for maintaining motivation throughout the learning process. All perspectives provide room for learners' flexibility and adjustment of their learning strategies which is important for mobility as a self-directed learning process embedded in unfamiliar, diverse and often unpredictable contexts.

In practice, the strategies of learning in the context of mobility are often inconsistent and lacking one or several elements: some of the participants do not take much effort to plan their learning, while others do not evaluate the outcomes properly. Even though they are intrinsically motivated to learn, faculty members are often not aware of the content they are supposed to learn, do not set well-defined goals, miss the opportunity to reflect on their experience during and after mobility, and do not pay much attention to the evaluation of their learning outcomes. An unfamiliar educational and institutional environment, insufficient information about the structure and content of the mobility program, and excessive dependance on guidance and support of the institutions contribute to the ambiguity of the mobility strategies and can be the factors inhibiting self-directed learning of the participating faculty members.

At the institutional level, mobility participants are not always encouraged to share their knowledge and experience back home; instead they are required to submit standardized reports that do not spotlight the faculty's learning and development and do not result in the acknowledgement of their learning. This practice negatively affects both the learning of individual mobility participants and the organizational learning culture of the educational institution that can be supported and promoted through dissemination of knowledge acquired by

the faculty during their mobilities. Knowls et al. (2005) also underline the importance of empowerment of the employees by the institution and of offering support to the staff along the learning journey, from assessing the learning needs that are often inaccurate and mixed with the learner's wants, to planning and implementing the learning strategies and assessing the results, which can enhance the faculty's learning experience during the mobility program as well.

Transformative learning and reflectivity

Academic mobility can become a transformative experience for academics, leading to personal and professional growth (Nada & Legutko, 2022). The transformative learning theory, which was developed by Mezirow (1991), suggests that adults undergo significant shifts in their perspectives, beliefs, and assumptions through critical reflection and challenging experiences. By immersing themselves in unfamiliar educational environments, international mobility participants are exposed to new ideas, perspectives, academic and non-academic practices, which can challenge their existing views and facilitate transformative learning. The transformative learning theory interprets their learning as a process of transformation of perception of the world and self-perception as well, in which the learners "come to reflect on their self-images, change their self-concepts, question their previously internalized norms, and reinterpret their current and past behaviors from a new perspective" (Mezirow, 1991, p. 213). Rooted in the learner's internal reflective process, transformative learning requires reflection on the content and process of lived experiences, followed by problem-solving reflection that facilitates meaning-making.

The mobility experience of the faculty often, but not always, yields tangible results like career advancement, publications, or adoption of new teaching methods and practices. The faculty sometimes reflects on intangible changes that can be explained by the ongoing transformations induced by their experience:

"That experience was part of internal development, that is I feel like I am two slightly different persons, that I was one person before the mobility program, and a new one, little better one after it." (Interviewee 8)

These transformations can demonstrate learning, whether it occurs unconsciously, intentionally, or as a result of the participant's self-directed efforts. They can not only expand academic horizons, but also often lead to dramatic shifts in the learner's perspective, resulting in changes in behavior, not only in

habits, traditions and practices of teaching or research, as well as beyond academic practices. For instance:

“Before I wore suits at work, and now I wear jeans and sneakers.”
(Interviewee 4)

Changes in habitual behaviors and routines signal transformative learning, extending to both the academic and non-academic life of the faculty. They also reflect changing assumptions and the adoption of features and elements of a new academic culture. This underpins the cultural dimension of learning, through which academics acquire knowledge, beliefs, values, customs, behaviors, and skills from the cultural environment in which they are immersed. It can be related to national and regional, as well as organizational culture, and play a crucial role in shaping the learner’s identity, worldview, and understanding of the community both in the host destination and upon returning home (Taylor, 1994).

The critical perspective is also an important element of transformative learning as it goes beyond simply acquiring information or skills; it challenges individuals to question assumptions, examine social structures, and engage in deep reflection about themselves and the world around them (Mezirow, 1991). The learners dip into the process of critically examining their existing knowledge and recognizing that some assumptions may be limiting or biased; this can be fostered by the mobility environment. Mobility participants challenge and sometimes dislodge existing paradigms and mental models, a critical perspective encourages them to question established conventional norms, professional and societal expectations, fostering a willingness to consider alternative viewpoints and appreciation of cultural diversity (Alemu, 2020). The societal context of mobility can serve as a catalyst for developing the participants’ critical perspective, which is manifested through comparisons of contexts and validation of practices such as “right and wrong” or “here and there”. Thinking about their experience, mobility participants disclose a critical stance towards their cognitive process and the reflective nature of their learning:

“In terms of science, it is very useful for us to understand where we are in the global scientific community, to see what we are doing right and what we are doing wrong.” (Interviewee 4)

Reflection as a part of transformative learning plays a pivotal role not only in assessment of the results, but throughout the whole process as well. For most of the participants, the interview for this research was the first substantial attempt of structured reflection following their mobility experience that allowed them to unveil new dimensions and perspectives of their lived experience, which is one of the features of qualitative inquiry (Kvale, 2007). After they completed

their mobility program, the faculty were expected to submit formal reports to their home universities that were mostly focused on financial information, travel documentation, the schedule and a summarized description of the mobility activities and content, usually quite short and superficial. The participants did not mention sharing knowledge with other staff members that would contribute to reflection about their own learning as a typical institutional practice after mobility completion. However, academics, who were more engaged in research than in teaching, benefited more from opportunities to reflect on their learning and development of new knowledge and perspectives owing to their job responsibilities, such as preparation of articles and conference presentations where they integrated the knowledge, skills and attitudes developed during their mobility:

“Each mobility resulted in a new article or conference presentation that I produced; all mobility experiences enriched my work with some new elements.” (Interviewee 5)

During the interviews, the participants were encouraged to reflect on both work-related knowledge and changing self-perceptions induced by learning. At the professional level, such reflexive practice can help academic staff integrate the insights into their own practices, enhancing the quality of and innovation in their teaching and research, boosting their cultural competence, and developing resilience and adaptability at the personal level. In a broader sense, academic staff may integrate the mobility experience and knowledge into their own values, teaching philosophies, and career aspirations, fostering a deeper sense of self-awareness and purpose (Mezirow, 1991). Reflecting on the mobility experience can also help connect this experience to experiential learning that, in turn, can deepen the mobility participants' understanding of their own learning.

In order to maximize the benefits of reflection after academic mobility completion, faculty should intentionally engage in structured reflection processes as this is essential for their understanding of their learning and development of their self-concept as learners. This may involve discussions with colleagues, knowledge-sharing sessions, participation in reflective workshops, or seeking feedback from peers, which can be organized and incentivized at the institutional level.

Experiential Learning

Being at the core of adult learning, experience is grounded in an individual's live activities in the personal, social and professional domains, followed by their reflection on such participation and making meaning of it. This view of experiential learning draws from the constructivist paradigm where existing experi-

ence is conceptualized as a base for learning and creating new knowledge. Adults constantly learn from their experiences, which are at the same time the source of learning and the impulse towards continuous learning (Merriam & Bierema, 2014). Experiential learning is crucial for the academic mobility of faculty members as it offers a dynamic and immersive approach to professional development. Most of the learning during mobility occurs incidentally from daily life in a new social, cultural and academic environment, where faculty members continuously gain new experience and make meaning of it based on their prior experiences:

“When you teaching at one university, you get used to it and work automatically. But when you immerse yourself in a foreign academic culture, you are reimagining your professional practices.” (Interviewee 2)

This process was theorized by Dewey (1938) as continuity of experience that describes experiential learning together with the principle of interaction between the learner and the context. Kolb (1984) also modelled adult learning as a continuous process or a cycle that starts from concrete experience, followed by reflective observation that allows a critical approach to the obtained experience from different perspectives, abstract conceptualization responsible for meaning-making and, finally, active experimentation, that is, solving problems and applying new knowledge to new practical situations. The mobility not only provides the faculty members with extensive experience in the host institution; academic staff also build on their prior depth of experience to make meaning and learn from the current situation. Importantly, by engaging in academic activities at the host institution, they benefit from the opportunity to convert their prior and newly gained experiences into practice and experiment with new knowledge, which provides a valuable contribution to their successful learning. Another way to internalize the acquired knowledge and experiences and complete the learning cycle is to put them into action by making changes in habitual teaching and research practices at one's home institution. The interviewed faculty members, who felt encouraged to apply the overseas experience back at their home institutions, were more satisfied with the mobility results and likely to perceive their learning through the experience as rewarding.

Engagement of different dimensions of experiences – physical, mental and emotional ... is typical for experiential learning (Zeivots, 2016). Emotional response and relatability of the experience were highly valued by the mobility participants and highlighted in the interviews:

“I shared my emotional experience with the students, because it was not what I read in books, but what I myself had experienced.” (Interviewee 5)

Emotions often do not count in a scholarly conversation on adult learning and even less in discussions on mobility. In the context of experiential learning during mobility abroad, it makes sense to consider emotions of the participants not only as an essential part of their lived experiences and learning, but also as an important factor responsible for their active engagement in the learning process and as an outcome. Children perceive learning with great joy and excitement, while many adults gradually seem to lose their sense of intrinsic excitement to engage with learning, probably due to both personally and socially conditioned factors such as job responsibilities, social roles, and family duties (Zeivots, 2016). This corroborates the importance of collegial and institutional support that can reduce tension between duties and responsibilities of mobility participants at their home institutions and active engagement in activities and learning at the host institutions during the mobility.

National and Institutional Contexts

It needs to be borne in mind that the research was conducted among faculty of medium-sized Russian universities located outside the capital. As often discussed in literature, internationalization practices of universities, including academic mobility, are deeply rooted in the national contexts and depend on public and institutional regulations, academic traditions, national and institutional cultures and other contextual factors (Knight, 2008). Another aspect to consider is the perception of mobility, which can vary depending on the context of participation. Mobility can be perceived as a privilege or as a burden, and, consequently, either as an opportunity to learn or as an extra workload, which greatly influences the participants' motivation, engagement, enthusiasm and, ultimately, the quality of learning.

Another issue connected with the national context concerns the language requirements for the mobility. Most mobility opportunities in English-speaking host institutions require proficiency in English, which many incoming academic staff believe they are lacking:

“My English is far from perfect, and of course, as any normal person, sometimes I feel shy because of that.” (Interviewee 2)

Thus, the language barrier can inhibit learning not only due to the lack of understanding of the content of trainings or written materials in the host institution, but at the level of self-perception as well, limiting effective communication between international and domestic staff and impeding learning.

Knowledge of the English language is not the only barrier to learning; so are the differences in the specific language, culture and community practices, and practice in the host institution (Fenwick & Tennant, 2020). The host academic community itself can be an enormous resource of learning if the newcomers are accepted and integrated, which is not easy and depends on the mobility plan, duration, type of professional engagement and individual characteristics of the faculty member. Faculty engaged in longer mobilities and primarily in research activities during the mobility reflected on deeper involvement and more meaningful interaction with academic staff of the host institutions than the faculty that has mostly teaching duties and shorter-term mobility experiences:

“Earlier I was engaged in a mobility program under a grant, but unfortunately it was a short-term program. And for engaging in research, you need more time than 1...2 weeks to immerse in team-work.” (Interviewee 3)

Open-mindedness, cultural competency and readiness to work and collaborate in unfamiliar national, cultural and academic environments is also a strong factor fostering active engagement in learning through experience during the mobility. Cross-cultural competences are invaluable in an increasingly globalized academic landscape, where effective communication with students, colleagues, and collaborators from different cultural backgrounds is essential. Academics with prior international experience or extensive knowledge about the cultures perceive their mobility experiences more positively, and their learning contributes to the internationalization of institutions. Faculty members, who have participated in academic mobility programs, can play a vital role in promoting international collaboration, fostering a global mindset among their colleagues, and contributing to the overall internationalization goals of their institutions.

Conclusion

Approaching the academic mobility of university faculty members through the adult learning theories is an impactful way to explore learning as a significant dimension of the mobility experience. The importance of assessing the learning of the mobility participants at Russian universities is underestimated at both the institutional and personal levels, while mobility participation is generally often undervalued. The research has shown that the mobility experience is a

rich source of learning capable of making a meaningful contribution to the professional and academic development of the faculty members. At the institutional level, learning by participating in academic mobility can become a driver of the organizational learning culture, foster a more global and international mindset among university staff, and facilitate the internationalization of higher education institutions. Mobility proposals should be clearly communicated and explained by the institutions, while, at the individual level, mobility participation needs to be well prepared and understood as a learning and development process. It is important to structure learning as an intentional effort rather than as a spontaneous process. Academic mobility, which involves a significant investment of resources such as time, money and labor, requires a well elaborated strategy that drives the participants to meaningful outcomes and explicit results. Using a self-directed learning theory as a framework, administrative staff of educational institutions, as well as potential mobility participants, can plan and work out in detail the mobility process before the mobility, starting with an assessment of the learning needs, discussing and elaborating appropriate motivations, setting professional and personal goals, planning the learning trajectory and evaluation of the results. Pre-planned reflective practices during the mobility, such as learning diaries, journals or reflective letters, can become an abundant resource for learning and help to internalize and implement new knowledge by individuals, transform their habitual teaching and research practices and contribute to the development of a better academic environment and practices back at home institutions. Prior experience integrated in a new academic context and reconsidered during and after the mobility can also make an essential contribution to the academic staff's self-perception and identity. However, the mobility participant's individual effort aimed at mobility planning, implementation and evaluation does not suffice for them to fully benefit from the mobility, and institutional support and acknowledgement play a pivotal role in the learning and development of the faculty as the mobility outcome. A meaningful contribution to individual learning of the mobility participants and organizational learning in the institutions could be made by helping the faculty at all stages of the mobility process, from assessing their learning needs and providing them with full information on the mobility that would help develop their learning strategies, to supporting practical implementation and sharing the acquired knowledge and experiences with the colleagues, enabling peer assessment and collegial feedback.

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Computational Thinking in Adult Education: Learning Outcomes of a STEM Intervention³

Abstract: Computational Thinking (CT) has attracted increasing international attention, particularly in relation to younger learners. However, as a fundamental cognitive process, CT is equally relevant to adults, and its development within this demographic warrants further investigation. STEM education, with its holistic and transdisciplinary orientation, is closely associated with CT and, if appropriately designed, can serve as a powerful framework for adult education. This paper reports on an action research project that explored the dimensions of CT in the context of STEM-based adult education. For this purpose, a STEM intervention comprising eight interconnected scenarios was designed and implemented in Second Chance Schools (SCSs), whose students exemplify the essential characteristics of adult learners. A total of 48 trainees, aged 26 to 75, across four classes in two SCSs in Athens, participated in the intervention. Data was collected through pre... and post-tests and analyzed quantitatively, supplemented by qualitative observations to support interpretation. The results revealed statistically significant improvements across all levels of difficulty and dimensions examined. Specifically, gains were observed in abstraction, algorithmic thinking, decomposition, generalization, and evaluation.

Keywords: Adult Education, Computational Thinking, Second Chance Schools, STEM Education

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Računarsko razmišljanje u obrazovanju odraslih: ishodi učenja STEM intervencije⁴

Apstrakt: Na međunarodnom nivou se sve više pažnje posvećuje računarskom razmišljanju (u daljem tekstu: RR), posebno mladih učenika. Međutim, RR je kao osnovni kognitivni proces podjednako važno i za odrasle, pa se njegov razvoj mora istraživati i u toj demografskoj grupi. Zahvaljujući svom holističkom i transdisciplinarnom pristupu, STEM obrazovanje je usko povezano sa RR i može biti idealno za obrazovanje odraslih, ukoliko se adekvatno osmisli. U ovom radu je predstavljeno akciono istraživanje u kojem su ispitane dimenzije RR u kontekstu STEM obrazovanja odraslih. Za potrebe istraživanja je osmišljena STEM intervencija koja se sastojala od osam međusobno povezanih scenarija. Intervencija je sprovedena u školama druge šanse (ŠDŠ) jer se njihovi polaznici odlikuju ključnim karakteristikama odraslih učenika. U intervenciji je učestvovalo ukupno 48 polaznika, uzrasta od 26 do 75 godina, koji su pohađali četiri odeljenja u dve ŠDŠ u Atini. Podaci prikupljeni pre i nakon intervencije kvantitativno su analizirani, dok su kvalitativna zapažanja iskorišćena kao pomoć u tumačenju rezultata. Statistički značajna poboljšanja su uočena nakon STEM intervencije na svim proučavanim nivoima težine i dimenzijama. Uočen je napredak u apstrakciji, algoritamskom razmišljanju, razlaganju, generalizaciji i evaluaciji.

Ključne reči: obrazovanje odraslih, računarsko razmišljanje, škole druge šanse, STEM obrazovanje

Introduction

Computational thinking (CT) is a crucial skill for adult learners, as it fosters problem-solving abilities that are applicable in various professional and everyday contexts. CT equips adults with the tools to approach complex challenges systematically, promoting skills like decomposition, abstraction, and algorithmic thinking (Yadav et al., 2017). Although adult learners need to develop or improve their computational thinking skills, challenges often arise due to the absence of suitable educational methods that consider their specific needs and motivations (El Mawas et al., 2021). To address the aforementioned challenges, we designed a small-scale STEM intervention for adult learners enrolled in Second Chance Schools (SCS) in the Prefecture of Athens, Greece. The intervention was informed by both adult education principles and the pedagogical foundations of STEM education.

⁴ Istraživanje predstavljeno u ovom radu zasnovano je na istraživanju koje E. A. Kotzampasaki sprovodi u okviru rada na svojoj doktorskoj disertaciji pod mentorstvom G. A. Koulaouzides.

Computational Thinking

Computational Thinking (CT) is conceptualized as a cognitive process that facilitates the automatization of certain aspects of human thought (Selby & Woollard, 2014). Wing (2006) pointed out that CT, as a process based on the fundamental concepts of computer science, might contribute as a way of thinking and approaching several critical issues in problem solving, and might lead us in understanding both human behavior and systems design, which is why CT must be recognized as one of the fundamental life skills. Some years later, Wing (2017) explained that computational thinking was “the thought processes involved in formulating a problem and expressing its solution(s) in such a way that a computer—human or machine—can effectively carry out.”

Although there is no universally accepted definition of CT, X. Tang and associates (2020) attempted to categorize some of the most common definitions. They distinguish between those emphasizing programming or computer science concepts (Brennan & Resnick, 2012; Denner et al., 2012; Weintrop et al., 2016) and those focusing on solving real-world problems through a combination of knowledge and methods from various fields (CSTA & ISTE, 2011; Selby & Woollard, 2014; Yadav et al., 2014). Moreover, in a more comprehensive approach, Denning and Tedre (2019, p. 4) explained that CT “is the mental skills and practices for (a) designing computations that get computers to do the jobs for us and (b) explaining the interpreting the world as a complex information processes [...] the explanation aspect reflects the science tradition of computing in which people seek to understand how computation works and how it shows up in the world.” However, in addition to efforts to define computational thinking, considerable debates about the main CT dimensions are under way in the research and educational community. Ling, et al. (2018) analyzed the relevant literature and concluded it by separating CT dimensions from CT skills. They opted for the five CT dimensions developed by Selby & Woollard (2014) that have received considerable acceptance:

- **Abstraction:** According to Wing (2011), abstraction is a crucial, high-level thinking process in computational thinking, playing a key role in identifying common properties and excluding non-essential data, thereby enhancing the ability to manage complexity. In other words, abstraction serves as a fundamental tool for handling complexity, enabling the development and understanding of simpler models to achieve a clearer comprehension of complex phenomena (Cook et al., 2012).
- **Algorithmic Thinking:** According to Hu (2011), computational thinking involves a step-by-step determination of a functional process. He

points out that individuals who study models and algorithms develop skills that can enhance critical thinking and benefit from them on multiple levels.

- **Decomposition:** Decomposition involves an initial assessment of a problem's complexity by breaking it down into smaller, more manageable components, making it easier to solve (Djambong & Freiman, 2016). It is about "...finding structure in the problem and determining how the various components will fit together in the final solution" (Csizmadia et al., 2019, p. 45).
- **Generalization:** This dimension involves recognizing the value of a solution in solving similar or other real-world problems, as well as reusing the solution either as part of another solution or in its original form (Csizmadia et al., 2019; National Research Council, 2011; Selby & Woollard, 2014).
- **Evaluation:** This dimension of computational thinking involves implementing, representing and assessing previous phases of problem-solving efforts (Fogli et al., 2017). Evaluation includes exploring alternatives, comparing options, and considering how these alternatives might function in real-life situations (Csizmadia et al., 2019).

The aforementioned dimensions of computational thinking have been applied in various research studies (Csizmadia et al., 2019; Ling et al., 2018; X. Tang et al., 2020) and form the basis of our approach in this study. At this point, the following question arises: "How can we actually foster computational thinking?". In our opinion, CT-STEM may be an answer.

Computational Thinking in STEM

Computational Thinking in STEM (CT-STEM) refers to the development of computational thinking skills through STEM education. It's important to recognize that

STEM (Science, Technology, Engineering and Mathematics) education is not merely the accumulation of knowledge across scientific fields, but rather a holistic, transdisciplinary approach that moves beyond isolated specializations. It emphasizes the study of connections, focuses on interrelated processes, and does not concentrate on individual phenomena (Psycharis et al., 2018 as cited in Kotzampasaki & Koulaouzides, 2024, p. 183).

STEM education fosters the development of scientific, mathematical and technological practices, concepts, and insights, which enable the resolution of real-world challenges and complex questions (Man et al., 2016). Integrating computational thinking into STEM education promotes interconnectedness across scientific fields and enhances math and science lessons to reflect current professional practices (X. Tang et al., 2020). Swanson, et al. (2019) analyzed interviews with CT-STEM researchers and proposed a taxonomy with four key CT-STEM practices: data handling, simulation and modeling, systems thinking, and computational problem-solving. Research shows a positive impact of both STEM education and game-based learning on computational thinking; however, as discussed in the following paragraph, most of these studies have been conducted with younger students (Fidai et al., 2020; Lu et al., 2023; Ma et al., 2023).

Computational Thinking Evaluation: Target Populations and Pools

Interest in computational thinking (CT) has grown significantly among researchers, and recent years have seen the publication of meta-analyses on the topic. Literature reviews and meta-analyses, such as those by X. Tang and associates (2020) including 96 studies; Cutumisu and associates (2019), reviewing 39 empirical studies; and Poulakis and Politis (2021), examining 82 studies, all reach a common conclusion: most CT research focuses on primary and secondary school students, with limited work addressing adult learners. In the few studies involving adults, the participants were typically college students.

Another notable finding is that most CT evaluations focus narrowly on computing or programming skills, while CT itself encompasses a broader set of cognitive skills. X. Tang and associates (2020) propose several directions for future research: a) conducting more studies with older age groups, such as high school students, college students, vocational trainees, and learners in non-traditional educational settings; b) basing studies on clear CT definitions and exploring connections across different thematic areas; c) incorporating qualitative data like interviews or focus groups to deepen understanding of CT; d) ensuring reliability and validity in assessments; e) recognizing the unique aspects of CT that distinguish it from programming or computing; and f) designing CT assessment tools adaptable across various platforms to allow comparisons. Poulakis and Politis (2021) echo these recommendations, noting the lack of independent, validated evaluation tools for all age groups and advocating multi-method evaluations that include quantitative research as the most effective approach. A critical issue in CT research is the need for reliable assessment tools to measure whether CT skills are

developed or improved. CT assessments can generally be categorized by their approach: a) assessments based on specific programming platforms, b) psychometric or scale-based tools, and c) multi-method approaches (Poulakis & Politis, 2021).

In our study, we focus on the internationally recognized Bebras CT competition (see bebras.org) to collect our main quantitative data, and we explain our choice in detail. Bebras questions are designed to assess cognitive skills useful in solving problems across various domains (X. Tang et al., 2020) and are based on the application of CT skills in daily life (Román-González et al., 2019). X. Tang and associates (2020) note that Bebras is widely used and valued by researchers due to its distinct advantages: a) no electronic devices are required; b) no prior knowledge of computers or programming is necessary; c) the questions are designed as riddles, brainteasers, or logic puzzles; d) the questions are available at varying difficulty levels; and e) each question is mapped to specific CT dimensions, aligning with Selby and Woollard's (2014) CT framework. Research suggests that Bebras questions provide a high-quality basis for CT assessment (Dagiene & Stupuriene, 2016), while psychometric analyses have been conducted to further confirm their validity (Araujo et al., 2019; Hubwieser & Mühling, 2015). Although Bebras competitions are primarily aimed at students under 18, researchers, such as López and García-Peñalvo (2016), have successfully adapted Bebras questions to assess CT in higher education students. Similarly, Lockwood and Mooney (2018) analyzed Bebras tasks and concluded that they were appropriate for college-level students as well.

CT and Adult Learners

Research on computational thinking (CT) specifically related to the general adult population remains limited (Kotzampasaki & Koulaouzides, 2024). A published content analysis of relevant research verified that there is only very limited focus on adult learners aside from educators or higher education students in the 336 studies published between 2006 and 2018 (K. Y. Tang et al., 2020). However, higher education students and undergraduate students, in particular, may not be generally classified as “adult learners” given the common understanding that they do not necessarily exhibit the key characteristics of adult learners, since adulthood is a complex concept linked to self-definition, social roles and social acceptance (Hill et al., 2023; Koulaouzides, 2019).

We should, however, take into consideration findings from research that examined computational thinking beyond schooling. For example, Lafuente-Martínez and associates (2022) attempted to create a CT test for adults, conduct-

ing reliability verification, validity, and factor analysis to develop a one-dimensional model focusing on algorithmic thinking (Algorithmic Thinking Test for Adults ... ATTA). However, we were unable to identify any published studies that utilized this tool. Moreover, Zapata-Rivera et al. (2019) studied ten educators and ten adult learners and made recommendations for programming training to support digital learning tools like alarms and notifications. This study revealed that adults primarily need support and training in CT aspects that meet lifelong learning demands, such as practical skills and time management, rather than computer use or programming (Zapata-Rivera et al., 2019). El Mawas et al. (2021) tested the adaptive educational game "AutoThinking" on 12 postgraduate students in a digital learning master's program. The "AutoThinking" labyrinth game uses flow charts and block programming; the study included questions assessing CT knowledge, such as "What is debugging?" and "What is a sequence?". The results suggest that the AutoThinking game effectively increased the students' knowledge of concepts related to computational thinking and computing (El Mawas et al., 2021). Moreover, Gao (2020) studied students in higher vocational education in China, finding that game-based learning and CT improved their learning interest and engagement; he also highlighted the need for studies involving older age groups. Similarly, Kazimoglu (2020) examined the effectiveness of a "serious game" for 151 first-year computer science students, noting its positive impact on motivation to learn programming and confidence in using CT skills. Serious games are "digital games and equipment with an agenda of educational design and beyond entertainment" (Park et al., 2012, as cited in Pliasa & Fachantidis, 2021, p. 619) and are utilized in educational research, such as that by Pliasa and Fachantidis (2021), because of their potential to develop skills, achieve cognitive objectives and modify attitudes, benefiting both typical and autistic students.

Methodology: Choices and Concerns

Research Gap and Research Questions

The above-mentioned studies revealed a significant gap in CT studies focusing on adult learners, particularly those without prior computing or programming knowledge. Therefore, we decided to focus on adult learners with low qualifications and examine what happens in formal education environments when they are given a second opportunity to participate in education (Cutumisu et al., 2019; Kotzampasaki & Koulaouzides, 2024; Ortiz et al., 2023; Poulakis & Politis, 2021; X. Tang et al., 2020). Our decision was also informed by the work of Ortiz and

associates (2023), who point out the importance of research related to ways of reducing the digital divide among adults participating in basic literacy programs.

In Greece, this opportunity is offered to the general adult population in the Second Chance Schools (SCSs). The SCSs in Greece are attended by adults, who had dropped out of school before completing their nine-year compulsory education. SCSs aim to support the learners' cultural, economic and social development, and self-confidence to help them enter or advance in the workforce by teaching them essential skills (Koutouzis et al., 2023). SCS students generally exhibit the main characteristics of adult learners; they face constraints such as time limitations, work, and family responsibilities, wherefore the SCS curricula address their diverse needs by employing adaptable educational tools to make education a multidimensional endeavor. Our main research question related to the research presented in this paper is:

- What is the impact of a designed STEM didactic intervention on the dimensions of computational thinking on Second Chance School adult students?

and more specifically:

- What is the impact of the STEM intervention on each of five CT dimensions (abstraction, decomposition, algorithmic thinking, evaluation, generalization)?
- What is the impact of the STEM intervention on CT's varying levels of difficulty (easy, medium, difficult)?

Procedure

To answer the research questions, we conducted a mixed-method action research study. We designed a STEM intervention featuring a sequence of interconnected educational scenarios centered on common transdisciplinary concepts. The intervention included seminars with a variety of activities, such as educational robotics, physical computing, micro-construction, experiments and simulations, alongside diverse teaching techniques. For instance, participants worked with the Edison robot, micro:bit, and various extensions, such as motors, sensors and LEDs, while also engaging in chemistry experiments and simulations, in order to explore the concept of "color" from multiple perspectives. Detailed information on the design and content of the STEM intervention will be published in a separate article.

Our STEM intervention was implemented four times at the two SCSs in Greece. The selection of the SCSs was guided by their expressed willingness to

participate and the practical feasibility of integrating the intervention in their curriculum. We secured the necessary permissions in communication with these schools and ensured that the study was implemented in a manner that respected their schedules and supported their smooth operation.

Participants first completed the Bebras CT pretest that is explained in the *Instruments* section. This was followed by the implementation of the intervention consisting of eight STEM educational scenarios. The seminars were generally three hours long and conducted once a week, unless there were scheduling conflicts with the SCSs, such as participation in other activities or an educational visit, in which case they were held bi-weekly or as two-hour sessions. Some of the didactic scenarios required less time and it was possible to implement two of them within a three-hour seminar. In each group, the educational intervention required between 16 to 19 teaching hours, with variations due to the available time in the SCSs, adjustments to the specific needs of each group, the number of learners, possible absences and the time required for brief repetitions. Implementation of the intervention lasted approximately three months in each SCS. Two weeks after the intervention was completed, the participants completed the post test, along with additional questionnaires addressing various research questions. To accommodate reading difficulties faced by some SCS adult learners, we read all the questions out loud during the process.

Our experimental research primarily combined quantitative correlation and descriptive methods through pretests and posttests. We also included qualitative data from observations during the intervention and responses to CT tests, documented in a research diary.

Population and Sample

Forty-eight adult learners aged 26...75 participated voluntarily in our interventions. At the start, we observed that most (41.7%) belonged to the 40...49 age group, followed by 33.3% in the 50...59 age group; a smaller proportion (20.8%) were in the 30...39 age group, one participant (2.1%) belonged to the 18...29 age group, while another (2.1%) belonged to the 70+ age group. The estimated average age of the trainees stood at approximately 45.85 years, which may differ from the actual average, which could only be determined if we had exact age data for each participant. Twenty-seven (56.25%) of the participants were women and 21 were men (43.75%). While the findings may not be broadly generalized to all populations, they may be applicable to those with similar sociocultural characteristics, warranting further investigation in comparable settings.

Instruments

To assess the CT dimensions, we designed a questionnaire based on the Bebras CT competition. We selected questions from the United Kingdom's 2015...2018 contests, which were developed in collaboration with Oxford University and Google, with contributions from global experts. Table 1 provides a list of questions along with references to detailed descriptions, answers and clarifications. The selection process involved three phases, and they were conducted with the assistance of experts, educators, and SCS students. The following criteria were used to select the questions: (a) questions needed to be evenly distributed across difficulty levels, (b) they should not require complex mathematical calculations, (c) they should not assume prior programming knowledge, and (d) the set of questions should sufficiently represent the five CT dimensions.

A native speaker fluent in both English and Greek reviewed the translation and the questions were piloted. The final selection included 12 questions covering all five CT dimensions across three levels of difficulty, comprising eight multiple-choice and four open-ended questions. Cronbach's alpha at pretest (.844) indicated a reliable test with high internal consistency; however, posttest Cronbach's alpha decreased (.532), potentially due to the participants' newly acquired knowledge, shifts in thinking, or changes in behavior or engagement. Further research could clarify these changes.

Ethical Issues

The research was approved by the Ethics and Research Committee of the Hellenic Open University (51/2024). Furthermore, it received approval for implementation in the Second Chance Schools from the General Secretariat of Vocational Education, Training, and Lifelong Learning, the competent authority of the Greek Ministry of Education. Participants voluntarily participated in the study and provided their consent by signing a Declaration of Consent after being fully informed.

Findings

Analysis of the 12 CT Questions

We aimed to examine the potential relationship between pretest and posttest performance on the responses to the 12 Computational Thinking (CT) test questions (categorized as correct, no answer, or incorrect) (Table 1) by conducting a

chi-square (χ^2) test in SPSS. However, the χ^2 test could not be applied because its assumptions were violated. Specifically, the expected frequencies in some cells of the 3x3 contingency table were below the threshold of 5, a condition that undermines the validity of the test. This violation occurs because the χ^2 test relies on sufficient sample sizes in each cell to ensure accurate statistical inference. Application of the test under these conditions could lead to biased or unreliable results. To address this issue and maintain the robustness of the analysis, we combined the adjacent response categories “no answer” and “incorrect”. This approach is commonly used to meet statistical assumptions while preserving the interpretability of the data. All variables were recoded (1 = “correct”, 0 = “incorrect or no answer”) and McNemar’s tests for equality of proportions were performed to assess the independence of two correlated samples. The necessary prerequisites for conducting the McNemar test were met, as it involves a pair of binary variables for ten questions (excluding Q12 and Q8, which require a different approach; further explanations are provided five paragraphs below). The null hypothesis assumes that there is no difference in the proportions of answers between the pretest and posttest. For questions 1, 2, 3, 4, 5, 6, 9, 10 and 11, McNemar’s test ($N = 48$, $p < .05$) led to rejection of the null hypothesis. This suggests a significant difference between pretest and posttest responses. Considering the data in Table 1 as well, it may be inferred that a higher percentage of learners are expected to provide correct answers to these CT questions after the STEM intervention.

Eight of the questions were multiple-choice and not analyzed further. However, questions 6, 7, 8 and 12 were open-ended, warranting additional analysis. This is crucial for examining not only participants who provided fully correct answers but also those whose responses closely approximate the correct solution.

Question 6 is considered correct only if learners determine the correct order of four colors, achieved by blending colors and combining various data. Only one out of 48 learners provided a completely correct answer in the pretest, whereas this ratio improved to one out of three in the posttest (Table 1). All incorrect answers were analyzed since even a minor error during the solution process results in an incorrect color. Notably, two learners in the pretest and four in the posttest managed to correctly identify three out of four colors in the correct order, suggesting that they possess the logical approach required to solve Question 6. Among those who answered incorrectly, 14.6% of participants in the pretest demonstrated reasoning far removed from the problem-solving logic, a percentage that decreased to 8.3% in the posttest.

The percentage of correct answers to Question 7 more than doubled (18.8% in the pretest, 41.7% in the posttest). However, this is the first question where the proportion of incorrect answers increased after the intervention (25%

in the pretest, 47.9% in the posttest), although a larger number of participants provided an answer (no answer: 27% in the pretest, 5% in the posttest). Despite the increase in correct answers, the McNemar Test ($N = 48$, $p = .007$, binomial distribution) suggests that we should adopt the null hypothesis, indicating no significant difference in the proportions of answers.

To explain the rise in incorrect answers to Question 7, and considering that the question was open-ended, we analyzed all the incorrect responses. We found that some participants approached the problem with the correct reasoning but narrowly missed the exact solution. Specifically, they arrived at the correct answer for a satisfaction level of 13, whereas the precise answer was for a satisfaction level of 14. As a result, they provided a second-best solution. When we combined those who gave either the best or second-best solution, the proportion increased from 27.1% in the pretest to 70.8% in the posttest. We recorded the data (1 = "best or 2nd best solution"; 0 = incorrect), and the result of the McNemar test ($N = 48$, $p < .001$, binomial distribution) indicates a statistically significant difference between the pretest and posttest. Therefore, it may be concluded that learners were more likely to approach the solution more accurately after the STEM intervention, providing either the best or second-best solution.

Question 8 was also open-ended, requiring participants to identify the least expensive solution in a path graph. No participants provided the correct answer in the pretest, but 43.8% succeeded in finding the exact solution in the posttest. The most cost-effective solution is a path with a length of 41, although many participants identified the second-best path (42). Despite an increase in incorrect answers, more participants were closer to the correct solution. The combined proportion of those providing either the correct or the second-best solution was 12.5% in the pretest, which improved to 72.9% in the posttest.

Similarly, no participant provided the correct answer to the open-ended Question 12 in the pretest. The answer is considered absolutely correct if participants decode the Kix-Code and identify the four letters or numbers in the correct order. Analysis of the incorrect answers reveals that 2% of participants provided the best or second-best solution (three or four correct elements) in the pretest, while this percentage increased to 27% in the posttest.

As mentioned in the first paragraph of this section, the McNemar test should not be applied to Questions 8 and 12 using the codes "correct" and "incorrect or no answer," since no one provided the correct answer in the pretest. A new recoding scheme was applied for more statistically reliable results: "1 = best or 2nd best solution" and "2 = incorrect or no answer." For both questions, the McNemar test results ($N = 48$, $p < .001$, binomial distribution) show that the null hypotheses are rejected. Data in Table 1 lead to the conclusion that a higher pro-

portion of participants are expected to provide the best or second-best solutions to Questions 8 and 12 after the STEM intervention.

Table 1. Outcomes of CT Tests, CT dimensions per question and McNemar

		No answer		Correct		Incorrect	
		n	%	n	%	n	%
Q1: Balls	Pretest	10	20.80%	13	27.10%	25	52.10%
(A) AB, AL, EV	Posttest	4	8.30%	34	70.80%	10	20.80%
		McNemar: $p = .004$					
Q2: Blossom	Pretest	22	45.80%	10	20.80%	16	33.30%
(B) EV, GE	Posttest	2	4.20%	39	81.30%	7	14.60%
		McNemar: $p < .001$					
Q3: Five Sticks	Pretest	13	27.10%	25	52.10%	10	20.80%
(B) AB, AL, DE	Posttest	0	0.00%	39	81.30%	9	18.80%
		McNemar: $p = .004$					
Q4: Superpower Family	Pretest	20	41.70%	15	31.30%	13	27.10%
(A) AB, AL, DE, EV	Posttest	3	6.30%	33	68.80%	12	25.00%
		McNemar: $p = .001$					
Q5: Beaver Lunch	Pretest	21	43.80%	6	12.50%	21	43.80%
(B) AB, DE, EV, GE	Posttest	0	0.00%	35	72.90%	13	27.10%
		McNemar: $p < .001$					
Q6: Theater*	Pretest	36	75.00%	1	2.10%	11	22.90%
(B) AL, DE, EV	Posttest	23	47.90%	16	33.30%	9	18.80%
		McNemar: $p < .001$					
Q7: Soda Shop*	Pretest	27	56.30%	9	18.80%	12	25.00%
(B) AB, AL, EV	Posttest	5	10.40%	20	41.70%	23	47.90%
		McNemar: $p = .007$					
		(For the best or 2 nd best solution McNemar $p < .001$)					
Q8: Toll roads*	Pretest	32	66.70%	0	0.00%	16	33.30%
(B) AB, AL, EV, GE	Posttest	5	10.40%	21	43.80%	22	45.80%
		(For best or 2 nd best solution McNemar: $p < .001$)					
Q9: Gifts	Pretest	40	83.30%	1	2.10%	7	14.60%
(C) AL, EV	Posttest	10	20.80%	26	54.20%	12	25.00%
		McNemar: $p < .001$					
Q10: Bowl Factory	Pretest	37	77.10%	1	2.10%	10	20.80%
(C) AB, AL, DE, EV	Posttest	21	43.80%	7	14.60%	20	41.70%
		McNemar: $p = .031$					

		No answer		Correct		Incorrect	
		n	%	n	%	n	%
Q11: Icon Image Reduction (C) DE, EV, GE	Pretest	43	89.60%	3	6.30%	2	4.20%
	Posttest	21	43.80%	16	33.30%	11	22.90%
	McNemar: $p < .001$						
Q12: Kix Code* (C) AL, GE	Pretest	44	91.70%	0	0.00%	4	8.30%
	Posttest	23	47.90%	13	27.10%	12	25.00%
	(For the best or 2 nd best solution McNemar: $p < .001$)						

Mc Nemar N=48 Binominal distribution

n = number of participants who provided each type of response.

(A)= Easy, (B)= Medium, (C)= Difficult

Abstraction (AB), Algorithmic Thinking (AL), Decomposition (DE), Generalization (GE), Evaluation (EV)

*Open-ended questions

For a more detailed description of questions with answers and clarifications see Blokhuis et al. (2015), Blokhuis et al., (2016), Blokhuis et al., (2017), Blokhuis et al., (2018).

Table 1 also provides statistical data on the performance of the 12 CT test questions before and after the intervention. Notably, there is an observed improvement in correct responses across all CT questions following the STEM learning program. For example, only 20.8% of participants answered Q2 correctly in the pretest, compared to 81.3% in the posttest. Figure 1 reveals that a greater number of participants answered correctly across all questions after the STEM intervention, without exception.

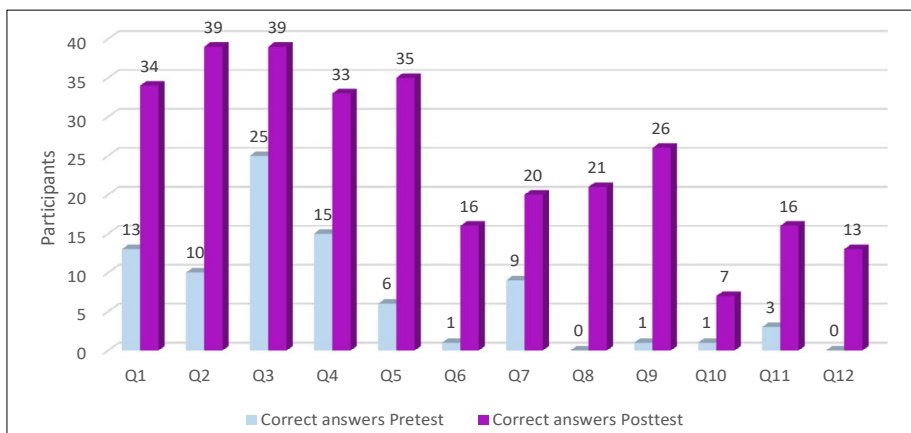


Figure 1. Number of Participants Who Correctly Answered Each Question

Further Analysis of the Number of Correct CT Answers

To conduct a more in-depth analysis, we calculated the number of correct answers provided by each participant and applied both tests. For the variables “number of correct answers in the pretest” and “number of correct answers in the posttest”, a paired-sample t -test was considered to assess the equality of the two means. While the t -test assumptions appeared to be satisfied in terms of quantitative variables, sample derivation from the same population and the assumption of normality based on the Central Limit Theorem, the results of the Shapiro-Wilk test ($p < .001$ for the pretest, $p = .036$ for the posttest) indicated that the assumption of normality was violated. Consequently, a Wilcoxon Signed-Rank Test was conducted, revealing a statistically significant difference between the two measurements ($z = -5.795$, $p < .001$). Specifically, the median number of correct answers increased from $Mdn = 1$ in the pretest to $Mdn = 6$ in the posttest, with positive ranks ($N = 44$) demonstrating that the STEM intervention had a substantial positive effect on the participants’ ability to provide correct answers.

Additionally, the mean number of correct answers increased from $M = 1.75$ (pretest) to $M = 6.23$ (posttest), with a mean improvement of 4.48 correct answers ($SD = 2.41$). This demonstrates that the STEM intervention had a substantial positive effect on the participants’ ability to provide correct answers. A line graph of the number of correct answers, with the Standard Error of the Mean ($SEM = 0.35$ for pretest and $SEM = 0.4$ for posttest), is presented in Figure 2.

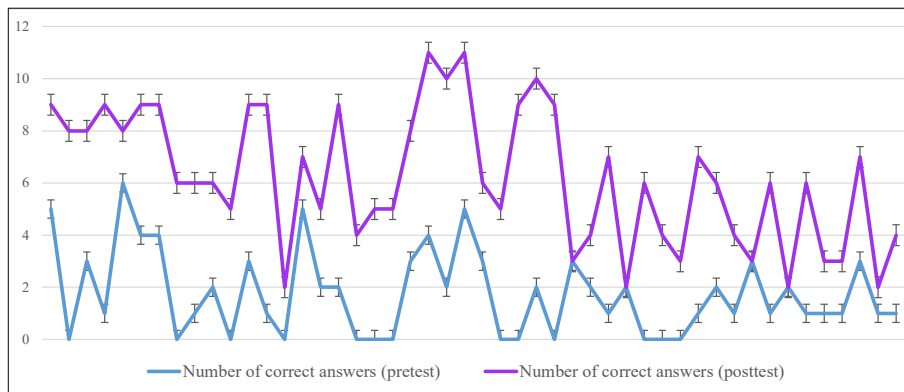


Figure 2. Number of Correct Answers with the Standard Error of the Mean (SEM)

As per the total number of correct answers of the 48 participants, they provided 84 correct answers in the pretest and 299 in the posttest. This represents a 256% improvement over the initial number of correct answers. Alternatively, the

posttest performance corresponds to 356% of the pretest performance in terms of group success. It is important to note that these percentages do not account for the improvement achieved by participants who provided second-best solutions after the intervention, wherefore the actual improvement is likely even more substantial.

The Spearman Rank Correlation Coefficient was used to evaluate the relationship between the number of correct answers in CT before and after the intervention, as the variables did not follow a normal distribution. The results indicate a significant positive correlation, $\rho(46) = .374, p = .009$. This finding suggests that the participants who performed well before the intervention tended to perform well afterwards.

Abstention Rate

This section examines the abstention rate, focusing on the number of questions each participant chose not to answer. Figure 3 provides a visual representation of this data. Before the intervention, only two participants answered all questions, whereas this number increased to ten after the intervention. Moreover, 18 participants left between nine and 12 questions unanswered in the pretest, while in the posttest, no participant left more than eight questions unanswered.

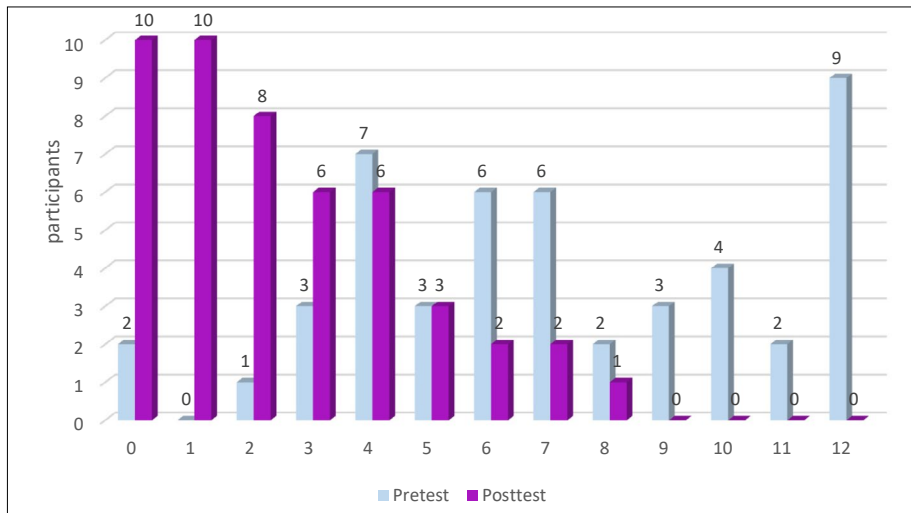


Figure 3. Number of Unanswered Questions

The requirements for a Wilcoxon Signed-Rank Test for the variables “Number of unanswered questions in the pretest” and “Number of unanswered questions in the

posttest” were met, as the Shapiro-Wilk test ($p < .023$ for the pretest, $p = .001$ for the posttest) revealed non normality. The results of the Wilcoxon Signed-Rank Test ($z = -5.66$, $p < .001$) revealed a statistically significant difference between the two variables. Specifically, there was a significant decrease in the number of “unanswered questions” in the posttest compared to the pretest. The negative ranks ($N = 42$) indicated that most participants had fewer unanswered questions after the STEM intervention. The median number of unanswered questions decreased from $Mdn = 7$ in the pretest to $Mdn = 2$ in the posttest. These findings indicate that learners are significantly more likely to attempt answering CT questions after STEM lessons.

Additionally, a t -Test was conducted to confirm the findings, as the t -test is known to be robust to violations of normality in larger samples. The t -test results ($t[47] = -10.40$, $p < .001$) reveal a highly significant difference between the number of unanswered questions in the pretest ($M = 7.19$, $SD = 3.44$) and the posttest ($M = 2.44$, $SD = 2.14$). These results further support the robustness of the t -test despite the violation of normality and confirm the observed improvement following the STEM intervention.

A Spearman’s correlation was conducted in order to explore the correlation between pretest and posttest abstention. The results reveal a significant positive relationship between the total number of unanswered questions in the pretest and the posttest, $\rho(46) = .451$, $p = .001$. Participants who had more “no answers” in the pretest tended to have more “no answers” in the posttest as well.

Calculation of Performances According to Bebras

Evaluation of CT performance requires calculation of the score based on the Bebras competition’s scoring rules for the 12 questions, given that Bebras questions are used in this study. As shown in Table 2, the three levels of difficulty yield different point values (zero, positive, or negative). Additionally, a bonus starting point must be applied to the scoring system to ensure that negative final scores are impossible.

Table 2. Information for Score Calculation According to the Bebras Competition

	“Incorrect” Points	“No Answer” Points	“Correct” Points	Questions	Start Points	Maximum Points
(A) Easy	0	0	6	1, 2, 3, 4	0	24
(B) Medium	-2	0	9	5, 6, 7, 8	8	36
(C) Difficult	-4	0	12	9, 10, 11, 12	16	48
Total score					24	132

For the variables “Bebras score pretest” and “Bebras score posttest,” the Shapiro-Wilk test revealed non-normality for the pretest scores ($p = .001$), whereas the posttest scores were normally distributed ($p = .15$). A Wilcoxon Signed-Rank Test was conducted for these variables, with the results ($z = \dots 5.97, p < .001$) indicating a significant increase in the participants’ scores on the CT test following the intervention ($z = \dots 5.97, p < .001$). The median score on the Bebras measuring score was $Mdn = 30$ before the intervention and increased to $Mdn = 64$ after the intervention. The positive rank ($N = 44$) shows that the participants scored higher in the posttest compared to the pretest and the negative rank ($N = 0$) shows that none of the participants scored lower after the intervention.

The mean pretest scores ($M = 31.71, SD = 9.98$) and posttest scores ($M = 67.50, SD = 24.97$) show that both the mean and median scores more than doubled after the intervention.

Spearman’s correlation was conducted to explore the correlation between the pretest and posttest CT scores according to Bebras. The results revealed a significant positive relationship between the pretest and posttest scores, $\rho(46) = .492, p < .000$. Participants who performed better in the pretest tended to perform better in the posttest as well.

In developing a mathematical model to analyze the correlation between the variables, a simple linear regression was found to provide a clear and interpretable equation, $F(1,46) = 15.35, \beta = 0.500, p = .000$. The R^2 was 0.250, indicating that the Bebras score pretest explained approximately 25% of the variance in the Bebras score posttest. The regression equation was:

$$[\text{Bebras score posttest}] = [27.881] + 1.25 [\text{Bebras score pretest}]$$

This implies that the predicted Bebras score on the posttest increases by approximately 1.25 points for each 1-point increase in the Bebras score on the pretest. Confidence intervals indicate that we can be 95% certain that the slope to predict the learners’ scores on the Bebras test after the STEM intervention, based on their scores before the intervention, lies between 0.608 and 1.891.

In addition, the possibility of more complex relationships was explored and a third-degree polynomial model explained 32.4% of the variance ($R^2 = .324, p < .001$). The polynomial model was found to be statistically significant, with $F(3, 44) = 7.015, \beta = 0.211, p < .001$. While this model showed an improvement in explaining the variance, it includes more terms and is less straightforward in interpreting the results. Therefore, we present the equation but will not elaborate this model further.

$$[\text{Posttest}] = -7.748 + 1.764 \times [\text{Pretest}] - 0.0275 \times [\text{Pretest}]^2 + 0.0001 \times [\text{Pretest}]^3$$

Difficulty Level Scores and Improvement in CT

The function for calculating CT scores at each difficulty level follows the Bebras scoring rules, as outlined in Table 2. Table 3 presents the mean scores for each difficulty level before and after the intervention, along with the corresponding percentage increases in performance. The analysis demonstrates significant improvements across all levels of difficulty: a 230% increase at the easy level, a 265% improvement at the medium level, and a 176% increase at the difficult level. Overall, the participants achieved a 213% improvement in their mean performance across all levels combined.

Table 3. Difficulty Level Scores According to the Bebras Calculation method

N=48	Shapiro-Wilks		Mean score		Percentage Mean Increase
	Pretest	Posttest	Pretest	Posttest	
Easy	$p < .001$	$p < .001$	7.88	18.13	230.08%
Medium	$p = .021$	$p = .021$	8.50	22.46	265.24%
Difficult	$p < .001$	$p = .030$	15.33	26.92	175.60%
Total			31.71	67.5	212.87%

A more detailed analysis was conducted for each difficulty level (easy, medium, difficult) to assess the statistical significance of the differences between pretest and posttest scores, as well as the correlations between them. According to the data presented in Table 3, the results of the Shapiro-Wilk test indicate that the distribution is not normal at any level of difficulty, both in the pretest and the posttest. Therefore, the most appropriate test for analysis is the Wilcoxon Signed-Rank Test and Spearman's correlation.

Easy Level: A Wilcoxon Signed-Rank Test ($z = -5.36$, $p < .001$) indicates that scores on easy CT questions were significantly higher in the posttest than in the pretest. The median score on the "easy" questions posttest was $Mdn = 95$, compared with $Mdn = 84$ for the pretest. These results suggest that the participants showed significant improvement in answering the easy CT questions after the STEM intervention. However, the Spearman's correlation rank test shows that there is no significant relationship between these variables, $r_s(46) = .149$, $p = .313$.

Medium Level: Similarly, a Wilcoxon Signed-Rank Test ($z = -5.73$, $p < .001$) reveals that scores on medium level questions were significantly higher in the posttest than in the pretest. The median score on the medium level questions after the STEM intervention was $Mdn = 75$, compared to $Mdn = 65$ before the intervention. This indicates that the intervention had a positive effect on

the participants' CT performance on medium level questions. A Spearman's correlation was conducted to evaluate the relationship between the medium level question scores in the pretest and the posttest, and there was a significant positive relationship between the two variables, $\rho(46) = .413, p = .004$. This suggests that, similar to the easy level, we can expect better scores after the STEM lessons at the medium level, with performance being correlated to the pretest score.

Difficult Level: Scores on difficult questions were significantly higher in the posttest than in the pretest, as the results of a Wilcoxon Signed-Rank Test ($z = -5.73, p < .001$) reveal. The median score on the "difficult" questions posttest was $Mdn = 60$, compared with $Mdn = 44$ for the pretest. These findings suggest that participants were able to significantly improve their CT performance on the difficult questions following the STEM intervention. A Spearman's correlation revealed no significant relationship between the difficult question scores in the pretest and the posttest, $\rho(46) = .203, p = .167$. Thus, while improved scores are expected on the difficult CT questions after the intervention, there is no significant correlation between pretest and posttest performance, similar to the easy level.

Regarding Each Computational Thinking Dimension

One of the main reasons for choosing Bebras tasks is that they provide clarity regarding the specific dimensions of CT required to solve each question, as outlined in Table 1. This allows us to apply scoring functions for each CT dimension using functions based on the Bebras rules, as shown in Table 2. For example, the dimension of abstraction (AB) is necessary for solving questions 1, 3, 4, 5, 7, 8 and 10. These questions vary in difficulty and different points are awarded for correct or incorrect answers. Table 4 presents the key statistical data for the CT dimension scores.

Table 4. Statistical Analysis of CT Dimensions

	Shapiro – Wilks		Wilcoxon Signed Ranks Test	Descriptives		Spearman
	Pretest	Posttest		Pretest	Posttest	
Abstraction	$p = .021$	$p = .119$	$z = \dots 5.36$	$M = 16.81$	$M = 35.17$	$r_s(46) = .381$
Start point = 10			$p < .001$	$SD = 7.96$	$SD = 14.34$	$p = .008$
Max = 67				$Mdn = 16$	$Mdn = 31$	
Algorithm	$p = .006$	$p = .281$	$z = \dots 5.94$	$M = 35.96$	$M = 47.52$	$r_s(46) = .461$
Start point = 18			$p < .001$	$SD = 8.89$	$SD = 21.36$	$p = .001$
Max = 99				$Mdn = 36$	$Mdn = 45$	

	Shapiro – Wilks		Wilcoxon Signed Ranks Test	Descriptives		Spearman
	Pretest	Posttest		Pretest	Posttest	
Decomposition	$p = .001$	$p = .067$	$z = \dots 5.30$	$M = 17.25$	$M = 30.19$	$r_s(46) = \dots 009$
Start point = 12			$p < .001$	$SD = 6.44$	$SD = 10.71$	$p = .954$
Max = 57				$Mdn = 16$	$Mdn = 27$	
Evaluation	$p = .005$	$p = .071$	$z = \dots 5.94$	$M = 24.92$	$M = 56.38$	$r_s(46) = .485$
Start point = 20			$p < .001$	$SD = 8.88$	$SD = 22.16$	$p = .000$
Max = 110				$Mdn = 21$	$Mdn = 56$	
Generalization	$p = .001$	$p = .690$	$z = \dots 5.66$	$M = 13.08$	$M = 31.25$	$r_s(46) = .226$
Start point = 12			$p < .001$	$SD = 5.58$	$SD = 13.43$	$p = .122$
Max = 60				$Mdn = 12$	$Mdn = 32$	

As shown in Table 4, Wilcoxon Signed-Rank Tests conducted between pretest and posttest scores across all five dimensions reveal statistically significant differences ($p < 0.001$). These findings indicate substantial improvements in performance following the STEM intervention across all CT dimensions. To provide further insight into the magnitude of these improvements, we calculated the percentage mean increase. The largest percentage increases, with more than double the improvement, were observed in the dimensions of generalization (239%), evaluation (226%) and abstraction (209%). Decomposition (175%) and algorithmic thinking (132%) also showed significant improvements, albeit with comparatively smaller percentage gains.

Additionally, we examined the statistical correlation between the pretest and posttest for each dimension separately. As presented in Table 4, a statistically significant medium correlation is observed for the dimensions of abstraction, algorithmic thinking and evaluation, according to Spearman's method ($.38 < \rho < .49$, $p < .05$). In contrast, for decomposition and generalization, the null hypothesis cannot be rejected using Spearman's test ($p > .05$), indicating no statistically significant correlation between the pretest and posttest for these dimensions.

Observation Data – Interpretation

Observation data during the STEM intervention and CT test-taking process were recorded in a research diary. In this paper, we focus on a few key issues related to CT. During the CT pretest, many participants reported that the questions were extremely complicated and difficult and that they were unsure how to approach them. They appeared discouraged, with a tendency to abandon the CT questions. However, the learners gradually became more engaged throughout the STEM lessons, approaching progressively complex activities requiring computational thinking.

For example, discussions and reflections were encouraged during STEM tasks with questions such as: “How can we break the problem and solution into smaller parts?”, “What do we know about this?”, “Which information is useful?”, “What steps must we follow to solve this, and in what order?”, “Are our solutions adequate, or can we improve them?”, and “Where else can we apply our solutions?”. These questions helped foster a deeper understanding of computational thinking and problem-solving strategies.

Overall, the learners seemed to enjoy their progress and appeared more confident in problem-solving. It is important to note that the participants were not taught any of the Bebras CT questions during the intervention. Nevertheless, after the intervention, when the participants took the same CT questionnaire in the posttest, it was evident that they had adopted a computational thinking approach. They viewed the questions as achievable challenges, believed that they could solve most problems and demonstrated increased persistence, ultimately solving more problems than before.

Discussion and Conclusions

Computational thinking is essential for adults but identifying an effective educational program to help them develop CT remains a challenge (Zapata-Rivera et al., 2019). Furthermore, experts emphasize the need for research of adult learners’ CT, as studies focusing on older populations are limited (Cutumisu et al., 2019; Kotzampasaki & Koulaouzides, 2024; Ortiz et al., 2023; Poulakis & Politis, 2021; X. Tang et al., 2020). This study aims to address this research gap by investigating the impact of a carefully designed and implemented STEM intervention on the CT skills of adult learners.

Our action research is aligned with experts’ recommendations for CT studies (Poulakis & Politis, 2021; X. Tang et al., 2020). Specifically: a) Bebras items were used as they do not require any prior programming knowledge; programming questions were intentionally excluded to consciously distinguish computer science knowledge from the unique computational way of thinking about problems and their solutions, whether specific or broad; b) Computer-based tools were not used for administering the CT test; instead, we opted for printed, colored questionnaires; c) A mixed-methods evaluation was employed, primarily quantitative, but also incorporating qualitative data for a deeper understanding; d) Our sample focused on Second Chance Schools learners, as they represent adult learners with distinct characteristics and are highly relevant to adult education. Furthermore, we were able to study an age range of 26...75 years, all with-

out prior programming or computer science knowledge; e) Content validity and internal consistency were assessed for reliability; and f) The research focused on defining CT and its dimensions. Specifically, we successfully “measured” the five dimensions both before and after the intervention, across three levels of difficulty.

Overall, we observed an improvement in the adult learners’ computational thinking because of the STEM intervention. Our results indicate that a greater number of learners answered all the questions correctly after the STEM lessons. Additionally, McNemar tests for equality of proportions, conducted on nine closed-ended questions [1, 2, 3, 4, 5, 9, 10, 11] and open-ended question 6, reveal a statistically significant difference, suggesting that a higher percentage of participants answered these questions correctly after the STEM intervention. Three open-ended questions [7, 8, 12] were recoded and McNemar tests between the pretest and posttest show a statistically significant improvement in solving these questions, either by providing the best or second-best solution. Thus, for all questions, a greater number of learners are expected to approach CT problems more accurately after the STEM intervention, offering either the correct answer or at least the second-best solution. Moreover, the significant correlation between the number of correct answers in CT before and after the intervention potentially reflects the effectiveness of the intervention in maintaining or improving the participants’ performance.

The STEM lessons have also had a significant positive impact on the number of questions participants answered correctly (pretest *Mdn* = 1, posttest *Mdn* = 6). Additionally, there was a decrease in the abstention from answering questions, with learners demonstrating an increased tendency to attempt to reply to more CT questions after the STEM intervention. This improvement can be further explained by our observational data, which reflects an increase in learner confidence and engagement. In addition, despite the significant decrease in the number of unanswered questions, the Spearman correlation results show that the participants who had more “no answers” in the pretest tended to continue facing difficulties in the posttest. This may suggest that these participants require more targeted and personalized interventions to improve further their performance.

According to the Bebras calculation method, the overall CT score doubled (213%), while the paired sample t-tests reveal a statistically significant difference. Furthermore, Pearson’s test shows a medium correlation between the pretest and posttest CT scores. We also identified two mathematical models that can estimate the improvement in 25% of the cases (linear regression) or 32.4% (third-degree polynomial), which is noteworthy, considering that it applies to a human science mathematical formula where thinking patterns and behaviors are inherently complex. Along with the other evidence, the highly statistically significant difference

observed between pretest and posttest scores reinforces the conclusion that the STEM intervention had a positive impact on the learners' CT.

Regarding difficulty levels, paired sample t-tests indicate that we expect greater performance after the STEM intervention at all CT levels. The percentage improvements for each difficulty level are as follows: easy (230%), medium (265%), and difficult (176%). However, Pearson's method reveals no correlation between pretest and posttest scores for easy and difficult questions. To clarify, although there is a statistically significant difference in mean scores, indicating improved performance after the intervention, there is no evidence suggesting that the participants' performance on the easy pretest questions predicts their performance on the easy posttest. In fact, we observed learners who scored extremely low on the pretest achieving excellent scores on the easy questions after the STEM lessons. Similarly, improved scores were expected on the difficult CT questions after the intervention, but no significant correlation was found with the pretest scores. On the one hand, this suggests that anyone could potentially solve difficult questions, regardless of their previous performance; on the other hand, we must acknowledge that only a few participants attempted the difficult questions on the pretest. For the medium difficulty level, performances on the pretest and posttest are related, as indicated by Pearson's correlation test. To illustrate, participants with higher CT scores on the medium-level questions in the pretest were expected to achieve better outcomes on the same questions in the posttest.

In addition, a statistically significant improvement is observed across all CT dimensions following the implementation of the STEM education program. The percentages of improvement are as follows: generalization (239%), evaluation (226%), abstraction (209%), decomposition (175%) and algorithmic thinking (132.24%). Pearson's method indicates a medium correlation between the pretest and posttest for algorithmic thinking, evaluation and decomposition. This suggests that improvements in these CT dimensions were moderately linked to the participants' initial performance.

We sought to compare our qualitative findings with other studies involving adults, but we were unable to find previous research that aligns with our sample, method and analysis. Although wary of comparing different age groups, we will refer to the study by Psycharis and Kotzampasaki (2019), which involved 115 Greek 5th-6th grade students, as it follows a similar research method and analysis. In that study, the students showed a statistically significant increase in their CT performance on the Bebras Test after the implementation of a STEM inquiry-based game. Specifically, their mean percentages of improvement were as follows: generalization (624%), algorithmic thinking (622%), abstraction (578%), decomposition (265%) and evaluation (221%). We observe that, except for evaluation, where improvement is similar to our findings, the students demonstrated

much greater percentages of improvement in the other dimensions. Interestingly, the students showed statistically significant improvement only at the easy and medium difficulty levels, whereas adult learners, with smaller mean improvements, achieved statistically significant improvement at all difficulty levels.

In conclusion, we can affirm that the STEM intervention designed and implemented for this action research has had a positive impact on the adult learners' computational thinking (CT), encompassing all CT dimensions and levels of difficulty. We argue that the STEM intervention helps learners gradually internalize the thought patterns of CT dimensions, enabling them to approach problems with a computational way of thinking. We believe that the positive correlation between CT, general skills and thinking styles (Durak & Saritepeci, 2018) is crucial for understanding the world, as Denning and Tedre (2019) highlight, and furthermore, for gaining insight into how people think. It is important to recognize that thinking is a multifaceted process and that the changes we have observed in attitude and behavior should not be underestimated. The interpretation of CT results is closely tied to other research questions we aim to address, which will be discussed in the following chapter on further research.

Further Research

This article presents the results of our intervention on adult learners' (CT) as part of a broader mixed-methods action research project. Interviews and additional questionnaires were used to explore further research questions related to critical reflection, the potential for transformative learning, and the correlation with CT (Kotzampasaki & Koulaouzides, 2024). By addressing these supplementary questions, we aim to offer a deeper and more comprehensive understanding of how adults apply computational thinking. We are convinced that further research on CT-STEM in adult education is essential, particularly for learners in Second Chance Schools, as the outcomes there carry significant implications.

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„Biti više od onog što jesmo“ – performativno učenje kao proces lične i profesionalne transformacije³

Apstrakt: U radu su predstavljena iskustva studenata andragogije u performativnom učenju, u obrazovnom kontekstu koji se oslanja na izvođenje, igru i improvizaciju kao sredstva za lični i kolektivni razvoj. Performans se u tom kontekstu otkriva kao prostor transformacije – omogućava studentima da „budu više od onoga što trenutno jesu“, što se prepoznaje kao temelj obrazovne promene. Nalazi pokazuju da studenti taj pristup doživljavaju kao dinamičan, utelovljen i kolektivan proces učenja, u kojem su istovremeno subjekti i objekti obrazovanja – oni koji uče, ali i oni koji oblikuju ono što se uči. Izvođenjem oni eksperimentišu s identitetima, preispituju društvene norme, razvijaju kreativnost, autonomiju i osećaj agencnosti. Rezultati istraživanja pokazuju da performativno učenje može značajno doprineti obrazovanju budućih andragoga, osnažujući ih da putem umetničkih i iskustvenih metoda razvijaju ne samo profesionalne veštine već i dublje razumevanje sebe, drugih i sveta u kome žive.

Ključne reči: performativno učenje, performans, dramske tehnike u obrazovanju, igra i improvizacija, studije andragogije

“Becoming More Than We Are” – Performative Learning as a Process of Personal and Professional Transformation⁴

Abstract: This paper presents the experiences of andragogy students with performative learning in an educational context that relies on performance, play, and improvisation

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as tools for personal and collective development. In this context, performance emerges as a space of transformation — it enables students to “be more than what they currently are,” which is recognized as the basis for educational change. The findings show that students perceive this approach as a dynamic, embodied, and collective learning process in which they are simultaneously subjects and objects of education—both learners and co-creators of what is being learned. Through performing, they experiment with identities, they question social norms, and they develop creativity, autonomy, and a sense of agency. The research confirms that performative learning can significantly contribute to the education of future adult educators by empowering them (through artistic and experiential methods) to develop, not only professional skills, but also a deeper understanding of themselves, others, and the world they live in.

Keywords: performative learning, performance, drama techniques in education, play and improvisation, andragogy studies

Uvod: performativnost kao izazov savremenom obrazovanju andragoga

Visoko obrazovanje u kontekstu dubokih društvenih promena i krize smisla u obrazovanju ukazuje na potrebu da se znanje ne posmatra isključivo kao prenošenje informacija već kao celovit proces saznanja koji uključuje telo, emocije, odnose i identitet. Performativno učenje – koje se oslanja na izvođenje, improvizaciju, igru i umetničko izražavanje – nudi upravo takvu alternativu. Takav pristup obrazovanju omogućava učesnicima da putem iskustva i kreativne prakse ne samo usvajaju znanja već i da preispituju sopstvene pozicije, razvijaju empatiju, povezuju se sa drugima i grade osećaj agencnosti (Redaelli, 2015).

U doba superkompleksnosti, kako ga opisuje Barnett (Barnett, 2000), u kojem izazov nije u pukom savladavanju količine znanja već u učenju kako da se nosimo sa neizvesnošću i kontinuiranim promenama, nije dovoljno prenositi znanje – neophodno je razvijati sposobnosti za odgovaranje na neizvesnost uz stalnu samorefleksiju. U skladu s tim, Sejlit (Salit, 2016, str. 10) ističe: „Da bismo se bolje snalazili u promenama, potrebno je da razvijemo alate za nove načine gledanja, razumevanja i učestvovanja u stvaranju tih promena. Ne možemo stajati u mestu – ni lično, ni profesionalno.“ Upravo u tome leži transformativni potencijal performativnog učenja – ono podstiče fleksibilnost, otvorenost i aktivno suočavanje s nepoznatim. U kontekstu obrazovanja odraslih, a posebno budućih andragoga, performativno učenje otvara prostor za razvoj ključnih profesionalnih i ličnih veština: fleksibilnosti, improvizacije, introspekcije, kolektivnog delovanja i emocionalne pismenosti (Parker *et al.*, 2020).

Međutim, taj pristup je još uvek marginalizovan u formalnim kurikulumima visokoškolskog obrazovanja iako je dokazano da doprinosi razvijanju kreativnosti, boljim ishodima učenja, ali i dobrom pozicioniranju diplomaca na tržištu rada (Jogschies *et al.*, 2018).

Polazeći od toga, ovaj rad se bavi istraživanjem iskustava studenata andragogije čiji je obrazovni proces bio zasnovan na performativnim metodama rada. Ovo istraživanje predstavlja nastavak analize podataka prikupljenih i delimično prezentovanih na međunarodnom naučno-stručnom skupu „Umetnost i obrazovanje“.⁵ Dok je u ranijem radu akcenat bio na uspostavljanju performativnog obrazovnog okruženja, u ovom radu smo usmerili pažnju na iskustva i doživljaje studenata u vezi sa efektima učenja kroz performans i na načine na koje ono doprinosi njihovom ličnom i profesionalnom razvoju. Polazna pretpostavka rada jeste da performativno obrazovno okruženje podstiče dublje, transformativno i integrativno učenje, koje osnažuje studente za kritičko promišljanje, refleksiju i aktivno delovanje u savremenom društvu. Cilj nam je da u ovom radu pokažemo da umetnički i iskustveni pristupi ne samo obogaćuju obrazovni proces već imaju potencijal da ga transformišu.

Performativno učenje: teorijska polazišta i andragoške implikacije

U savremenom obrazovanju odraslih sve veću pažnju privlači ideja o uključivanju umetnosti i kreativnog izraza u obrazovne prakse (Maksimović, 2025). Paralelno s tim, sve češće se upotrebljava performans (Pineau, 1994), naročito u neformalnim oblicima obrazovanja, dok se postepeno uvode inovacije i u formalne obrazovne okvire (Simpson *et al.*, 2018). U tom kontekstu, koncept *performativnog učenja* zauzima posebno mesto. Iako relativno nov i višestruko tumačen, on se javlja u različitim obrazovnim kontekstima, pri čemu se njegovi izrazi kreću od pedagoške metode (Redaelli, 2015), preko umetničkog pristupa (Jogschies *et al.*, 2018; Schewe, 2013), do šire epistemološke perspektive (Simpson *et al.*, 2018) i ontološkog procesa (Friedman, 2021; Holzman & Newman, 2012; Holzman & Salit, 2020).

Toj vrsti učenja oznaku *performativnog* daje integrisanje performansa u obrazovni proces (Nikolić & Koruga, 2024). Ipak, sama upotreba performansa ne podrazumeva nužno i performativno učenje. Kada je reč o primeni izvođačkih

⁵ Konferenciju je organizovala Akademija umetnosti u Novom Sadu, 24–25. maja 2024. godine u hibridnom formatu. U konferencijskom zborniku je objavljen prilog pod naslovom „Performativno okruženje za učenje u kontekstu obrazovanja studenata andragogije“, u kojem su prikazani rezultati dela istraživanja koji se odnose na uspostavljanje performativnog obrazovnog okruženja.

formi u obrazovanju, pre se može govoriti o *učenju putem performansa* (*learning through performance*), što predstavlja konkretniju praksu u odnosu na širi okvir performativnog učenja. Taj pristup se obično odnosi na metode koje uključuju dramske i druge izvođačke umetnosti (npr. igranje uloga, simulacije, improvizacija) kao andragoška sredstva. U takvim aktivnostima polaznici učestvuju u scenski strukturiranim situacijama kako bi dublje razumeli nove pojmove, teme, sopstvena iskustva ili društvene uloge.

Neki autori (Donovan & Hood, 2021; Jogschies *et al.*, 2018) to učenje nazivaju performativnim, naglašavajući da performativna kultura poučavanja, učenja i istraživanja može nastati kada akademske discipline stupe u dijalog sa izvođačkim umetnostima. Time jasno pokazuju da umetnički performans (drama, igra, pokret, improvizacija ili druge forme) ima potencijal da transformiše obrazovni proces i da ga učini „performativnim“. Tako, Ševe (Schewe, 2013) predlaže da se pojam „performativno“ koristi kao krovni termin koji obuhvata sve oblike nastave i učenja koji proističu iz izvođačkih umetnosti. U tom smislu, performativnost u učenju nije samo stvar metode ili didaktičkog pristupa, već podrazumeva dublju promenu kulture učenja i odnosa prema znanju. To uključuje i dimenzije tela, emocija, izraza, kao i interakcije koje su karakteristične za izvođačke umetnosti.

Slažemo se sa pomenutim autorima da je u srži performativnog učenja – performans. Razmatrajući kako se pojam „performansa“ razvijao u antropološkim, psihološkim i društvenim teorijama, Fridman (Friedman, 2000) ukazuje na evoluciju tog pojma sa počecima u Tarnerovom (Turner, 1982) razlikovanju liminoidnog od liminalnog. Liminalni performans je ritual prelaza u tradicionalnim zajednicama, koji obeležava prelazak iz jednog društvenog statusa u drugi i period u kome se učesnici nalaze „između“ – nisu više ono što su bili, a nisu ni postali ono što će biti. Tarner (Turner, 1982) je osmislio termin *liminoidno* da opiše slične, ali savremenije i individualizovane forme liminalnog iskustva. Liminoidni performans se javlja u modernim, kompleksnim društvima, gde prelazna iskustva nisu obavezna već dobrovoljna i često povezana s umetnošću, igrom, rekreacijom ili eksperimentisanjem. U obrazovanju odraslih to može biti performans u obrazovnoj radionici, improvizacijska predstava kao produkt obrazovnog procesa, eksperimentalno pozorište u obrazovanju ili radionica drame u obrazovanju odraslih. Dok liminalni performans karakteriše ritualno narušavanje društvenih normi sa ciljem njihove kasnije reafirmacije, koje je tipično za tradicionalna društva, liminoidni performans u savremenim društvima gubi ritualni karakter, postaje eksperimentalniji i povezuje se sa inovacijom i društvenom transformacijom (Friedman, 2000; Turner, 1982). Slično

tome, u oblasti razvojne psihologije Saton-Smit (Sutton-Smith, 2001) ističe subverzivnost performansa i njegov potencijal za kreiranje novih kulturnih formi, objašnjavajući da u haotičnosti performansa leži glavni izvor učenja. Uzimajući prethodna shvatanja u obzir, Turnbull (Turnbull, 1990 prema Friedman, 2000) kritikuje tradicionalne metodologije antropologije i društvenih nauka tvrdeći da se performans ne može proučavati objektivno već samo aktivnim učestvovanjem. U njegovoj metodologiji se naglašava *delanje* umesto *posmatranja*, što vodi ka ideji učenja kroz performans.

Fridman (Friedman, 2000, 2021) povezuje te ideje sa konceptom performansa Njumana (Holzman & Newman, 2012), koji performans ne shvata primarno kao nešto što se gleda već kao nešto što se *izvodi*. Takav pristup naglašava performativno učenje – proces u kome pojedinci aktivno oblikuju i transformišu svoja iskustva putem izvođenja i interakcije. Autor je uočio da performans nije samo nešto što ljudi rade na sceni već i dublji ontološki proces – način na koji se ljudi razvijaju, ali i način na koji ih društvo, kultura i psihološki obrasci mogu sprečavati da ostvare svoj puni razvojni potencijal. To je bilo ključno za razvoj njegove performativne razvojne prakse, koja je proizašla iz kombinacije pozorišne umetnosti i sociokulturne teorije razvoja Vigotskog (Vygotsky, 1978 prema Friedman, 2021). Ključna ideja je da društvena interakcija ima suštinsku ulogu u razvoju pojedinca, a posebno da igra i performans omogućavaju ljudima da „dosegnu iznad“ svog trenutnog nivoa razvoja – kako Vigotski kaže, da budu „za glavu viši“ od sebe (Holzman & Salit, 2020). Naime, performans podrazumeva istovremeno bivanje onoga što jesmo (trenutnog nivoa razvoja) i onoga što nismo (iznad trenutnog nivoa razvoja). To je aktivnost neprekidnog bivanja i postajanja. „Ljudski razvoj je moguć zato što ljudska bića nikada nisu samo ono što jesu u datom trenutku – mi smo, zapravo, istovremeno ono što jesmo i nešto više od toga“ (Holzman & Salit, 2020, str. 145). Performans se u kontekstu obrazovanja odraslih može razumeti kao vrsta igre pretvaranja, u kojoj odrasli – baš kao i deca – ne samo da preuzimaju unapred definisane uloge već ih i aktivno osmišljavaju i kreiraju nova pravila delovanja (Николић Максић, 2017). U tom smislu, performans postaje prostor dijalektičkog jedinstva imaginacije i pravila, u kojem se identitet ne imitira već se izvodi, pregovara i iznova stvara (Holzman, 2016; Николић Максић, 2017). Slično igri, performans omogućava da budemo istovremeno ono što jesmo i ono što nismo – ono što možemo postati. Time, kao što kaže Vigotski (Vygotsky, 1978 prema Holzman, 2016), bivamo „za glavu viši“, kreirajući uslove za lični i kolektivni razvoj u činu izvođenja. Pošto je performativno učenje usmereno na stvaranje novih performansa (izvođenja), njime se otkrivaju načini na koje možemo

menjati sebe i svoje okruženje. Performans, kao oblik procesnog kolaborativnog podučavanja i učenja, kako objašnjava Haris (Harris, 2017, str. xiv), „predstavlja izvanredan primer toga kako je obrazovanje, u svom najboljem obliku, istovremeno čin i događaj, proces postajanja i rezultat, uzajamni odnos koji se uvek odvija u kritičkom društvenom, političkom i istorijskom kontekstu. U tom procesu, svi smo istovremeno izvođači i publika, učitelji i učenici, oni koji menjaju i oni koji bivaju promenjeni“.

Može se reći da je performativno učenje *rezultat vrste razvojne obrazovne aktivnosti usmerene na kolektivno stvaranje okruženja u kojem se, upotrebom performansa, ljudi osnažuju da menjaju i transformišu svoju realnost*. Performativno učenje tako postaje širi koncept od učenja putem performansa jer obuhvata učenje koje se dešava putem iskustva, akcije, izražavanja i refleksije. U tom okviru, performativnost podrazumeva da se znanje ne samo prenosi već i stvara putem „izvođenja“ (*performance*) u obrazovnim kontekstima. To izvođenje može biti umetničko (pozorište, drama, ples), ali i svakodnevno, na primer, izvođenje identiteta, uloga u grupi, ili stavova i osećanja u određenoj situaciji. Ključna je ideja da se značenja i znanja proizvode u činu njihovog izražavanja, a ne samo u njihovoj reprodukciji, baš kako Hejzmen (Haseman, 2019, str. xii) ističe – „performativno uvek podrazumeva proces u nastajanju“.

Performativni pristup ili dinamička celina „učenje/igra“, kako ga konceptualizuju Simpson, Trejsi i Veston (Simpson *et al.*, 2018), posebno je relevantan za obrazovanje odraslih jer naglašava otvorenost procesa učenja te ulogu spontanosti, afekta i zajedničkog stvaranja značenja. U tom smislu, performativno učenje je relevantno za obrazovanje onih kojima će obrazovanje odraslih biti poziv (Nikolić & Koruga, 2024). Istraživanje ispituje relevantnost performativnog učenja u situaciji formalnog obrazovanja na visokoškolskom nivou i načine na koje se performativno učenje odvija u obrazovnom procesu profesionalnog pripremanja budućih andragoga. Ono podrazumeva da studenti nisu samo pasivni primaoci informacija već aktivni učesnici u kreiranju znanja putem interakcije, iskustva i kreativnog izražavanja. Putem performansa, igre uloga, simulacije i drugih dramskih tehnika, studenti ne samo da uče određene sadržaje već i razvijaju veštine kritičkog mišljenja, saradnje i kreativnog rešavanja problema (Donovan & Hood, 2021). Performativnost omogućava da se obrazovni proces transformiše iz uniformnog i statičnog u dinamičan i interaktivan, pri čemu se činom izvođenja uči i menja realnost u kojoj se studenti nalaze (Pineau, 1994). Takav pristup može poboljšati motivaciju, angažovanost i razumevanje jer studenti uče sopstvenim iskustvom i aktivno učestvuju u stvaranju znanja, što je naročito značajno za one čiji će poziv biti obrazovanje odraslih.

Metodološki okvir: istraživačka radionica kao performativno okruženje za učenje

Ova kvalitativna studija fenomenološkog karaktera ima cilj da razume kako studenti andragogije doživljavaju performativno okruženje za učenje, kakve efekte takvo okruženje ima na njihov lični i profesionalni razvoj. Podaci prikupljeni istraživačkom radionicom analizirani su i interpretirani tekstualno vizuelnom tematskom analizom (Trombetta & Cox, 2022), koja uzima u obzir tekstualne i vizuelne podatke (fotografije iz procesa).

Istraživački kontekst. Predmet *dramske tehnike u obrazovanju odraslih* se odnosio na upoznavanje sa teorijskim konceptima drame, igre i improvizacije u obrazovanju odraslih uz praktičnu nastavu koja je podrazumevala primenu dramskih tehnika u obrazovnom kontekstu. Ključni ciljevi predmeta su: razumevanje dramskih i pozorišnih tehnika kao alata za učenje, osnaživanje i razvoj odraslih; istraživanje uloge tela, prostora, glasa, igre i improvizacije u obrazovnom procesu; promišljanje o odnosu između učenja, identiteta i izraza upotrebom performativnih metoda i razvijanje facilitatorskih veština kod budućih andragoga. Neke od tematskih oblasti koje su obrađivane na predmetu su: osnove dramske pedagogije (teorijska polazišta i istorijat); primenjeno pozorište (teatar potlačenih i druge angažovane forme); igra kao osnova dramskog izraza u obrazovnom procesu; improvizacije i principi improvizacije („da i...“ u komunikaciji), facilitacija dramskim procesom u grupi. Predmet je organizovan u vidu radionica, interaktivnih predavanja, praktičnih zadataka i istraživačko-refleksivnih aktivnosti. Studenti su aktivno učestvovali u kreiranju sadržaja – gradili su iskustvo učenja putem igre, scenskih improvizacija, rada u ulozi i kolektivnog stvaranja.

Metodološki okvir istraživanja. Fokus ovog istraživanja je bilo razumevanje doživljaja studenata andragogije o efektima učenja u odnosu na kreiranje konteksta za performativno učenje. Istraživanje je osmišljeno kao kvalitativna studija fenomenološkog karaktera. Van Manen (van Manen, 1990) ističe da se fenomenološkim pristupom traga za suštinom doživljenog iskustva i njegovog razumevanja. Imajući u vidu i kompleksnost i slojevitost iskustva koje su studenti sticali na predmetu *dramske tehnike u obrazovanju odraslih*, podaci su prikupljeni radioničarskim pristupom. Istraživačka radionica, kao specifična kvalitativna metoda, predstavlja metodološki pristup u kojem se kombinuju učestvovanje, stvaranje i refleksija, a koristi se za istraživanje iskustava kroz kreativne, telesne i interaktivne aktivnosti. Istraživačka radionica omogućava saradnju istraživača i ispitanika, prikupljanje bogatijih i relevantnijih podataka i zbog načina dokumentovanja procesa (snimanje, beleške, fotografije) i zbog opipljivih objekata koji nastaju tokom

radionice (Storvang *et al.*, 2024). Radionica kao metoda za prikupljanje podataka doprinosi boljem razumevanju podataka koji nastaju iz refleksije koja proizilazi iz odnosa studenata i nastavnika, ali i pogleda u budućnost zbog novih odnosa i znanja kreiranih tokom same radionice (Hu, 2024). Ovo istraživanje je imalo karakter participativne, akcione i ekspresivne metodologije jer učesnici nisu bili samo ispitanici već i aktivni kokreatori znanja kroz refleksiju, igru, simboličke akcije i umetničko izražavanje.

Stoga je cilj istraživanja da se razume kako studenti andragogije doživljavaju performativno okruženje za učenje, kakve efekte takvo okruženje ima na njihov lični i profesionalni razvoj i kako takav pristup može doprineti formiranju andragoške profesionalne prakse. Iz ovako definisanog cilja istraživanja proizilaze istraživačka pitanja *kako studenti doživljavaju performativno učenje i koji su efekti učenja u performativnom okruženju na njihov lični i profesionalni razvoj*.

Opis i tok istraživačke radionice. Za potrebe ovog istraživanja radionica je koncipirana tako da prati ključna istraživačka pitanja, a istovremeno omogućava učesnicima da ih istraže kroz sopstveno telo, prostor, pokret, igru i refleksiju, što odgovara prirodi samog predmeta istraživanja – performativnog učenja. Učesnici radionice su zajedno sa nastavnicima i facilitatorima radionice kokreirali performativno okruženje za učenje (Nikolić & Koruga, 2024). Istovremeno su bili i učesnici i koistraživači, budući da je sam proces osmišljen tako da se znanje stvara zajedničkim iskustvom i refleksijom.

Radionica je bila zasnovana na razumevanju efekata performativnog učenja kao procesa koji obuhvata: akciju, igru i scensku dinamiku, uz učenje putem telesnog izražavanja, pretvaranja i izvođenja; zonu narednog razvoja, gde scena postaje izazov koji podstiče rast izvan poznatog; spontanost i improvizaciju, kojima se oslobađaju autentične reakcije; osnaživanje i kreativnost putem saradnje, ogledanja u grupi i zajedničkog stvaranja.

Istraživačka radionica u ovoj studiji sastojala se od tri faze. U prvoj fazi (zagrevanje i uvod u proces) primenjena je projekтивna tehnika koja je podrazumevala razgovor o doživljajima i sećanjima na predmet *dramske tehnike u obrazovanju odraslih*. U drugoj fazi (istraživanje doživljaja performativnog okruženja za učenje) kreirani su avatari, odnosno prikazi ispitanika korišćenjem skulpture kao umetničke forme za prikazivanje, odnosno otelotvorenje doživljaja efekata učenja, vajanjem oblika koje to iskustvo predstavljaju. Ta faza je podrazumevala i unapređenje avatara veštinama, stavovima, karakteristikama koje su dobili nakon pohađanja predmeta. Osim toga, u toj fazi su primenjene vajarske tehnike kojima su kreirani avatari obogaćeni. Diskusija je vođena o pitanjima kako se avatar oseća

u prostoru, na koga je usmeren, šta mu je važno, kako teče proces učenja, kako izgleda i po čemu se razlikuje od drugih načina učenja. U trećoj (završnoj) fazi avatari su pozicionirani u svet izvan prostora učionice gde se odvijala radionica, uključujući fotografisanje avatara u spoljnjem svetu. Potom je radionica zaokružena završnom refleksijom sa pitanjima gde sada ide vaš avatar, šta nosi sa sobom i kako sebe vidite nakon ovog iskustva. Radionica je zaključena kreiranjem zajedničke slike svih avatara i davanjem imena kolektivnom performativnom iskustvu. Sve faze radionice su dokumentovane fotografisanjem i snimanjem razgovora o procesu, ali i produktima radioničarskog rada.

Učesnici istraživanja. U istraživanju je učestvovalo devet osoba, osam studentkinja i jedan student⁶ treće godine andragogije, koje su slušale i položile ispit na izbornom predmetu *dramske tehnike u obrazovanju odraslih* u prolećnom semestru akademske 2022/2023. godine. Istraživačka radionica je organizovana u maju 2024. godine i trajala je 150 minuta.

Analiza i obrada podataka. Format istraživačke radionice nam je omogućio da prikupimo bogate narativne, vizuelne i simboličke podatke, koji su kasnije interpretirani tekstualno-vizuelnom tematskom analizom (Trombetta & Cox, 2022). Analiza je sprovedena u tri koraka. Tematska analiza tekstualnog sadržaja imala je šest koraka: upoznavanje sa podacima, kreiranje početnih kodova, traženje tema, pregled tema, definisanje i imenovanje tema, izveštavanje (Braun & Clarke, 2006). Drugi korak je podrazumevao analizu fotografija koje su nastale tokom radionice. Ona je integrisana sa analizom intervjua pomoću pitanja da li fotografije potvrđuju ono što je rečeno ili se suprotstavljaju rezultatima analize teksta, šta se nalazi na fotografijama, a nema ga u intervjuima i obrnuto (Trombetta & Cox, 2022). Treći korak se odnosio na uviđanje odnosa između fotografija i teksta.

Ograničenja istraživanja. Ograničenje ovog istraživanja bila je specifičnost uzorka. U istraživanju su učestvovali studenti koji su birali predmet *dramske tehnike u obrazovanju odraslih*, što implicira da su bili visokomotivisani da učestvuju u tom obrazovnom procesu. Takođe, u istraživanju su učestvovali studenti koji su se dobrovoljno odazvali pozivu za učešće u istraživačkoj radionici i kojima je takav pristup obrazovanju i istraživanju blizak. Istraživanje je sprovedeno na malom broju studenata andragogije, što ograničava mogućnost generalizacije rezultata na širu populaciju studenata. Treba uzeti u obzir da se rezultati istraživanja odnose na izborni predmet na studijskoj grupi za andragogiju na Filozofskom fakultetu u Beogradu, pa su rezultati uslovljeni institucionalnim i programskim okvirom te specifičnostima nastavnika i generacije studenata.

⁶ Da bi citati ispitanica i ispitanika bili anonimni, pol u izjavama korišćenim u radu ne odgovara polu ispitanika.

Istraživanje su sproveda dva istraživača. Jedan od istraživača, uz jednog nezavisnog, imao je i ulogu nastavnika na pomenutom predmetu te postoji mogućnost da su studenti bili skloni da pozitivnije opisuju svoja iskustva u vezi sa tim predmetom. Međutim, format radionice je doprineo uspostavljanju atmosfere otvorenosti i uzajamnog poverenja.

Rezultati i interpretacija: obrazovanje kao čin stvaranja umesto prenošenja znanja

Na osnovu rezultata analize moguće je zaključiti da su studenti svesni efekata učenja u performativnom okruženju koje su mogli opaziti kod sebe i kod ostalih. Neke opšte naznake da je do učenja došlo pružaju izjave kao što su: „*Izgradilo me je sve to*“ ili „*Ovo me je promenilo na neki način, a taj način je svakako pozitivan*“. Od efekata na ličnom planu, izdvajaju se kao teme: socijalni, obrazovni i terapijski efekti, a moguće je bilo izdvojiti i one koje se dešavaju na profesionalnom planu.

Od individualnog ka kolektivnom: iskustva zbližavanja prilikom izvođenja

Od svih efekata, socijalni se izdvajaju kao najznačajniji, a oni se u najvećoj meri ogledaju u povezanosti i zbližavanju grupe: „*Mislim da nas je zbližio taj predmet sve*“. Na to ukazuju reči: zajedno, zajedništvo, bliskost, blizina... koje su učesnici često pominjali u opisima različitih situacija. Zbližavanje se odvijalo na brz, neprimetan i neinvazivan način. Upitani da li se to odnosi na pojedince ili na celu grupu, svi su odgovorili da se zbližila cela grupa: „*Iako smo svi bili već povezani, mi smo se opet na još nekom novom nivou još više zbližili*“. To zajedništvo je bilo čvrsto i intenzivno jer, kako je rekla jedna od ispitanica: „*Lični prostor ne postoji*“. O tome govori i činjenica da su ispitanici svoje avatare pozicionirali u krug (fotografija 1). Takođe, kada su učesnici istraživanja dobili zadatak da svoje avatare izvedu u svet (da izađu van sale) i dodele im neke osobine koje sa sobom nose iz procesa, nekoliko njih ih je pozicioniralo u lift (fotografija 2). Neke od tih osobina nisu bile vidljive na avatarima i fotografijama na kojima su se nalazile te su izjave ispitanika bile ključne za tumačenje prikupljenih podataka. Razlozi koje su naveli govore u prilog tome da je upravo zajedništvo važan element celokupnog procesa: „*Mi smo ušli u lift jer idemo gore-dole, jer idemo na različita mesta i išle smo zajedno*“ (fotografija 2) i „*Uvek smo zajedno išli i stvarno tako smo išli na različite nivoe, prelazili ih u procesu*“ (fotografija 4). Donovan i Hud (Donovan & Hood,

2021) navode da su prikupljeni podaci u njihovom istraživanju pokazali da su studenti često isticali interakciju tokom performativnih aktivnosti kao dragoceno iskustvo performativnog aspekta nastave. Takođe, činilo se da prepoznaju ulogu svojih kolega u obrazovnom procesu i učenje koje se odvijalo zahvaljujući međusobnoj interakciji studenata.



Fotografija 1. Pozicioniranje avatara u prostoru



Fotografija 2. Pozicioniranje avatara u svetu izvan učionice

Cilj mnogih vežbi i aktivnosti na ovom predmetu ogledao se upravo u povezivanju studenta jer je to uslov za zajedničko kreiranje okruženja za učenje. Takve aktivnosti su omogućile studentima da „uđu u tuđe cipele“ i oseće ono što nas čini ljudskim bićima u relacijskom smislu (Holzman & Salit, 2020).

Zajedničko kreiranje naših priča, slušanje kako su ih drugi čuli i doživeli, bivanje viđenim na nove načine, stavljanje u tuđu perspektivu, izvođenje tuđih priča – sve to nam omogućava da preispitamo svoje individualne i kolektivne identitete, stvarajući priliku za zajedničko oblikovanje značenja i otvaranje novih mogućnosti u budućnosti (Holzman & Salit, 2020, p. 149).

U zajedničkom izvođenju (*co-performance*) studenti su bili u prilici da ulaze u odnose koji nisu zasnovani hijerarhijski već na međusobnoj pažnji i usklađivanju. To je podsaklo razvijanje poverenja, međusobnog slušanja i povezanosti, što su ključni elementi grupne kohezije. Učenje se dešava kroz telo, ne samo kroz intelekt. Kada dve osobe usklade ritam, pokret ili pažnju, dolazi do telesnog pamćenja zajedništva, što pojačava osećaj pripadnosti grupi. Osoba ne razmišlja samo o sebi već uči i kako da brine o drugima i zajedničkom cilju, čime se razvijaju empatija i kolektivna odgovornost. Bliskost i zajedništvo su i uslov i posledica kreiranja razvojnog okruženja za učenje, onog koje je istovremeno podržavajuće, ali i dovoljno podsticajno: „Učestvujući u zajedničkom izvođenju na način na koji to ranije nisu radili zajedno, oni istovremeno stvaraju okruženje u kojem svako, pojedinačno i kolektivno, napreduje i razvija se“ (Salit, 2016, str. 38). Simpson i saradnici (Simpson *et al.*, 2018) navode slične nalaze iz svog istraživanja: performativno iskustvo omogućava učesnicima da kreativno istražuju različite ideje koje se preklapaju i na taj način pronalaze nove podsticaje za zajednički kreativni rad, što otvara prilike za kontinuirani kolaborativni razvoj. Autori takvo kolektivno iskustvo nazivaju relacionom društvenošću (*relational sociality*), smatrajući da otvorene i intenzivne interakcije učesnika omogućavaju da se igraju i uče iz međusobnih iskustava, pozivajući svakoga od njih da proširi sopstveni identitet otvaranjem ka novim mogućnostima – ‘kao da’ je onaj drugi. „Ovakva relacijska iskustva predstavljaju oblik improvizacije koja se odvija u kontekstu učenja/igre, gde izvode ono što još nije manifestovano, isprobavajući ga ‘kao da’ već postoji“ (Simpson *et al.*, 2018, str. 17).

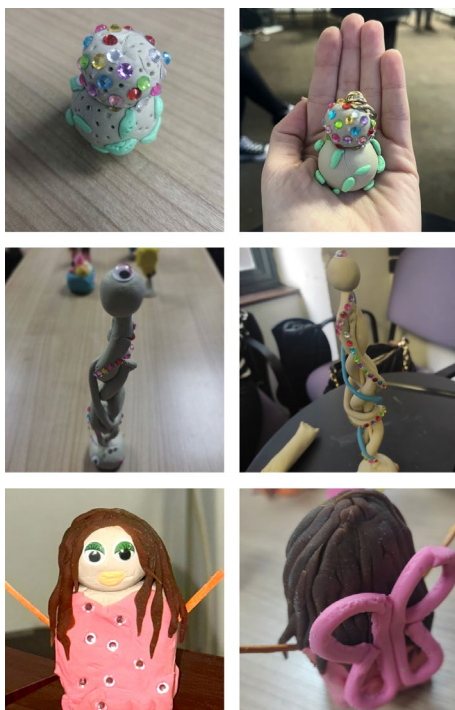
Razmišljanje van okvira: razvoj fleksibilnosti i spontanosti putem izvođenja

U odnosu na obrazovne efekte, u najvećoj meri se pominje kreativnost, što ilustruje sledeći iskaz: „*Smatram da nas je taj predmet dosta oplemenio i nekako mi je to kao prelazak s neke tamnije strane na neku bolju, kreativniju*“. Tome je blisko i

uverenje da performativno obrazovno okruženje podražava razmišljanje van okvira ili gledanje iz druge perspektive, s obzirom na to da ističu kako ih je predmet podstakao „*da prelazimo izvesne granice, kako neki 'thinking outside the box'*“ ili kako opet jedna od njih tvrdi: „*To je upravo taj momenat gledanja iz druge perspektive*“. Izjavom da „*uvek ima nešto dalje*“ ističe se započinjanje procesa kontinuiranog učenja i usavršavanja. Važan aspekt učenja, koji je verovatno najveći specifikum performativnog okruženja, jeste povećanje kapaciteta za improvizaciju. To najbolje pokazuje citat u kome jedna studentkinja objašnjava koju supermoć bi dodelila svom avataru:

Ja sam svom dodala krila. Letenje, da kažem, olakšava kretanje, a više metaforički znači da ono što mi je možda olakšalo kada sam izašla ovde iz procesa učenja, kao i generalno u životu, da lakše radim neke stvari, u nekim situacijama lakše reagujem, nemam više prepreke zašto ovo da kažem, da li da kažem, možda se izblamiram, možda ne, nego jednostavno improvizujem više, čak i na primer na predavanjima kada se nešto prezentuje, ranije sam morala više da imam neki skript kako ću ja to da pričam, sada apsolutno više to ne postoji, tako da taj neki način kretanja kroz život, zato kao krila, kao neko olakšavajuće kretanje (fotografija 3).

Na fotografiji 3 se mogu videti unapređeni avatari koji imaju krila, dodata iskustva u vidu linija druge boje, dodatni ukrasi koji predstavljaju nove poglede na svet, što pojačava izjave ispitanika o pozitivnim efektima ovog predmeta na njihovo znanje i iskustvo. Sastavni deo takvog procesa učenja su greške i učenje putem pokušaja i pogrešaka, o čemu govore iskazi: „*Kao kad ne možemo nešto da uradimo, pa da li se nećamo da ustano, da nekom pridemo, da nešto ka-
žemo, ali ovde smo naučili: samo kreni, zini, ustani, iskorači, pa ćeš nastaviti*“ i „*U suštini, vreme ne možemo da vratimo, što ne znači da ne možemo da*



Fotografija 3. Avatari pre i nakon što su im dodate supermoći

utičemo na neke postupke: greške koje smatramo da ne možemo u prošlosti da popravimo, možemo u budućnosti – time što ćemo istupiti“. Kreativni procesi, poput improvizacije, puni su grešaka i često imaju neočekivane posledice, ali takvi procesi pojedincima daju resurse koji podržavaju nove inicijative (Vera & Crossan, 2004). Prema rečima studenata, improvizacija je bila sastavni deo učenja: „*Učili smo da lako uđemo u proces, da se pustimo u nešto novo*“ i „*da ne mislim da li je to glupo, kako to treba da uradim, nego idem, pokušam*“. Sojer (Sawyer, 1999) govori o improvizaciji kao ključnom elementu izvođačkih žanrova, a odnosi se na performans ili njegove delove koji nisu strogo zapisani ili unapred definisani, odnosno na takvu vrstu izvođenja koja se ne odvija prema unapred utvrđenom scenariju (Nikolić, 2019, 2021; Nikolić Maksić, 2016). On ističe da improvizacija može postojati u različitim oblicima – od jednostavne varijacije na postojeći okvir (poput pesme, ritualne molitve ili tradicionalne priče) do potpunog stvaranja nečega novog bez unapred definisanog okvira. Ona se, međutim, ne ograničava na scenske umetnosti već se pojavljuje u različitim kulturnim kontekstima i u raznim verbalnim žanrovima, uključujući i razgovor (Sawyer, 1999). Improvizacija je zapravo fundamentalno ljudsko svojstvo (Nikolić, 2019), što bi značilo da smo mi kao ljudska bića – improvizatori. Sejlit (Salit, 2016) improvizaciju vidi kao osnovni mehanizam svakodnevnog ponašanja, na koji često zaboravljamo jer ima tendenciju da se pretvori u rutinu. Iako živimo sa ustaljenim navikama i ponašanjima, kao po scenariju, sve te navike nisu postojale oduvek. Kada se desi nešto nepredviđeno, reagujemo spontano, eksperimentišemo, pokušavamo nešto novo – i ako to funkcioniše, to postaje nova rutina. Dakle, ono što danas izgleda kao navika nekada je bilo nepredvidljiva improvizacija, koja je prirodan deo ljudskog razvoja i prilagođavanja. Time se otvara prostor za razumevanje performativnog učenja kao procesa učenja kroz činjenje, eksperimentisanje i igru sa identitetom i ponašanjem – u svakodnevnom životu, a ne samo na sceni. Ukoliko to neko nauči u veštački stvorenoj situaciji, ta sposobnost se prenosi i na ostale životne situacije. Naime, kada improvizacija funkcioniše u eksperimentalnoj kulturi, ona podstiče i podržava kompetentne greške – greške koje proističu iz novih ideja, a ne iz loše izvedbe (Cunha i sar., 1999 prema Vera & Crossan, 2004). „Suprotno tome, ako se improvizacija odvija u kulturi koja nije eksperimentalna, ona će verovatno biti sputana ili prekinuta umesto da bude podržana, a greške nastale kroz improvizaciju će verovatno biti kažnjene umesto prihvaćene i iskorišćene za dalji razvoj“ (Vera & Crossan, 2004, str. 740).

Zanimljivo zapažanje studenata je da improvizacija pomaže kada već postoji znanje o nečemu: „*Ono što sam ja kasnije primetio sada u četvrtoj godini, a to mi je značilo sa Dramskih, ... to koliko improvizacija treba da bude uvežbana, u smislu neuvežbana, ali da znamo da imamo znanje i onda možemo da improvizujemo...*“.

Drugim rečima, improvizacija ne negira znanje. Improvizovati možemo i kada ne posedujemo znanje o nečemu, ali i kada je ono na visokom nivou. Upravo o tome govori Sojer (Sawyer, 1999) kada naglašava da improvizacija nije apsolutan već relativan pojam jer se uvek odvija u dijalogu s već postojećim strukturama određene izvedbe. U skladu sa tim, uvežbavajući veštinu improvizovanja, postajemo bolji improvizatori (Nikolić, 2019) – vežbajući učimo da budemo manje uvežbani, što je važno i sa aspekta svakodnevnih i sa aspekta profesionalnih veština.

Performativno učenje kao prostor emocionalnog izraza i lične transformacije

Performativno učenje omogućava ljudima da istražuju sopstvene emocije i nesigurnosti u sigurnom okruženju. U tom smislu postaje značajan faktor emocionalnog i psihološkog razvoja. Tu temu smo prepoznali kao terapijske efekte. Važan aspekt je prevazilaženje straha od javnog nastupa: *„To jeste neki period kada sam se oslobađala treme pred bilo koju vrstu nastupa“*. Druga tvrdi slično, da je uvežbavanje za javni nastup bilo *„nekako [...] upotporeno sa svim ostalim što je bilo važno za javni nastup, pa je to samo doprinelo i poguralo ceo taj proces“*. Takođe, jedan od studenata kaže: *„Naučili smo da nas nije sramota, da nas nije strah i da ne moramo sve da imamo strukturirano unapred“*. Sejlit (Salit, 2016) objašnjava da ljudi prestaju da rastu i razvijaju se kada izgube okruženje koje ih podstiče da istražuju, eksperimentišu i uče putem grešaka. Kao deca, dobijamo pohvale za pokušaje, čak i kada nešto ne uspemo, ali u nekom trenutku se fokus pomera sa procesa učenja na rezultat. Umesto da nas ohrabruju zbog truda, okolina počinje da nas koriguje i kritikuje za neuspehe, što izaziva nesigurnost i povlačenje. Ona to povezuje sa konceptom razvoja Vigotskog (Vygotsky, 1978 prema Salit, 2016), prema kojem ljudi napreduju kroz uloge i izvođenja koji ih čine „za glavu višima“ nego što trenutno jesu. Kada se odrasli nađu u okruženju koje od njih očekuje samo ono što već znaju (ili im postavlja zahteve bez podrške za učenje), oni prestaju da preuzimaju rizike, ponavljaju već usvojene obrasce i ne izlaze iz svoje zone komfora. Suština njenog argumenta je da greške ne treba shvatati kao neuspeh već kao sastavni deo učenja i razvoja, a performativno učenje može pomoći ljudima da se oslobode straha od neuspeha i ponovo otkriju sposobnost eksperimentisanja i rasta. U kontekstu javnog nastupa, to takođe može značiti da izvođači mogu eksperimentisati sa novim verzijama sebe, što im omogućava da prevaziđu uverenja o sopstvenim sposobnostima koja ih ograničavaju. Performativno okruženje za učenje omogućava eksperimentisanje bez straha od neuspeha, smanjuje fokus na perfekcionizam, podstiče razvoj veština koje povećavaju samopouzdanje, što je ključno za razvoj inovativnih rešenja u radu i svakodnevnom životu.

Osim toga, studenti ističu i povećan kapacitet za introspekciju jer, kako kaže jedna od ispitanica: „Kroz sve to što smo radili nekako mislim da je najviše uticalo na introspekciju i tako da baš nekako lepo dodemo do nekih novih saznanja o sebi, o drugima“. Za to je svakako zaslužan proces divajzinga (*devising*), u kojem se dramskim tehnikama radi na ličnim temama i refleksiji u odnosu na važne životne teme. U tom procesu se uči o sebi, osvešćujući različite teme, ali i o drugima kroz intenzivan grupni rad i zajedničko deljenje, što ilustruje sledeći iskaz: „Naučili smo ko ima strah od čega, koga šta zanima, koga šta zabavlja...“. To se vidi i kada su avatarima dodeljivali supermoći: „Moj ima neku introspektivnu moć, da razume sebe i da razume druge“. Koliko je performativno okruženje važno sa aspekta učenja o emotivnom životu ilustruju sledeće reči jedne od studentkinja:

Naučili smo te emocije, što je taj najjači utisak, ta introspekcija. Ja emocije ne pokazujem toliko često, ali na Dramskim trudila sam se da baš nekako bude iskreno, tako da je sve to dosta pomoglo da emocije izađu napolje, da ih prihvatim i da ih prepoznam; tako da su tu razne boje, ima onih lepih i onih manje lepih emocija, ali su sve tu, sigurne su, prihvaćene i kod mene.

Deljenje ličnih iskustava je često deo dramskog procesa i oslanja se na pripovedanje (*storytelling*) koje je prirodni impuls – instinktivna potreba da izrazimo ko smo i šta nam je važno. Skot (Scott, 2018) ističe da je sama priroda pripovedanja, pa time i ličnih narativa, utemeljena u telu (*embodied storytelling*). Ona tvrdi da se lična priča prvo proživljava kroz telo, pri čemu se identitet i značenje oblikuju kroz telesne interakcije sa svetom. Za nju je pripovedanje fizički čin, jer se priče ne pričaju samo rečima, već kroz fizičke i emocionalne reakcije tela – pokrete, glas, izraze lica i intuitivne senzacije. U tom smislu, autorka naglašava neodvojivost pripovedanja od telesnosti, pokazujući da pričanje priča nije samo intelektualna aktivnost već emocionalno, intuitivno i fizičko izvođenje identiteta i značenja. Upravo zato je performativno učenje važno u smislu „izvođenja identiteta“, gde lične priče postaju način na koji izvodimo ko smo i šta nam je važno, ali istovremeno postaju i iskustva iz kojih dalje oblikujemo priče koje pričamo. U performativnom učenju, učesnici ne samo da usvajaju znanje već putem performansa istražuju i konstruišu svoj identitet i odnose sa drugima. To je proces iz koga neminovno izlazimo promenjeni.

Kao još jedan efekat učenja u okviru ove teme navodi se razigranost. Opisujući supermoć svog avatara, jedna studentkinja kaže: „Moj je *'shapeshifter'*, *menja se iz odraslog u dete i tako ukруг*“. Razigranost je osobina koja se smatra odlikom detinjstva, ali nakon celog semestra ispunjenog igrom, učesnici su očigledno svesni značaja usvajanja razigranog stava prema životu i u periodu odraslosti. Igra

nesumnjivo vodi u zadovoljstvo i uživanje, ali i omogućava da se lakše prolazi kroz život, čak i u najozbiljnijim situacijama.

Dok je Liberman (Liberman, 1977 prema Guitard *et al.*, 2005) smatrao da je razigranost (*playfulness*) integrisana crta ličnosti i pokazatelj kognitivnog stila, danas se ona najčešće definiše kao unutrašnja sklonost koja obuhvata nekoliko različitih kvaliteta, od kojih se ističu kreativnost, radoznalost, uživanje, smisao za humor i spontanost. To znači da razigranost nije jedna osobina već rezultat međusobne interakcije tih pet elemenata: (1) sposobnosti da se razmišlja izvan okvira i generišu nove ideje (kreativnost); (2) želje za istraživanjem i učenjem novih stvari (radoznalost); (3) sklonosti ka smehu i sposobnosti da se stvari vide na zabavan način (smisao za humor); (4) sposobnosti da se uživa u aktivnostima i trenutku (zabava/uživanje) i (5) fleksibilnosti i otvorenosti za neočekivano (spontanost). Drugim rečima, postojanje i kombinacija tih osobina kod odraslih određuje koliko su oni skloni razigranom načinu razmišljanja i ponašanja. Razigrani odrasli su spontani, ekspresivni, zabavni, kreativni i luckasti (Gordon, 2014). Kada se kaže sklonost, misli se na sklonost ka angažovanju, odnosno razigranost se shvata kao jedinstven način uključivanja u aktivnost (Masek & Stenros, 2021). Takvo određenje je u skladu i sa definicijom igre za koju se smatra da predstavlja modalitet ljudskog delovanja, u smislu da nešto možemo raditi na manje ili više razigran način (Botturi & Loh, 2008, prema Nikolić Maksić & Ljujić, 2012). Razigranost, dakle, nije ograničena samo na situacije igre (igranja) ili na slobodno vreme (Николић, 2025), sa kojima se najviše povezuje, već utiče na način na koji odrasli doživljavaju i procenjuju i druge situacije u svakodnevnom životu, uključujući i one koje se smatraju ozbiljnim. Štaviše, razigranost omogućava ljudima da se distanciraju od društvenih normi, situacija i konvencija, što im daje širu perspektivu i otvorenost za traženje novih i originalnih rešenja. Takođe, pomaže u suočavanju sa teškoćama i prihvatanju neuspeha, čime doprinosi fleksibilnijem i otpornijem pristupu izazovima. Sličnost faktora razigranosti kod dece i odraslih ukazuje na to da razigranost, uprkos godinama, u velikoj meri ostaje dosledna. Drugim rečima, iako se način na koji se igra manifestuje može menjati s godinama, osnovne karakteristike razigranosti – kreativnost, spontanost i uživanje u eksperimentisanju – ostaju tokom celog života (Gordon, 2014).

Uprkos tome, društvena manifestacija razigranosti nije prihvatljiva kada su u pitanju odrasli, kao što je to slučaj sa dečjom igrom (Nikolić Maksić & Ljujić, 2012). Solnit (Solnit, 1998 prema Guitard *et al.*, 2005) tako smatra da se dečja igra tokom odrastanja transformiše u razigranost. Kako autor objašnjava, odrasli u nekom trenutku postaju previše kritični i napuštaju igre iz detinjstva, ali zadržavaju razigran stav, koristeći ga za igru idejama i razvijanje mašte. Tako razigranost pomaže odraslima da se lakše nose sa svakodnevnim izazovima. Iako

odrasli generalno odustaju od igre, razigranost ostaje važan psihološki resurs koji može doprineti kreativnosti, fleksibilnosti i uspehu u profesionalnom i ličnom životu. Odrasli često postaju previše usmereni na rutinu i produktivnost, što može ograničiti njihovu sposobnost kreativnog razmišljanja. Kako ljudi stare, često se oslanjaju na prethodno naučene obrasce mišljenja i ponašanja. Međutim, razigranost omogućava fleksibilnost u učenju – podstiče eksperimentisanje, istraživanje i prilagođavanje novim situacijama, što je posebno važno u brzo promenljivom svetu. Gordon (Gordon, 2014) ističe da razigranost donosi slične koristi odraslima kao i deci, uključujući povećanu kreativnost, humor, maštovitost, divergentno mišljenje, motivaciju, redukciju stresa i pozitivan emocionalni doživljaj. Prema rečima tog autora, istraživanja pokazuju da razigrani ljudi u proseku žive deset godina duže od svojih manje razigranih vršnjaka. Te prednosti ukazuju na to da razigranost nije samo karakteristika detinjstva već ključan element blagostanja i dugovečnosti odraslih.

Zato razigranost ne treba posmatrati samo kao osobinu ličnosti – ona može da predstavlja pedagošku/andragošku strategiju, koja omogućava učesnicima da se angažuju, istražuju, preispituju i transformišu svoje razumevanje performativnim metodama poučavanja. Koristeći elemente igre, performativnim učenjem se zapravo uvećava sposobnost za igranje i na taj način povratno podstiče razigranost. Učenje kroz igru nije samo za decu – ono je moćan alat za razvoj odraslih koji im pomaže da budu kreativniji, otporniji, društveno povezaniji i spremniji na izazove.

Izvođenjem do profesije: performativno učenje u formiranju andragoškog identiteta

Osim efekata na ličnom planu svakog učesnika ponaosob, kada smo ih zamolili da svoje avatare izvedu u svet tako što će ih izvesti iz učionice i pozicionirati negde napolju, izdvojili su se i efekti na profesionalnom planu. Takav zadatak je, na simboličan način, označio njihov izlazak u svet, odnosno ukazao je na to kako sebe vide nakon završetka studija, u sklopu ideje o tome kako se stečene veštine na ovom predmetu uklapaju u tržište rada.

Studenti primećuju i ističu da je važan značaj performativnog učenja u obrazovanju budućih andragoga. Na to se odnosi iskaz: „*Moj avatar je otišao kod Savićevića [sala 211]. Kako je Savićević doveo andragogiju na ovu katedru, tako andragogija treba da se unapređuje i razvija u svim aspektima, da tu bude uključena i umetnost, a ne samo ajmo svi u HR*“ (fotografija 5). Naime, ovaj student je svog avatara pozicionirao ispred sale 211 na drugom spratu Filozofskog fakulteta,

ispred koje je postavljena tabla na kojoj piše ime prof. dr Dušana Savićevića, po kojem je nazvana. To ilustruje još jedan od studenata rečima: „*Moj utisak je sličan, 'Traži se andragog', ali andragog ne mora da bude samo HR, organizacija, već i slobodno vreme, igra i stvaralaštvo, Dramske*“.



Fotografija 4. Pozicioniranje avatara u svetu izvan učionice



Fotografija 5. Pozicioniranje avatara u svetu izvan učionice

U sledećem iskazu student ukazuje na ulogu i funkcije andragoga u društvu:

Ja nekako razmišljam kada gledam čime bih se bavio, sve su to neke ozbiljne stvari, a kada smo uzeli danas da radimo sa plastelinom, shvatio sam koliko smo svi kreativni i umetnički nastrojeni, da nauka i umetnost idu zajedno i kada se gledaju master programi po Evropi često ima umetnost i obrazovanje, i mislim da je to važno, ne moramo se time baviti sad kao pravimo pozorišne predstave recimo, ali taj pristup u bilo kom radu treba primenjivati.

Vidimo da izjave studenata i o toj temi prate fotografije nastale u procesu. Oni često svoje doživljaje opisuju tako što objašnjavaju pozicije avatara u prostoru u odnosu na druge i u odnosu na promene koje su nastale tokom obrazovnog procesa. Iz fotografija se ne mogu videti refleksije o emocijama koje su pokrenute aktivnostima i na predmetu i tokom same istraživačke radionice, ali to objašnjavaju njihovi iskazi.

Studenti nedvosmisleno osećaju da performativno okruženje oblikuje buduće profesionalce u oblasti andragogije na način na koji drugi kursevi u kojima izostaje performativnost ne uspevaju da postignu. Rezultati govore u prilog tome da su nauka i umetnost komplementarne, da u obrazovanju treba raditi na preva-

zilaženju veštački stvorene dihotomije među njima i da je to i moguće i poželjno, čak i u formalnom obrazovanju na visokoškolskom nivou. Njihova integracija u obrazovanju ruši tradicionalnu dihotomiju između „racionalnog“ i „kreativnog“ pristupa učenju. Ta veštački stvorena podela potiče iz dualističkog razmišljanja koje nauku poistovećuje sa objektivnošću i logikom, dok umetnost povezuje sa subjektivnošću i emocijama. Smatramo da ta podela nije samo nepotrebna već i štetna za razvoj holističkog znanja i kreativnog mišljenja. Integracija nauke i umetnosti je važna sa aspekta podsticanja divergentnog mišljenja, povezivanja apstraktnog i konkretnog znanja, razvoja kreativnosti i inovativnosti te podsticanja kritičkog i fleksibilnog razmišljanja. Performativnost se javlja kao važna sa aspekta emocionalne povezanosti sa učenjem, s obzirom na to da ono nije samo racionalan proces već uključuje i ulogu emocija u motivaciji, načinu angažovanja i dugoročnom pamćenju. Prevazilaženjem veštačke podele između ta dva domena, obrazovni sistemi mogu pripremiti studente za kompleksne probleme savremenog društva, gde su interdisciplinarne veštine ključne za inovacije i napredak. U vezi sa tim, ponovo se navodi sposobnost za improvizovanje i sa tim u vezi povećana fleksibilnost u profesionalnim zadacima, što najbolje ilustruje sledeći opis:

...kada pričamo o obrazovanju, tj. načinu na koji predajemo, u trenutku kako nam dođe najprirodnije, kako se grupa ponaša, u kakvom je stanju, da je tad najbolje improvizovati, da imamo unapred pripremljeno sve, a da se u tom trenutku prilagodimo grupi, a to smo naučili tu – na ovom predmetu.

Studenti su i na ovom, može se reći početnom, stepenu svog profesionalnog razvoja svesni načina na koje performativno učenje može izgraditi profesionalce u njima i u stanju su da zamisle situacije u kojima bi takvu vrstu osposobljenosti mogli da primene u svom budućem radu. Čini se da na osnovu rezultata istraživanja ima opravdanja za tvrdnju da performativno učenje treba da dobije ključno mesto u nastavnom kurikulumu profesionalnog osposobljavanja andragoga. Razlike u odgovorima onih koji su bili obučeni za performativni i improvizacijski rad i onih koji nisu imali nikakvu vrstu pripreme (studenti koji su prethodno pohađali predmet *igra i stvaralaštvo u obrazovanju odraslih* i oni koji nisu) govore u prilog tome da bi performativno učenje trebalo da bude polazna tačka, ali i da ostane u centru obrazovnog procesa tokom celokupnog profesionalnog razvoja andragoga. Veštine kao što su praćenje unapred definisanih obrazovnih planova i strogo pridržavanje propisanih metoda trebalo bi da dođu kasnije u razvoju andragoške prakse. To je posebno važno za sve buduće profesionalce u oblasti obrazovanja odraslih koji ne planiraju da se drže isključivo tradicionalnih i rigidnih obrazovnih modela. Ali bi čak i onima koji se opredele za klasične me-

tode učenja i nastave čvrsta osnova u improvizaciji pružila fleksibilnost i bolji set andragoških veština.

Sojer (Sawyer, 2007, str. 2) tvrdi da upotreba improvizacije u obrazovnom procesu omogućava (1) dubinsko konceptualno razumevanje (*deep conceptual understanding*), (2) integrisano znanje (*integrated knowledge*), (3) adaptabilnu ekspertizu (*adaptable expertise*) i (4) kolaborativne veštine (*collaborative skills*), a to su upravo veštine potrebne stručnjacima u svakoj oblasti savremenog visoko-kompleksnog i specijalizovanog rada. (1) Ukoliko je autor u pravu, performativno učenje u obrazovanju budućih andragoga doprinelo bi dubinskom razumevanju procesa učenja odraslih, na osnovu koga bi andragog mogao da procenjuje obrazovnu situaciju u široj perspektivi i da prilagođava strategije na osnovu temeljnih principa učenja odraslih. Ekspert u obrazovanju odraslih bi na osnovu toga mogao da vidi površinske karakteristike problema, ali i da ih razume u kontekstu širih obrazovnih, društvenih i psiholoških mehanizama, na osnovu kojih može da kreira efikasan i smislen obrazovni proces. (2) Slično tome, andragog mora povezivati različite metode i pristupe (npr. iskustveno učenje, dijalog, refleksivnu praksu, interaktivne metode...) kako bi kreirao celovit i dinamičan obrazovni proces. Znanje koje poseduje takav ekspert ne predstavlja niz odvojenih činjenica ili metoda koje se primenjuju u izolovanim situacijama. Naprotiv, svaka informacija, teorija i metodološki pristup međusobno su povezani i integrisani u celovit okvir razumevanja procesa učenja odraslih. U tom okviru se pojedinačni aspekti obrazovanja odraslih ne posmatraju kao nezavisne komponente već se svaki deo znanja vidi u širem kontekstu jer se obrazovanje shvata kao dinamičan proces u kojem se različiti aspekti znanja, iskustva i konteksta prepliću i nadograđuju. (3) Takođe, andragog mora imati širok repertoar strategija, koje ne primenjuje na rigidan način već ih mora modifikovati prema situaciji, potrebama i reakcijama odraslih učenika. Suočen sa novim izazovima, on se ne oslanja samo na teorijska znanja već odmah povezuje svoja prethodna iskustva sa sličnim situacijama i koristi praktične strategije koje su se ranije pokazale kao efikasne. Ekspert u andragogiji nije neko ko samo primenjuje unapred naučene metode već neko ko brzo prepoznaje obrasce, prilagođava ih novim okolnostima i kombinuje različite pristupe kako bi obezbedio efikasno i relevantno učenje za odrasle. (4) Na kraju, uloga andragoga u obrazovanju odraslih nije da dominira procesom već da facilitira kolektivno učenje. Odrasli polaznici donose svoje iskustvo, znanje i perspektive, a zadatak andragoga je da kreira okruženje u kojem svi aktivno doprinose i oblikuju zajedničko učenje. To znači da takvi eksperti rade u saradnji sa drugim stručnjacima i u obrazovnim institucijama i u širim organizacionim strukturama. Za razliku od tradicionalnog hijerarhijskog sistema, u kojem su uloge bile strogo definisane, savremeni andragoški rad zahteva fluidnu saradnju i zajednički pristup konkretnim zadacima i aktivnostima. Savre-

meni andragog nije izolovan stručnjak sa fiksiranom ulogom već deo dinamičnog tima koji zajedničkim radom sa drugim ekspertima stvara inovativna obrazovna rešenja. Takav kreativan, kolektivni pristup omogućava razvoj fleksibilnih i efektivnih programa učenja za odrasle.

Iako uključivanje performativnog učenja u studijski program andragogije deluje kao naizgled radikalna promena, zadržavanje postojećeg sistema obučavanja, čak i uz povremeno uključivanje improvizacijskih metoda, omogućilo bi zadržavanje i osnovnog nedostatka savremenog obrazovnog sistema – implicitne pretpostavke da je uloga onih koji obrazuju da neguju prenošenje unapred definisanog znanja, umesto da zajedno sa odraslim polaznicima učestvuju u njegovom oblikovanju i stvaranju. Zbog toga nam je potrebna transformacija kulture obrazovanja odraslih – promena koja bi preokrenula odnos između andragoga i unapred definisanih programa, koja bi andragogu dala veću autonomiju i status partnera i facilitatora u procesu učenja, a ne samo organizatora i izvođača unapred zadatih obrazovnih sadržaja.

Zaključak

Nedvosmisleno se može zaključiti da je studentima ovaj predmet važan i da su svesni pozitivnih efekata performativnog učenja na njihov lični i profesionalni razvoj. Efekti performativnog učenja pokazuju se na dva nivoa. Na ličnom planu, studenti izveštavaju o većoj samosvesti, otvorenosti za nove perspektive i osnaživanju za izražavanje sopstvenih ideja. Na profesionalnom planu se uočava razvoj veština saradnje, improvizacije i prilagodljivosti, što predstavlja osnovu za kompetentno i participativno delovanje u budućem radu.

Istraživanje pokazuje da studenti performativno učenje doživljavaju kao proces koji prevazilazi tradicionalno shvatanje obrazovanja jer podrazumeva aktivno učešće, kreativno izražavanje i refleksiju o iskustvu. U performativnom okruženju oni ne usvajaju samo teorijska znanja već razvijaju i praktične, društvene i komunikacione veštine koje doprinose smislenim interakcijama u grupi. Posebno ističu osećaj bliskosti i povezanosti sa drugima, što gradi relacijsko razvojno okruženje u kome podrška i izazov idu ruku pod ruku. Osim toga, kao važni ističu se razvijanje razigranosti i spontanosti, sposobnost za introspekciju i bolje razumevanje sebe te povećanje kapaciteta za improvizaciju. Igra i improvizacija se javljaju ne samo kao važni elementi blagostanja u odraslom dobru već, prema rezultatima, u značajnoj meri obogaćuju sam obrazovni proces. Performativno učenje podstiče razigranost omogućujući učesnicima da se otvore za eksperimentisanje, izraze na nove načine i istraže različite uloge, što sam proces učenja čini dubljim i smislenijim.

Na kraju, može se izvući indirektan zaključak da je ovaj predmet relevantan u obrazovanju budućih andragoga. Pre svega, učestvovanje u preformativnim aktivnostima na ovaj način razvija osećaj agensnosti kod studenata. Putem igre i kreativne ekspresije oni dobijaju priliku da dođu do uvida o sebi kao facilitatorima učenja koji nisu samo prenosioci znanja već aktivni graditelji odnosa, značenja i okruženja za učenje. Učenjem putem umetničkog i simboličkog izražavanja oni istovremeno uče o neverbalnoj komunikaciji, improvizaciji i empatiji, što osnažuje njihove kapacitete za rad sa različitim ciljnim grupama. Budući da se učenje ne tretira kao puko sticanje znanja već kao proces građenja značenja angažovanim učestvovanjem, podstiče se kritička i refleksivna praksa budućih andragoga. Više od svega, performativni pristup učenju doprinosi razvoju emocionalne pismenosti i kolektivne kreativnosti – elemenata koje formalni obrazovni sistemi često zanemaruju, a presudni su za savremeni rad u zajednici i obrazovanju odraslih.

Buduća istraživanja performativnog učenja trebalo bi usmeriti ka dubljem razumevanju njegovih dugoročnih efekata na profesionalni razvoj studenata i njihov u praksi u obrazovanju odraslih. S obzirom na naglašenost značaja povezivanja grupe i zajedničkog kreiranja znanja, posebno je značajno ispitati na koji način performativne prakse podstiču refleksivnost, saradnju i demokratizaciju odnosa u obrazovnom procesu te kako se mogu uporediti sa drugim participativnim pristupima učenju. Osim toga, zanimljivo bi bilo istražiti kako se performativne tehnike mogu prilagoditi različitim grupama odraslih (npr. nezaposleni, marginalizovane grupe, profesionalci u obrazovanju, menadžeri). Sama istraživanja bi trebala da razvijaju metodološke modele koji odgovaraju prirodi performativnog učenja, uključujući i participativne i vizuelne metode, i da ispituju potencijale takvih praksi u različitim kontekstima rada sa odraslima i u interdisciplinarnim okruženjima.

U celini, performativno učenje se pokazuje kao metodološki okvir koji ne samo da obogaćuje iskustvo studenata već i omogućava njihovo osnaživanje u procesu učenja. Time se otvara prostor da obrazovanje odraslih prepozna i podstiče kreativnost, interakciju i transformaciju – ne samo kao pedagoške ciljeve već i kao deo profesionalnog i ličnog razvoja u savremenom društvu.

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Faza „praznog gnezda“ u životnom ciklusu porodice – nedovoljno istraženo polje obrazovne intervencije³

Apstrakt: Bez obzira na to o kojoj kulturi je reč, jedan od značajnijih pokazatelja odraslosti dece u svim delovima sveta jeste odlazak od kuće i napuštanje porodičnog doma. Faza „praznog gnezda“, kako je nauka najčešće prepoznaje, predstavlja fazu u životnom ciklusu porodice u kojoj roditelji nastavljaju da žive sami jer su se deca osamostalila i otišla od kuće. Tu fazu karakterišu intenzivne promene porodičnih konstelacija, strukture i organizacije, ali u njoj se ukršta veliki broj individualnih promena svakog člana, što pred porodicu i njene članove postavlja veoma izazovne zadatke. Tu izazovnost usložavaju društvene promene i životni kontekst porodice koju „napuštaju“ deca. Kompleksnost „praznog gnezda“ i globalnog društvenog konteksta iznedrila je nesumnjivu potrebu za podrškom roditeljima koji žive u toj fazi. I pored toga, mnoge društvene nauke koje istražuju porodično funkcionisanje, kao i nauke o vaspitanju i obrazovanju, zanemarile su roditelje „praznog gnezda“, čime su ih učinili još nevidljivijim. U ovom radu ćemo predstaviti opšte karakteristike faze „praznog gnezda“ i one karakteristike proistekle iz razvojnog pristupa porodici. Razumevanje faze „praznog gnezda“ otvoriće prostor za uspostavljanje referentnog okvira za kreiranje obrazovne intervencije koja bi mogla da podrži roditelje i decu, a samim tim i ceo porodični sistem u toj fazi životnog ciklusa.

Ključne reči: „prazno gnezdo“, roditelji „praznog gnezda“, životni ciklus porodice, obrazovanje za život u porodici

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The “Empty Nest” Phase in the Family Life Cycle – An Underexplored Field of Educational Intervention⁴

Abstract: Leaving the parental home is one of the most significant milestones in a child's journey to adulthood across cultures. Commonly referred to in academic literature as the “empty nest” phase, this stage in the family life cycle begins when parents find themselves living alone after their children have become independent and moved out. It is marked by profound shifts in family dynamics, structure and organisation, also involving an overlapping of a range of personal changes experienced by each family member and, posing extremely demanding challenges for both the family and its individual members. These challenges are further compounded by societal changes and the life context of the families “left behind” by the children. The complexity of the “empty nest” experience and the global social context has created a clear need for targeted support for parents navigating this stage. Nevertheless, many disciplines delving into family functioning, as well as educational and pedagogical sciences, have tended to overlook parents in the “empty nest” phase, contributing to their invisibility. This paper outlines the core features of the “empty nest” phase, as well as those emerging from the developmental approach to the family. A deeper understanding of this stage will open up space for establishing a reference framework for the development of educational interventions aimed at supporting both the parents and the children, and thus the entire family system during this phase of the life cycle.

Keywords: empty nest, empty nesters, family life cycle, family life education

Uvod

„Porodica u svetskim i domaćim razmerama doživljava epohalne promene koje su gotovo do pre jednu deceniju bile nezamislive“ (Milić, 2007, str. 13), čime se otvaraju nova pitanja, ali i izazovi i dileme za sve porodične praktičare i teoretičare. Dok različite naučne discipline različito vide porodicu, svedoci smo da u dominantnom narativu porodicu definišemo kao bračni par sa decom, dok se (van) bračni par bez dece retko isto doživljava. Deca su važna determinanta porodičnog života – i njihov dolazak u porodicu, i razvoj i sazrevanje i, konačno, odlazak iz porodice pod budnim su okom istraživača.

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Za razliku od roditelja male i dece tinejdžerskog uzrasta, roditelji faze „praznog gnezda“ ostali su gotovo neprimećeni u većini naučnih istraživanja i društvenih politika. Iz tog razloga razumevanje karakteristika funkcionisanja savremene porodice u fazi životnog ciklusa porodice kada poslednje dete napusti dom i roditelji ostanu „sami“ – kada se nalaze u fazi „praznog gnezda“, postaje sve aktuelnija tema u naukama koje se bave izučavanjem porodičnog funkcionisanja, pa tako i u naukama o vaspitanju i obrazovanju.

Naše interesovanje u ovom radu usmereno je na razumevanje faze „praznog gnezda“ i sagledavanje moguće uloge obrazovanja u podršci roditeljima koji više ne žive sa svojom decom, sa ciljem uspešnog funkcionisanja i njih kao pojedinaca i cele porodice. Za razliku od brojnih zemalja zapada, ali i sve češćih istraživanja te faze životnog ciklusa u Kini, domaća naučna zajednica se i dalje ne usredsređuje na roditelje koji se nalaze u kasnijim godinama života i kasnijim fazama životnog ciklusa. Zbog toga smatramo da je neophodno da podstaknemo domaće autore da više istražuju i pišu o fazi „praznog gnezda“, s obzirom na to da je Srbija jedna od najstarijih zemalja Evrope (Bobić, 2003), a u demografski starim zemljama odnos odrasle dece i roditelja treba da bude značajno pitanje.

Razvojni pristup porodici, koji porodicu vidi kao sistem koji se razvija kroz vreme, poslužiće kao teorijska osnova ovog rada. Razvoj porodičnog sistema se odvija u fazama koje karakterišu različiti događaji, transformacije i izazovi. Očekivani događaji i promene koje su zajedničke velikom broju porodica definišemo kao razvojne zadatke. Oni nas upućuju u izazovnost i kompleksnost života porodice u nekoj fazi, koji zajedno sa kulturom, tradicijom i vrednostima nekog društva predstavljaju važan referentni okvir za kreiranje obrazovne podrške i roditeljima i deci.

U naukama o vaspitanju, porodično funkcionisanje se može posmatrati kao okvir vaspitne stvarnosti porodice, s jedne strane, i kao polje obrazovne intervencije u porodični sistem, s druge strane, sa ciljem podrške razvoju vaspitne stvarnosti (Medić, 2007). Posmatrajući ga i s jedne i s druge strane, našu pažnju usmeravamo na roditelja. Ostvarujući svoje individualne, bračne, porodične i roditeljske uloge, roditelj čini porodični život vaspitnim kontekstom u kome odrastaju deca, dok je, s druge strane, roditelj otvoreni resurs, kapacitet za promenu i unapređenje porodičnog funkcionisanja koji se može razvijati i obrazovanjem. Obrazovanje za život u porodici, odnosno obrazovanje usmereno na podršku rastu i razvoju porodičnog funkcionisanja, ima svoju uspešnu i dugu praksu i krajnja je prilika da obrazovanjem podržimo i roditelje (a samim tim i celu porodicu) koji su u fazi „praznog gnezda“.

Pristupi proučavanju porodičnog života u naukama o vaspitanju i obrazovanju

Viđenje porodice se menjalo tokom istorije, baš kao i zainteresovanost stručne javnosti za njeno proučavanje. Konstatcija sociološkinje Milić da danas gotovo da nema društvene nauke koja se ne bavi porodičnim životom (Milić, 2001) odražava se u različitim viđenjima porodice i bavljenju različitim aspektima porodičnog života, zavisno od toga o kojoj nauci je reč. Porodična andragogija usmerava pažnju na roditelja i poboljšanje roditeljskih kompetencija, radi unapređenja sveukupnog porodičnog funkcionisanja. Oslanjajući se na razvojnu teoriju i njoj srodni sistemski pristup, andragogija i druge nauke o vaspitanju i obrazovanju porodicu vide kao sistem u razvojnoj perspektivi. U ovom radu kao teorijski okvir će biti korišćen razvojni pristup porodici, zbog čega ćemo ga ukratko opisati u nastavku.

Porodična razvojna teorija proistekla je iz sociologije porodice, ljudskog razvoja i sistemskog pristupa porodici i predstavlja jednu od prvih teorija koje su se fokusirale isključivo na porodicu (Duvall, 1988; Šaćiri, 2020). Za utemeljenje porodične razvojne teorije najznačajniji su autori Evelin Duval i Ruben Hil. Tokom svoje višegodišnje prakse, Duval i Hil su, konstituišući razvojnu porodičnu teoriju, razvili koncept životnog ciklusa porodice i koncept razvojnih zadataka. Ti koncepti nam omogućavaju da razumemo razvoj i usložavanje porodičnog sistema kroz vreme, kao i ključne promene i izazove sa kojima se porodica suočava u određenom stupnju životnog ciklusa. Prelazak porodice iz jedne u drugu fazu životnog ciklusa karakterišu prelazni periodi ili kritični događaji (emocionalni, psihološki, relacijski, biološki, društveni) koji zahtevaju od porodice prilagođavanje, to jest adaptibilne mehanizme kako bi svi njeni članovi uspešno prevazišli izazove koji se dešavaju i nastavili svoj individualni i porodični razvoj u narednoj fazi. Neadekvatno reagovanje porodice i njenih članova na izazove neke faze životnog ciklusa podstiče razvoj disfunkcionalnih obrazaca ponašanja. „Svaka faza porodičnog ciklusa je potencijalna krizna tačka, ukoliko se porodica ne prilagodi razvojnim potrebama svojih članova, tj. ukoliko ne uspostavi strukturu koja je odgovarajuća za zdravo funkcionisanje u toj fazi“ (Vukov Goldner, 1988, str. 178). Faza „praznog gnezda“, zbog velikog broja promena i tranzicija koje se dešavaju u isto vreme, i za roditelje i za decu predstavlja jednu od najkritičnijih faza u životnom ciklusu porodice, zbog čega je neophodno njeno dodatno i detaljno proučavanje.

Životni ciklus porodice je „prirodni evolutivni proces koji pokreće porodicu put rasta, razvoja, sazrevanja i promene“ (Vukov Goldner, 1988, str. 52) i značajan okvir za razumevanje razvojnih trendova porodičnog sistema kroz vreme. Prvi put je primenjen davne 1903. godine za potrebe Roventrijevog istraživanja linije siromaštva u engleskim radničkim porodicama, ali se rodonačelnikom tog

koncepta smatra Ruben Hil (Milić, 2007; Milošević, 2009). Životni ciklus omogućuje razumevanje najznačajnijih promena, transformacija i razvoja porodičnog sistema koji se odvija po uobičajenim obrascima izazvanim različitim unutrašnjim i spoljašnjim zahtevima (Dalos & Drejper, 2012; Šaćiri, 2020). Na osnovu značajnih događaja i promena koje se dešavaju tokom životnog ciklusa porodice definisane su različite faze životnog ciklusa, koje nam pomažu da razumemo individualne i porodične promene koje se dešavaju baš u određenoj fazi.

Drugi važan koncept razvojnog pristupa je koncept razvojnih zadataka porodice. Svaka faza u životnom ciklusu porodice ima pripadajuće razvojne zadatke koji je definišu i njihovo razumevanje je neophodno za dalju analizu životnog ciklusa porodice. Kroz razvojne zadatke možemo razumeti promene u strukturi i organizaciji porodice, kao i porodične izazove i tranzitne događaje u određenom stadijumu razvoja. Razvojni zadaci se definišu i kao odgovornost za odrastanje jer predstavljaju kombinaciju biološke, emocionalne i psihološke zrelosti i očekivanja i pritiska koji proizilaze iz društvenog konteksta (Duvall & Kerckhoff, 1958). Uspesno prevazilaženje aktuelnih razvojnih zadataka vodi ka verovatnijim uspesima u prevazilaženju narednih razvojnih zadataka i obrnuto – neuspeh u ostvarenju nekog razvojnog zadatka u aktuelnoj fazi otežava ispunjenje budućih zadataka u narednim fazama životnog ciklusa porodice (Duvall & Kerckhoff, 1958).

Od prvih modela pa do onih kasnijih, životni ciklus porodice je pretrpeo brojna revidiranja i rekonceptualizacije. Bez obzira na različite klasifikacije, svaki od kreiranih modela služi kao primenljiva podela za proučavanje porodičnog života, koji u stvarnom svetu teče iz jedne faze u drugu, bez ikakvih prekida i pauza, zbog čega je odabir konkretnog modela manje važan (Duvall & Kerckhoff, 1958). U ovom radu ćemo koristiti klasifikaciju domaće autorke Vukov Goldner (1988), mada je faza „praznog gnezda“ bila prepoznata još u početnim modelima. Iako je danas jasno da ne prolaze sve porodice kroz iste razvojne zadatke, zahvaljujući konceptu životnog ciklusa porodice primećeno je da se, i pored postojećih pluraliteta u načinima življenja i pojedinaca i njihovih porodica, veliki broj porodica suočava sa (približno) istim razvojnim zadacima, koji, kao takvi, predstavljaju značajnu osnovu za kreiranje obrazovnih programa namenjenih porodici u određenoj fazi životnog ciklusa.

Faza „praznog gnezda“ u životnom ciklusu porodice

Fazu „praznog gnezda“ nije moguće razumeti bez preciznijeg definisanja porodice. „Svaka porodica ili grupacija stvara jedinstven interpersonalni sistem, obično počev od inicijalnog spajanja dvoje ljudi koji mogu postati roditelji dece a kasnije

baba i deda. Tako postaje porodica – sistem koji sa svojim značenjima i ponašanjima predstavlja oblik porodičnog života koji se razvio integracijom različitih pregovora članova porodice i izborima članova zasnovanih na njihovim ličnim i zajedničkim uverenjima i prošlosti“ (Dalos & Drejper, 2012, str. 35). Dvoje ljudi, osnivajući porodicu, započinju svoj porodični životni ciklus. Klasifikacije životnog ciklusa su brojne, a prema modelu koji predlaže Vukov Goldner (1988), faze u životnom ciklusu porodice su:

1. zasnivanje porodice,
2. porodica sa malim detetom,
3. porodica sa predškolskim detetom,
4. porodica sa školskim detetom,
5. porodica sa adolescentom,
6. porodica koju napuštaju deca,
7. porodica „praznog gnezda“ i
8. porodica koja stari.

Ova klasifikacija pokazuje tendenciju definisanja faza životnog ciklusa porodice na osnovu uzrasta dece. Istorijski gledano, takva praksa ne treba da čudi s obzirom na to da je faza „praznog gnezda“ dugo bila retka i kratkog trajanja (Mitchell, 2016). Usled povećanja životnog veka ljudi i niže stope fertiliteta, sve veći broj roditelja je u prilici ne samo da iskusi „samostalan život bez dece“ već i da ovu fazu živi dugi niz godina, zbog čega danas faza „praznog gnezda“ ima status najduže faze u životnom ciklusu porodice. Posmatrajući je kao „fenomen“ 21. veka, faza „praznog gnezda“ porodicu suočava sa brojnim tranzitnim događajima, od kojih je odlazak poslednjeg deteta iz porodičnog doma samo jedan od njih. Tranzicije u porodičnom domenu obuhvataju splet međuzavisnih događaja i procesa i mogu se dešavati uporedo sa procesima obrazovne, radne ili druge tranzicije (Tomanović *et al.*, 2012), zbog čega faza „praznog gnezda“ ima veliki krizni potencijal da porodica razvije disfunkcionalne obrasce ponašanja. Kada i iz kog razloga će poslednje dete napustiti porodični dom i sa kojom drugom tranzicijom će se to napuštanje poklopiti, može varirati u velikoj meri. Tako se roditelji mogu naći u različitim ličnim, životnim fazama, kada napuštanje nastupi, što će umnogome odrediti njihovu reakciju na „prazno gnezdo“ i kako će nastaviti dalje svoj individualni i porodični životni put. Otuda potreba nauka o vaspitanju i obrazovanju da najpre razumeju porodično funkcionisanje u ovoj fazi, a zatim i da pruže obrazovni sadržaj koji bi porodicu podržao da se funkcionalno suoči sa izazovima „praznog gnezda“ i kako bi porodica mogla da nastavi svoj put rasta i razvoja.

Razumevanje kulture, tradicije i vrednosnog sistema nekog društva značajno boji reakciju roditelja na odlazak dece od kuće. Sve što čini jednu kulturu prelama se kroz porodicu i porodično funkcionisanje, s obzirom na to da je porodica najmanji sistem svakog društva. Dosadašnja naučna saznanja upućuju da roditelji različito reaguju na fazu „praznog gnezda“, ali da se njihove reakcije mogu svrstati na ekstremnim tačkama kontinuuma – od krajnje pozitivnih osećanja (sreće, ponosa, slobode, zadovoljstva) do manje pozitivnih, „negativnih“ osećanja (usamljenosti, tuge, straha, depresije). Posmatranjem kultura (i u njih utkanih vrednosti i ponašajnih obrazaca) različitih krajeva sveta, uočljivo je da one održavaju tradiciju i vrednosni kontinuitet, s jedne strane, ali i doživljavaju značajne promene usled globalizacije, s druge strane. Pripadnost nekom narodu „igra glavnu ulogu u određivanju onoga šta jedemo, kako radimo, u kakvim smo odnosima, kako slavimo praznike i rituale, te kako se osećamo u odnosu na život, smrt i bolest“ (McGoldrick, 1992, str. 437). Analizirajući reakcije roditelja na fazu „praznog gnezda“ u odnosu na kulturu i tradiciju porodičnog porekla, uočljiva je najopštija podela na kulture istoka i zapada. Njihove razlike su primećene u odnosu na očekivanja roditelja kada i iz kog razloga deca treba da napuštaju porodični dom. Za najveći broj porodica zapadnjačkih kultura odlazak dece od kuće predstavlja normativni događaj. Zapadne kulture su više individualističke, neguju samostalnost i nezavisnost, manja je unutarporodična kohezija, a odlazak dece od kuće je visokovrednovan i jasan pokazatelj uspešnog roditeljstva (McGoldrick, 1992; Mitchell & Lovegreen, 2009; Mitchell & Wister, 2015). Zbog toga prolongiran ostanak dece u roditeljskom domu može izazivati pojavu disfunkcionalnih obrazaca ponašanja svih članova porodice (McGoldrick, 1992). S druge strane, nezapadne, kolektivističke kulture su pretežno familijarno orijentisane, sa izraženim vrednostima lojalnosti, reciprociteta i porodične solidarnosti. Vrednuju se intenzivni porodični odnosi i bliskost, zbog čega se odlazak dece od kuće može doživljavati kao roditeljski neuspeh – jer decu nisu dovoljno naučili porodičnim vrednostima (Mitchell & Lovegreen, 2009; Mitchell & Wister, 2015). Navedene razlike predstavljaju veštački podeljene i definisane kulture i ne mogu se koristiti kao „uputstvo“ za uspešno razumevanje porodica istoka i zapada. Ali, nije nam ni namera da u ovom radu podržavamo/stvaramo stereotipije o određenom društvu već upravo suprotno. Nastojimo da razumemo moguće razlike proistekle iz sveukupnog folkloru jednog društva, kako bismo mogli bolje da razumemo koja i kakva transgeneracijska uverenja mogu uticati na reakciju roditelja na odlazak dece iz „gnezda“ i da sadržaj obrazovne podrške namenjene roditeljima kreiramo u odnosu na potrebe samih roditelja.

Razvojni zadaci faze „praznog gnezda“ u životnom ciklusu porodice

Prema modelu koji predlaže Vukov Goldner (1988), definisani razvojni zadaci na koje treba da odgovori porodica u fazi „praznog gnezda“ su: a) preispitivanje partnerskih relacija posle odlaska dece; b) ponovno regulisanje bliskosti i distance u braku nakon odlaska dece; c) prihvatanje novih porodičnih uloga (babe i dede); d) uspostavljanje odnosa sa novoformiranim porodicama dece i prihvatanje novih članova porodice; e) završno definisanje granica prema porodicama svoje dece i relacija prema unučadi (Medić *et al.*, 1997). Definisanim razvojnim zadacima dodali bismo još pripremu roditelja za profesionalni završetak karijere i penzionisanje kao razvojni zadatak koji se događa na individualnom planu, a koji boji partnersku relaciju i celokupan doživljaj porodičnog života. U nastavku ćemo se detaljnije osvrnuti na svaki od predstavljenih razvojnih zadataka.

Preispitivanje partnerskih relacija posle odlaska dece i ponovno regulisanje bliskosti i distance u braku nakon odlaska dece

Mnogi porodični teoretičari i praktičari zastupaju stav da je partnerski odnos baza porodičnog sistema, te ne treba da čudi to što se prva dva razvojna zadatka upravo i tiču preispitivanja partnerske relacije nakon odlaska dece od kuće (Milojković *et al.*, 1997; Vukov Goldner, 1988). Usmerenost ka partneru/partnerki naspram dotadašnje usmerenosti na decu može imati i pozitivne i negativne efekte na roditelje/partnere. Kada partneri dobiju dete i postanu roditelji, učestala je pojava deprivacije bliskosti, pa ukoliko se deprivacija ne prevaziđe u ranijim godinama detetovog života, neretko se održava i na druge faze životnog ciklusa porodice. Usmerenost na brigu o malom detetu postavlja bračna neslaganja i konflikte po strani, do trenutka odlaska dece od kuće.

Faza „praznog gnezda“ mnogim roditeljima donosi saznanja o značajnoj, nekad nepremostivoj distanci koja je nastala u partnerskoj relaciji, zbog čega je odgovor na te razvojne zadatke neizmerno značajan. Ranija istraživanja o zadovoljstvu kvalitetom braka kroz životni ciklus porodice pokazala su da zadovoljstvo brakom ima izgled latiničnog slova U – najveće zadovoljstvo brakom je na početku, smanjuje se tokom srednjih godina braka i roditeljstva i raste sa odlaskom dece iz kuće (Medić, 1993). Ti nalazi podržavaju ideju o mogućem novom „medenom mesecu“ za roditelje faze „praznog gnezda“. Preusmeravanje pažnje roditelja sa dece na partnera/partnerku otvara prostor za ponovno uživanje u partnerskoj relaciji, u novom porodičnom kontekstu. Zajedničko osmišljavanje novih, samo njihovih rituala, ispoljavanje intime i zajedničko provođenje vremena na drugačiji

način u odnosu na ranije faze omogućava partnerima koji su u toj fazi životnog ciklusa da uživaju u tom, po mišljenju mnogih, najznačajnijem odnosu. S druge strane, usmerenost roditelja na brigu i dobrobit deteta i prisustvo dece u porodičnom domu održava porodicu na okupu, a za mnoge roditelje deca su glavni razlog ostanka u braku. Neuspešan odgovor roditelja na taj razvojni zadatak uzrok je visoke stope razvoda u fazi „praznog gnezda“. Prema podacima nekih istraživanja, iako se stopa razvoda ne povećava od devedesetih godina prošlog veka, stopa razvoda u populaciji ljudi starijih od 50 godina se udvostručila (Brown, 2012, prema McGoldrick *et al.*, 2016). Te dve velike tranzicije u isto vreme – odlazak dece od kuće i razvod braka, veoma su kompleksne tranzicije, svaka pojedinačno, i zahtevaju ekstremnu promenu uloga i načina života, istovremeno izazivajući osećaj slobode i osećaj gubitka (Brown, 2012, prema McGoldrick *et al.*, 2016).

Još jedan značajan aspekt partnerske relacije, o kojem se i dalje malo zna, piše i priča, jeste seksualnost u zrelom i starijem dobu. Seksualnost je važan aspekt fizičkog i mentalnog zdravlja, ali su i dalje uobičajena istraživanja koja se tom temom u zrelom dobu bave kroz medicinsku prizmu, naglašavajući patološke aspekte seksualnosti i objašnjavajući je kao skup fizioloških procesa, isključujući psihološke i socijalne procese koji zapravo u najvećoj meri oblikuju seksualni život sredovečnih i starijih parova (Kirkman *et al.*, 2013; Lodge & Umberson, 2012). Dok se parovi u zrelom i starijem dobu i dalje neretko vide kao aseksualni, postoje shvatanja da je seksualnost važan aspekt koncepta aktivnog starenja, pri čemu se seksualna aktivnost doživljava kao znak uspeha u procesu starenja (Gott, 2005, prema Lodge & Umberson, 2012; Katz & Marshall, 2003, prema Lodge & Umberson, 2012). Promena paradigme posmatranja seksualnosti treba da skrene fokus sa disfunkcionalnosti i nezadovoljstva na suprotnu stranu, seksualnu aktivnost i zadovoljstvo (Kirkman *et al.*, 2013). Mali je broj istraživanja koja se bave tom temom u kasnijim fazama života, što stvara iskrivljenu sliku seksualnosti u srednjim i kasnijim godinama (Kirkman *et al.*, 2013) zbog čega je treba detaljnije istražiti.

*Prihvatanje novih porodičnih uloga (babe i dede); uspostavljanje
odnosa sa novoformiranim porodicama dece i prihvatanje novih
članova porodice; završno definisanje granica prema porodicama
svoje dece i relacija prema unučadi*

Druga „grupa“ razvojnih zadataka odnosi se na prilagođavanje porodice na transformacije koje su proistekle iz promena u strukturi i organizaciji porodičnog života. Na životnom putu porodice njen obim se povećava i smanjuje, a smanjivanje se povezuje sa fazom „praznog gnezda“ mada roditelji u toj fazi mogu

dobiti nove uloge – babe i dede. Iako su roditelji uvek roditelji i deca uvek deca, njihove uloge i pozicije u porodici nisu fiksirane već individualni putevi razvoja svih članova zahtevaju revidiranje međusobnih odnosa, granica, važećih pravila. Adaptacija porodice na promene umnogome se oslikava u novim ulogama (baba i deda) koje preuzimaju roditelji „praznog gnezda“, zbog čega su neki autori definisali pet načina ponašanja u poziciji baba/deda:

1. „formalni“ – baba i deda se povremeno zabavljaju sa unucima, dok brigu o njima preuzimaju njihovi roditelji;
2. „surogat roditelja“ – babe i dede preuzimaju funkcije roditelja;
3. „rezervoar porodične mudrosti“ – babe i dede su vrhovni porodični autoriteti, nosioci sve mudrosti i životnih kompetencija;
4. „zabavljači“ – babe i dede su uključeni samo u igru i zabavu unuka;
5. „distancirane figure“ – babe i dede su više posmatrači svojih unuka, međusobni kontakti su retki i distancirani (Milojković *et al.*, 1997).

Predstavljena klasifikacija veoma precizno i slikovito upućuje i na druge elemente porodičnog života – na osnovu definisanih ponašanja jasno možemo videti na koji način je porodica „praznog gnezda“ odreagovala na nove uloge, da li je prihvatila nove porodične članove i kako je uspostavila granice porodičnog sistema u novim životnim okolnostima. Svaka od pozicija može biti (ne)odgovarajuća nekoj porodici, ali to zavisi isključivo od same porodice. Značaj koji donose (nove) uloge babe i dede ogleda se i u tome što zauzimanje bilo koje od pozicija utiče na celokupno porodično funkcionisanje. Zbog toga je važno da roditelji „praznog gnezda“ i njihova deca imaju srodne poglede na uloge babe i dede, kao i da o njima razgovaraju i pregovaraju, kako bi se olakšao odgovor porodice na ovaj razvojni zadatak.

Dobijanje unuka ne znači samo dobijanje novih uloga već ta promena zahteva prihvatanje novih članova (noviformirani članovi porodice dece), redefinisane granica u odnosu na svoju decu i uspostavljanje granica sa novim članovima porodice. Uobičajeno je da žene nose odgovornost za uspostavljanje bliskosti sa novoformiranim porodicama svoje dece i preuzimaju ili zadržavaju ulogu „negovateljice“ treće generacije, ali i dece i unuka (McGoldrick *et al.*, 2016). Takvu ulogu društvo očekuje od žena i socijalizuje ih i priprema od najranijih godina. Iako su žene emancipovane u mnogim segmentima društvenog života, u svim kulturama sveta njima se nameće odgovornost za održavanje porodice na okupu i uspostavljanje funkcioniranih porodičnih odnosa. S jedne strane, takva društvena očekivanja mogu predstavljati veliki teret ženama, s obzirom na to da se u fazi „praznog gnezda“ već suočavaju sa brojnim izazovima i tranzicijama. S druge strane, one žene koje su teže podnele odlazak dece od kuće, zbog umanjenja zna-

čaja uloge majke, ulogom bake mogu kompenzovati svoj „gubitak“. Za razliku od žena, o iskustvima muškaraca u ulozi dede veoma je malo nalaza, zbog čega nam je veoma važno da se ubuduće muškarci obimnije uključe u istraživanja o porodičnom funkcionisanju.

Priprema za završetak karijere i penzionisanje

Pripadnost i obavljanje određene profesije ima veoma važnu ulogu i veliki je deo identiteta svake osobe, a privređivanje i materijalni faktori u značajnoj meri određuju kvalitet života i mogućnosti koje će se postići tokom individualnog i porodičnog ciklusa. Iako faza „praznog gnezda“ može nastupiti u različitim godinama roditelja, dominantna je realnost da je veliki broj njih u toj fazi pri kraju poslovnog angažovanja, nakon čega sledi penzionisanje. Penzionisanje predstavlja značajnu promenu i za pojedinca i za bračnu dijadu, a i na individualno reagovanje na prestanak rada utiču brojni faktori. Pojedinci koji su zdravi i finansijski situirani formalan prekid rada i odlazak u penziju češće prihvataju dobro, bez mnogo poteškoća, koristeći slobodno vreme za učenje, hobije i nova zanimanja (McGoldrick *et al.*, 2016). Penzija je od krucijalnog značaja za materijalno blagostanje (i bitan preduslov drugih blagostanja), važan je činilac dostojanstvenog života (Babović *et al.*, 2018), ali sama tranzicija iz sveta rada u „penzionerske“ dane podrazumeva učenje novih navika, menjanje i prihvatanje uloga i redefinisane odnosa, zbog čega može biti veoma izazovna. Ta tranzicija može biti posebno psihološki izazovna muškarcima iz kultura u kojima su oni dominantno donosioci kućnih prihoda. Gubitak te uloge može se negativno odraziti na prilagođavanje muškaraca toj životnoj fazi, što ne znači da se ista osećanja i izazovi ne mogu pojaviti i kod žena.

Brojni i kompleksni društveni faktori i ekonomska realnost koju čine: duži životni vek, bolji zdravstveni životni uslovi, manjak radne snage, viši životni troškovi, velike društvene razlike, dovode do sve češće pojave da ljudi rade i nakon stečenih uslova za odlazak u penziju. Nestabilna ekonomija i poskupljenje osnovnih životnih troškova stavljaju dodatni teret na roditelje „praznog gnezda“ jer upravo oni često pomažu samostalnost svoje dece i funkcionalnost svojih roditelja. Potreba da pomognu i podrže članove svoje porodice roditelje „praznog gnezda“ može udaljiti od procesa penzionisanja, što je posebno izazovno u društvima sa slabijom i nestabilnijom ekonomijom. Prolongiran ostanak u svetlu rada može se reflektovati na partnerske i porodične aspekte života roditelja „praznog gnezda“, a samim tim i na funkcionisanje svih članova porodice.

Treba naglasiti da smo u ovom radu zapostavili najčešće moguće promene koje se dešavaju na individualnom planu roditelja „praznog gnezda“. Takva jedna analiza bi zahtevala zaseban rad.

Umesto zaključka

Gotovo je nemoguće obuhvatiti sve aspekte porodičnog života, posebno u onim fazama životnog ciklusa u kojima se veliki broj promena i tranzicija dešava u isto vreme. „I teško je i lepo je, i raduje i boli i izaziva osećaj ponosa“ – neretko su ovo reči kojima roditelji faze „praznog gnezda“ opisuju osećanja izazvana odlaskom dece iz porodičnog doma. Iako je odlazak iz kuće u mnogim zemljama normativni događaj, ne znači da ta tranzicija ne izaziva pomešana osećanja kod roditelja – i radost i ponos, i tugu i bol. Sve su češći nalazi koji umanjuju moguće dve, ekstremne reakcije roditelja na fazu „praznog gnezda“, napominjući da roditelji u najvećem broju slučajeva osećaju i pozitivna i manje pozitivna osećanja (Bouchard, 2014).

Obrazovanje za život u porodici ima korene u XIX veku, ali je teorijsko utemeljenje dobilo tek sredinom XX veka. Centralnu ulogu u nastajanju konceptualnog okvira obrazovanja za život u porodici imaju koncepti životni ciklus porodice i razvojni zadaci, kao i znanja različitih nauka: sociologije, antropologije, ekonomije, psihologije, ljudskog razvoja (Duvall & Kerckhoff, 1958). Iako je shvaćen značaj obrazovne podrške roditeljima za uspešnije individualno i porodično funkcionisanje, i dalje je izazovno pronaći istraživanja koja se bave obrazovnom podrškom roditeljima faze „praznog gnezda“. Pojedini univerziteti Sjedinjenih Američkih Država kreiraju onlajn kurseve namenjene toj grupaciji roditelja. Primer jednog takvog kursa je kurs kreiran na Državnom univerzitetu Arizona pod nazivom „Zagrljaj praznog gnezda: kako uspešno ploviti životom kada decu napuste dom“ (*Embracing the Empty Nest: Navigating Life When Your Children Leave Home*) (Arizona State University, 2024). Kurs je kreiran sa ciljem da podrži roditelje u fazi „praznog gnezda“ i da ih nauči kako da postignu emocionalnu rezilijentnost i osmisle život u novoj porodičnoj fazi. Sadržaj kursa je usmeren na emocije, odnose sa porodicom i značajnim drugim, lična interesovanja, postavljanje novih životnih ciljeva. Međutim, o tom kursu nije bilo više dostupnih informacija, zbog čega su nam veoma značajni nalazi Arkusa i saradnika (Arcus *et al.*, 1993, prema Ballard & Morris, 2003). U svom istraživanju, ti autori su se bavili obrazovnim potrebama sredovečnih i starijih roditelja (najveći broj roditelja „praznog gnezda“ i pripada tim starosnim kategorijama). Prema njihovim nalazima, od 28 ponuđenih tema iz različitih aspekata života, ispitanici su

u najvećoj meri birali one teme koje su u vezi sa porodicom, porodičnim ulogama i odnosima, iskazujući potrebu da se putem obrazovanja pripreme za drugačije ili nove uloge i odnose koji slede. Ukoliko su ispitanici bili istovremeno i bake i deke, češće su birali teme u vezi sa unucima i novim životnim ulogama (Ballard & Morris, 2003).

Na osnovu dostupne literature o različitim aspektima faze „praznog gnezda“, sledi nekoliko zapažanja značajnih za kreiranje obrazovnih programa namenjenih roditeljima koji više ne žive sa svojom decom. Najpre, neophodno je ispitati i razumeti društveni i kulturni kontekst porodica „praznog gnezda“ kojima je namenjen obrazovni program, važeće narative o odlasku dece od kuće i potencijalne izazove koji proizilaze iz tih narativa. Osim toga, neophodno je razumeti važnost uloge roditelja u nekom društvu i moguće teškoće u prevazilaženju slabljenja značaja te uloge te otvoriti pitanja o značaju partnerstva u fazi „praznog gnezda“.

Zbog velikog raspona godina među roditeljima „praznog gnezda“, neophodno je ispitati dominantnu starosnu kategoriju kojoj pripadaju roditelji te faze, kojima je namenjen obrazovni program. Godine roditelja mogu biti značajna determinanta u prepoznavanju individualnih tranzicija roditelja koje se mogu poklopiti sa odlaskom dece iz porodičnog doma, zbog čega je važno da obrazovni program koji kreiramo polazi od potreba samih roditelja, a ne da realizujemo isti program za roditelje „praznog gnezda“ koji su u pedesetim godinama, na vrhuncu svoje karijere (što je karakteristično za zapadne zemlje), i za one roditelje koji se spremaju za penzionisanje (što je karakterističnije za istočne zemlje i zemlje mediteranskog tipa porodice). Veliki raspon godina koje roditelji mogu imati kada usledi „prazno gnezdo“ i status najduže faze koju „prazno gnezdo“ ima otvara pitanje različitih iskustava roditelja u toj fazi, zavisno od dužine „staža“ koji su roditelji proveli u njoj i samim tim i pitanje različitih potreba roditelja za obrazovnom podrškom. Nemoguće je kreirati vrednosno neutralan obrazovni program, zbog čega nam je vrlo važno da vrednosti obrazovanja proizilaze iz potreba samih porodica, a ne iz pozicije moći onih koji program kreiraju.

Nakon faze „praznog gnezda“ sledi završetak životnog ciklusa jedne porodice u kojoj roditelji umiru. Takav položaj porodice u toj fazi životnog ciklusa čini izuzetno vulnerabilnim i decu i roditelje. Usled dečjeg napuštanja doma porodica ima mogućnost da poslednji put sagleda i unapredi dotadašnje odnose, komunikaciju, granice, odnose moći i u prilici je da sveukupan porodični život integriše u novi kvalitet i smisao. Zbog toga je važno da obrazovnom intervencijom podržimo jačanje kapaciteta i potencijala svih članova porodice te podstaknemo prevazilaženje nerazjašnjenih porodičnih obrazaca iz prethodnih faza, kako se disfunkcionalni obrasci ponašanja ne bi preneli i u poslednju fazu životnog ciklusa.

Na osnovu definisanih razvojnih zadataka porodice faze „praznog gnezda“, identifikovali smo (najmanje) četiri područja obrazovnih intervencija koje treba obuhvatiti prilikom kreiranja obrazovnog programa – sadržaji povezani sa porodičnom situacijom, partnerskom situacijom, roditeljskom situacijom i individualnom situacijom. Svako od ta četiri područja neophodno je razgraditi na manje tematske celine koje mogu varirati zavisno od kulture nekog društva i starosne kategorije kojoj pripadaju polaznici kojima je namenjen obrazovni program. Obrazovanje za život u porodici ističe kompetentnost roditelja da biraju i odlučuju šta je za njih najbolje, dok je obrazovanje samo podrška tom odlučivanju. Zato je neophodno obuhvatiti što veći dijapazon postojećih znanja o toj fazi, koja mogu biti podrška roditeljima faze „praznog gnezda“ da obavljaju svoje roditeljske, porodične i partnerske uloge, ali i da nastave da razvijaju individualne potencijale i ostvaruju svoje želje i potrebe.

Poredeći živote različitih generacija, očigledno je da su se norme, vrednosti, standardi i obrasci funkcionisanja svih generacija umnogome promenili. Promena globalnog, socijalnog, ekonomskog konteksta uticala je na to da ni mladi ni odrasli ni stari ne žive isto kao što se živelo samo jednu generaciju pre. Neke od aktuelnih društvenih promena koje značajno utiču na porodično funkcionisanje tokom životnog ciklusa i prelamaju se i u fazi „praznog gnezda“ su: niža stopa nataliteta, duži životni vek, promenjena uloga žene, porast broja vanbračne dece i vanbračnih zajednica, povećan broj samohranih roditelja koji usvajaju decu, povećan broj LGBT parova i porodica, veća fizička udaljenost između članova porodice usled učestalijih migracija, produženo radno vreme (posebno za žene), visoka stopa razvoda i češća pojava drugog ili trećeg braka, promena strukture porodice sa većim brojem samačkih domaćinstava nego ikada ranije (McGoldrick *et al.*, 2016). Danas se suočavamo sa različitim formama porodičnog i partnerskog života (istopolne zajednice i brakovi, LAT forma življenja [*living apart together*] u kojoj partneri pristaju da žive odvojeno iako su u partnerskoj relaciji, ponovno stupanje u brak i stvaranje nove porodice, kohabitacija), uveliko govorimo o „bumerang“ deci (povratak mladih svojim porodičnim domovima iako su se već osamostalili), a sve češće i o „bliskosti na daljinu“ (održavanje bliskih odnosa i emocija putem tehnologija). Međutim, i pored postojećih trendova koji pokazuju da sve veći broj porodica živi drugačije od onoga što životni ciklus opisuje, zbog potrebe otvaranja teme faze „praznog gnezda“ u domaćoj naučnoj zajednici i demografskih karakteristika srpskog društva, u ovom radu smo se fokusirali na nuklearne porodice koje su i dalje najzastupljenija forma porodičnog života kod nas. Svakako, potreba za permanentnim preispitivanjem kreiranih modela životnog ciklusa porodice, postojećih faza i razvojnih zadataka te njihove adekvatnosti ne prestaje već se uvećava, s obzirom na sve dinamičnije okruženje

u kojem današnje porodice žive. Ne umanjujući izazove sa kojima se suočavaju mladi odrasli prilikom osamostaljivanja, nismo želili da marginalizujemo pitanje dece u fazi „prazno gnezdo“. Toj značajnoj temi su posvećene sociološke komparativne i nacionalne studije. Veštačkim odvajanjem roditelja od dece nastojali smo da proniknemo u izazovnost roditelja „praznog gnezda“ i da im damo malo više pažnje u odnosu na decu, iako to nije uobičajeno. Možda je u nekim periodima istorije bilo dovoljno učenje o porodičnom, roditeljskom i partnerskom životu na osnovu znanja koja su se prenosila sa kolena na koleno, ali se čini da danas to nije slučaj. Prepuštajući roditelje da kroz život idu onako kako intuitivno najbolje znaju, bez praktične podrške na tom putu znanjima do kojih je nauka došla, uskraćujemo roditelje za razvijanje značajnih preventivnih mehanizama „protiv“ razvijanja disfunkcionalnih obrazaca ponašanja članova porodice. S druge strane, neki autori ističu da upravo roditelji srednjih i starijih godina treba da budu ciljna grupa obrazovnih programa za život u porodici jer su oni neretko nosioci odgovornosti za zadovoljenje sopstvenih potreba, potreba svoje dece, svojih roditelja, unuka, pa i cele porodice (Ballard & Morris, 2003).

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Hronika, Polemika, Kritika

Chronicle, Polemics, Review

Projekat „Korak napred“ – umrežavanje i unapređivanje profesionalnih veština andragoga u Hrvatskoj, Sloveniji i Srbiji¹

Erasmus+ projekat „Korak napred“ uspešno je završen. Koordinator projekta je bila Zajednica za razvoj ljudskih potencijala i obrazovanja odraslih Hrvatske gospodarske komore, uz podršku partnera Društva andragoga Srbije i Andragoškog društva Slovenije. Protekle dve godine smo razvijali inovacije u oblasti obrazovanja odraslih saradnjom, istraživanjem i razmenom znanja.

Jedan od ključnih rezultata projekta je *Vodič za digitalnu transformaciju u obrazovanju odraslih*, koji je privačen kao značajan resurs i podrška svima koji rade u procesima podučavanja i učenja u digitalnom okruženju. *Vodič* je nastao iz zajedničkog promišljanja, razmene iskustava, stručnosti i entuzijazma svih partnera. On je samo prvi korak ka daljem osnaživanju digitalne transformacije obrazovanja.

Kao dopuna *Vodiču* razvijene su *onlajn radionice* zasnovane na igrovnim aktivnostima koje podstiču interakciju, kreativnost, promišljanje i rešavanje problema u vezi sa izazovima učenja u digitalnom okruženju, sa kojima se učesnici susreću delujući u svojim obrazovnim sredinama. Teme radionica pokrivaju pet oblasti: uvod u digitalno obrazovanje, inovativni digitalni alati, podučavanje putem društvenih mreža, mikroučenje i otvoreni obrazovni resursi. Svi materijali su otvoreni i besplatni za celu zajednicu svih stručnjaka iz oblasti obrazovanja odraslih do kraja 2029. godine, čime se obezbeđuje dugoročna podrška profesionalnom razvoju andragoga.

Osim radionica, tokom projekta proizvedene su *podkast emisije* iz Hrvatske, Slovenije i Srbije, posvećene temama digitalne transformacije, veštačke inteli-

¹ Erasmus+ KA2 Adult education. Project number: 2022-2-HR01-KA210-ADU-000098281. Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

gencije i budućnosti i izazovima digitalizacije u obrazovanju odraslih. Cilj je da se tim resursima otvori prostor za zajednička promišljanja, razmenu ideja i kreiranje održive digitalne budućnosti obrazovanja.

Projekat je zaokružen *Festivalom znanja*, događajem na kome smo sa učesnicima proslavili postignute rezultate, delili znanja i iskustva, ali i motivisali nove koleginice i kolege da se uključe u zajedničku izgradnju održivog i inovativnog obrazovanja odraslih.

Svi resursi su dostupni na veb-stranici projekta <https://stepforward.si/>.

Nikola Koruga i Luna Milutinović

Uputstvo za autore priloga

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