

Developing Alumni Competencies: Lifelong Learning and the Challenges of Today's Workplace

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Lifelong learning is essential for the professional and personal development of alumni and for adapting to the challenges of the modern labour market. The aims of the study were to explore the lifelong learning needs of alumni and to identify the key content areas and competences they would like to develop, with a particular focus on green and digital skills and preferred lifelong learning formats and delivery modes. A qualitative study was conducted with semi-structured interviews in three focus groups ($n = 19$). The thematic analysis revealed five themes: (1) lifelong learning needs; (2) key areas of lifelong learning; (3) formats and delivery modes of lifelong learning; (4) the role of the alumni club; and (5) suggestions for improvement. The results provide a basis for the development of targeted micro-credentials to better support alumni in strengthening their skills and successfully integrating into today's labour market.

Keywords: micro-credentials, alumni club, graduates, university, green transition

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Introduction

Lifelong learning has become a fundamental imperative for both individuals and society. In an era characterised by globalisation, rapid technological transformation, and urgent sustainability challenges, the continuous acquisition of knowledge and skills is crucial to mastering the complexity of contemporary life. The emergence of artificial intelligence, the green transition

and increased digitalisation not only offer opportunities but also place growing demands on individuals to remain adaptable and professionally resilient (Gündüz, 2023; Nešić Tomašević, 2023).

As Mikulec (2023) argues, lifelong learning is not a unitary or static concept, but a multidimensional one that has evolved as part of a paradigm shift, from humanistic ideals promoting personal and democratic development to economic models focused on employability and labour market flexibility. This transition has increasingly shifted responsibility for lifelong learning to the individual rather than the state, reflecting broader neoliberal tendencies in education policy. Such a development emphasises the tension between lifelong learning as a collective right and as an individual duty.

The concept of lifelong learning is by no means new but has developed over decades and has been consistently promoted by key international institutions such as OECD (2001), UNESCO (2022) and the European Commission (2001). Initially anchored in humanistic ideals of personal development, lifelong learning has increasingly been redefined within policy frameworks as a driver of economic growth, workforce development and social inclusion (Biesta, 2006). In this evolving context, learning is increasingly regarded as an individual responsibility rather than a collective right.

This tension is also reflected in the digitalisation of everyday life, which, according to Mezgec and Lepičnik Vodopivec (2023), has profoundly changed both the private and public spheres. The authors emphasise that adult learners today need not only digital competences but also broader problem-solving skills in technology-intensive environments in order to function as active citizens and maintain their employability. In Slovenia, large parts of the working-age population still struggle with these competences, which limits both their participation in sustainable development initiatives and their integration into the digital society. In their opinion, this emphasises the urgent need for inclusive lifelong learning strategies that bridge digital divides and promote civic engagement (Mezgec & Lepičnik Vodopivec, 2023). Adding to this complexity, Javrh (2023) identifies significant regional differences in participation in lifelong learning in Slovenia. These differences are determined by factors such as socio-economic conditions, the accessibility of educational opportunities and the availability of infrastructure. Learners in more rural or developmentally disadvantaged regions often face greater barriers to participation, which further exacerbates inequalities in skills acquisition and labour market mobility.

Against this background, university graduates are a particularly relevant group for examining how lifelong learning is experienced and supported

beyond formal education. Their relationship with education does not end at graduation; rather, lifelong learning encompasses continuous upskilling and reskilling in response to changing labour market demands, technological innovation and broader societal transformations (Molnár et al., 2024). Lifelong learning includes formal, non-formal and informal modalities of learning across a range of settings (Gündüz, 2023). Recent studies confirm that structured, flexible lifelong learning initiatives, when designed with relevance and accessibility in mind, can improve career adaptability and progression (Faupel-Badger et al., 2015). Key factors for success include mentorship, industry relevance, and the recognition of acquired competencies through validated learning outcomes (Bjursell & Florin Sädbom, 2018; Wallo et al., 2020).

Higher education institutions have a crucial role to play in embedding lifelong learning within their institutional mission. No longer limited to their traditional function of preparing young students for first-time entry into the labour market, universities are increasingly expected to support alumni in their continued personal and professional development throughout life. This requires a shift towards more inclusive and flexible educational models, modular formats, and stackable credentials-particularly in response to the demand for just-in-time, skills-based learning that aligns with rapidly changing workforce expectations (Boyadjieva & Orr, 2022).

One response to this shift is the growing adoption of micro-credentials. These short, competency-based learning units offer a targeted and verifiable way for individuals to gain new skills and demonstrate them to employers. For higher education institutions, micro-credentials represent a means to bridge formal and informal learning, while expanding access to education for diverse learner groups, including alumni. Supported by European initiatives such as DigComp and GreenComp, micro-credentials are increasingly recognised as tools to address skills gaps in digital and sustainability domains and to reinforce employability in the context of the green and digital transitions (European Commission, 2022; Vuorikari et al., 2022).

As a result, universities are uniquely positioned to lead the integration of micro-credentials into wider lifelong learning ecosystems, by leveraging their academic credibility, engaging with employers, and developing learner-centred, stackable qualifications that support upskilling, career transitions and personal growth (Ruddy & Ponte, 2019). The aim of this study was to explore alumni perceptions of lifelong learning needs after graduation, with a focus on their interest in developing green and digital skills. It also aimed to identify the preferred formats for continuing education and

assess how the alumni association and university can better support lifelong learning opportunities through flexible and targeted programmes, such as micro-credentials.

Methods

This study utilised a generic qualitative methodology, a flexible and pragmatic approach suitable for exploring participants' perspectives in everyday life (Hall & Liebenberg, 2024; Sandelowski, 2000). This approach, rooted in naturalistic enquiry, allowed the research team to stay close to the data and provide a rich, low-interference summary of alumni views on lifelong learning and the development of green and digital competencies. The approach was chosen because it lends itself to applied research contexts where actionable insights are needed, particularly in higher education and continuing professional development (Colorafi & Evans, 2016; Villamin et al., 2024). Semi-structured group interviews were conducted to gather participants' experiences, and the data was analysed using thematic analysis. The study followed the COREQ (Consolidated Criteria for Reporting Qualitative Research) checklist to ensure transparency, rigour and completeness in the reporting of qualitative methods and results (Tong et al., 2007).

Sample and Setting

The sample consisted of 19 alumni who had completed their studies in the fields of education, management and health sciences at the University of Primorska. The participants were divided into three groups according to their field of study. The group of alumni from education study programmes consisted of seven participants, the group of management graduates consisted of five participants and the group of alumni from health sciences consisted of seven participants.

The sample comprised 12 women and 7 men. The average age of the participants was 29 years and ranged from 22 to 53 years. The youngest participant had just graduated from university, while the oldest participant had over three decades of professional experience. The average length of work experience of the participants was 5.3 years and ranged from no work experience to 26 years. Seventeen participants had completed a first-degree programme at the University of Primorska, while two participants had completed a second-degree programme. Ten participants had continued their education in the second cycle after completing their studies in the first cycle, and one participant completed all three cycles of higher education at the University of Primorska. In terms of fields of employment, five participants

worked in pedagogical professions, five in management and leadership positions and five in healthcare and related fields.

The word similarity between different focus group transcripts was assessed using Pearson's correlation coefficient. The results indicated a high degree of word similarity between some transcripts, with Pearson's correlation coefficients ranging from 0.810 to 0.936, reflecting strong positive relationships in the word frequency patterns across the compared transcripts.

Data Collection

The data was collected in early 2024 through three groups with alumni of the University of Primorska.¹ Each group consisted of five to seven participants, consistent with methodological guidelines for maintaining a manageable group dynamic while fostering rich discussion (Krueger & Casey, 2015). The groups were conducted online via Zoom, which allowed for flexible participation across different geographic locations and ensured accessibility for all invited alumni.

Participants were recruited with the support of the alumni coordinators. Invitations were sent to potential participants from a range of degree programmes and professional fields to ensure diversity of experience and opinion. Prior to the sessions, all participants were emailed an information sheet explaining the purpose of the study, the voluntary nature of participation and data protection measures. Written informed consent was obtained electronically. Participants also completed a short demographic questionnaire in which they provided information on their age, gender, highest level of education, field of work and time since graduation.

Each group followed a structured topic guide developed by the research team, which explored alumni perspectives on lifelong learning with a particular focus on digital and green competences. The same core questions were used in all sessions, with flexibility to ask follow-up questions depending on the group dynamics. Each group lasted approximately 60 minutes and was facilitated by a member of the research team.

¹ This research was conducted as part of the Green, Digital & Inclusive University of Primorska (GDI UP) project, which is one of three pilot initiatives to support the curricular renewal of professional higher education programmes at the University of Primorska. The project contributes to the broader national reform for a green, digital and resilient transition to society 5.0. The GDI UP project focuses on equipping students with the competences required for the green and digital transition in line with the following principles: providing a high-quality study experience, offering flexible study pathways and a responsive learning environment, aligning educational practises with lifelong learning concepts and ensuring equal opportunities and gender balance in all areas of study.

All Zoom sessions were recorded (with the consent of the participants) and transcribed verbatim. No field notes were taken during the live sessions to maintain the flow of discussion. However, reflective notes were taken in some cases and used later to support thematic analysis.

Data Analysis

To identify patterns and meanings within the data, a thematic analysis was carried out according to Braun and Clarke's (2006) six-phase framework. The analysis was conducted in Slovenian, and selected illustrative quotes were translated into English for reporting purposes. The process was supported by the qualitative data analysis software NVivo, which facilitated coding, organisation and thematic mapping. The analysis involved familiarisation with the transcripts, generation of initial codes, development of themes, review and refinement of themes and interpretation in line with the study aim (Braun & Clarke, 2006; Kiger & Varpio, 2020). An inductive approach was adopted that remained close to the participants' perspectives and provided a rich, descriptive account of the alumni's experiences and perceptions of lifelong learning (Sandelowski, 2000).

Trustworthiness

To ensure the trustworthiness of the study, several strategies were employed throughout the research process, focusing particularly on credibility, confirmability, and reflexivity. First, the research process, from data collection to analysis, was meticulously documented to establish an audit trail, enhancing transparency and allowing readers to assess the dependability of the findings (Elo et al., 2014; Lincoln & Guba, 1985). During data analysis, collegial debriefings were held to discuss emerging codes and themes, aiming to reduce researcher bias and enhance confirmability (Ahmed, 2024; Lincoln & Guba, 1985). The thematic analysis followed the six-step framework proposed by Braun and Clarke (2006), and data saturation was monitored to ensure the richness and completeness of the identified themes (Kiger & Varpio, 2020). Reflexivity was maintained throughout the study via researcher notes and critical self-reflection (Villamin et al., 2024). Informal member checking was conducted during interviews by summarising and verifying participants' responses to strengthen credibility (Elo et al., 2014). Triangulation was achieved by involving multiple researchers in the coding and interpretation of the data, further supporting the confirmability of the results (Ahmed, 2024). Finally, thick descriptions of the research context and participant characteristics were provided to enable readers to assess the potential transferability of the findings to other contexts (Elo et al., 2014; Lincoln & Guba, 1985).

Ethical Considerations

The study adhered to established ethical standards for qualitative research, particularly in relation to informed consent, confidentiality, non-maleficence and the right to opt out (Nii Laryeafio & Ogbewe, 2023). Before data collection began, all participants were informed in detail about the purpose of the study, the procedures involved and their rights as participants. Written informed consent was obtained from each participant. All identifiable information provided by participants, including names or institutions, was anonymised during data processing and reporting to ensure confidentiality and protect participants' privacy. Participants were informed that their decision to participate or not would not affect them in any way and that they could skip any question they did not wish to answer. The researchers were aware of their ethical responsibility to create a safe and respectful interview environment that encouraged honest and voluntary participation.

Findings

Through thematic analysis, five overarching themes were identified: (1) Alumni needs for lifelong learning, (2) Key areas of lifelong learning, (3) Formats and delivery modes of lifelong learning, (4) The role of the Alumni Club in lifelong learning, and (5) Suggestions for improving lifelong learning (Table 1).

Alumni Needs for Lifelong Learning

The participants emphasised that they clearly recognised the importance of lifelong learning for both their personal and professional development. Their motivation to continue their education was based on a positive attitude towards continuous learning, a desire for personal and professional growth and the need to develop both professional and social skills. Many participants reported that they proactively sought out learning opportunities, while some stated that employers often acted as initiators for upskilling. The prevailing view among participants was that learning should be both self-directed and supported by the workplace. As one participant said:

I think it's good that everyone has the desire to learn continuously and continue their education outside of formal education. [FG_Management]

The types and forms of learning needs varied. Participants mentioned mandatory on-the-job training but also emphasised their preference for independently selecting learning topics that aligned with their interests and career aspirations. They valued the practical, hands-on training provided in

Table 1 Identified Themes and Sub-themes

Themes	Sub-themes	Codes
Alumni needs for lifelong learning	Motivation for learning	positive attitude towards lifelong learning, personal and professional growth as a driver for education, development of professional and soft skills, self-initiated pursuit of learning opportunities, employers as initiators of training
	Types and forms of learning needs	mandatory training at the workplace, independent choice of learning content, various forms of education – seminars, conferences, workshops, need for more practical training, participation in international education programmes, monitoring legislative changes
	Barriers to accessing education	financial constraints related to paid training, time limitations due to work obligations, lack of employer support for education, limited opportunities for networking and peer connection, difficulties accessing high-quality content and lecturers
Key areas of lifelong learning	Professional competencies	specific knowledge and skills related to the profession, adapting teaching methods to different learner/patient needs, individualised work with students and patients, data management and recording in digital systems, crisis management and self-defence
	Soft skills and personal development	communication skills, teamwork and social competencies, negotiation and conflict resolution skills, burnout prevention and stress management, time management and workload balancing
	Digital competencies	advanced use of Excel and data analysis, basics of programming and coding, use of artificial intelligence in professional contexts, creation of digital learning content, digital security and data protection
	Green competencies and sustainable development	sustainability in professional environments, ecological awareness in the workplace, resource-saving and energy efficiency, legislation and regulations related to sustainability, integrating technology and green policies.

Continued on the following page

seminars, conferences and workshops, and expressed interest in participating in international education programmes. As one participant commented:

It would be good if a student could choose an internship where they could stay longer, gain more practical experience and be better prepared for the labour market. [FG_Health Sciences]

Several participants emphasised the need to keep up to date with legisla-

Table 1 *Continued from the previous page*

Themes	Sub-themes	Codes
Formats and delivery modes of lifelong learning	Modes of delivery	preference for practical workshops over theoretical sessions, emphasis on interactive learning methods, availability of recorded sessions for later access, development of e-learning and digital platforms
	Organisational aspects	hybrid approaches (combining online and face-to-face meetings), weekend learning as a preferred option, shorter educational modules delivered over a longer period, adaptation of educational formats to employees' schedules
The role of the Alumni Club in lifelong learning	Connecting alumni and networking	alumni club as a meeting point for alumni and employers, organisation of professional evenings and panels, mentorship and advisory opportunities for younger generations, strengthening university affiliation after graduation
	Content support for education	alumni as a source of feedback for improving study programmes, development of tailored educational programmes, promotion of innovation and research projects, alumni club as a central hub for lifelong learning initiatives
Suggestions for improving lifelong learning	Increasing accessibility of learning opportunities	more funded and free education programmes, greater promotion of available educational opportunities, inclusion of practitioners and industry experts, increased flexibility in participation requirements
	Tailoring content to alumni needs	development of micro-credentials for specific skills, introduction of individualised learning pathways, interdisciplinary approaches to education, stronger connection between education and labour market demands

tive changes relevant to their professions. In this context, one participant emphasised:

Every year there are changes in regulations and laws that impact how we work. We need continuous updates to stay compliant. [FG_Management]

However, notable barriers to accessing education were also identified. Participants reported financial constraints in relation to paid training, time constraints due to professional commitments, lack of employer support for training, limited networking opportunities and difficulties in accessing quality educational content and lecturers. These challenges, participants noted, often limited their ability to fully engage in lifelong learning initiatives.

Key Areas of Lifelong Learning

Participants identified several key areas in which they felt they needed to strengthen or expand their competences to remain relevant in their fields. These areas included professional competences, soft skills, digital competences and green competences related to sustainable development. The need to keep up with changes in professional knowledge and practice was a consistent theme across all three focus groups.

In terms of professional competences, participants highlighted the importance of specific knowledge and skills directly related to their professions, such as adapting teaching or care methods to individual needs, improving clinical or technical skills and managing data in digital systems. As one participant explained:

It would be good if there was more training in relation to working with people with dementia, not only for patients but also for their relatives. [FG_Health Sciences]

The development of soft skills was also emphasised many times. Participants pointed out that communication skills, teamwork, conflict resolution and stress management are crucial for effective performance in a professional environment. Many noted that these skills are often overlooked in formal training but are crucial in practise. As one participant described:

Soft skills, especially communication and leadership, are most important for working with people and for project management. [FG_Management]

In addition to professional and social skills, digital skills were also prioritised. Participants expressed a desire to improve their skills in the areas of data management, advanced use of Excel, digital content creation and safe use of digital technologies. The need for greater confidence and competence in using digital tools was particularly pronounced among participants from the management and healthcare sectors. One participant from the education sector emphasised this:

We would need more practical knowledge about how to monitor our work digitally and use data collection in daily practise. [FG_Education]

Furthermore, participants recognised the growing importance of green skills and sustainable practises. They indicated that knowledge about sus-

tainable development, energy efficiency and ecological awareness should be more integrated into their continuing education, as these aspects are becoming increasingly important in all sectors. As one participant commented:

There is a lot of innovation in the green sector and we need to constantly update our knowledge. [FG_Management]

Although participants in all focus groups commonly emphasised the importance of professional, soft, digital and green competences, a closer examination reveals faculty-specific differences in how these needs are understood and prioritised. As the groups included graduates from the Faculties of Health Sciences, Education and Management, the following section analyses how the professional contexts shaped the different expectations of lifelong learning and continuing education. Participants from health-related degree programmes emphasised the need to strengthen clinical and patient-centred skills.

Key areas included: palliative care; dementia care (including support for relatives); physiotherapy in women's health; health communication and patient education; digital literacy and use of digital tools in practice. Education faculty graduates pointed to several critical areas where additional training is needed to meet the demands of different learning environments: parental cooperation; inclusive didactics for pupils with special needs; stress management and emotional regulation; curriculum implementation and assessment strategies; basic psychology and crisis management; bureaucracy and administrative skills. Management and business participants expressed diverse and evolving needs related to a dynamic professional environment: communication, leadership, and soft skills; digital competences, including AI and data management; green skills and sustainability literacy; entrepreneurship and legal frameworks; ethics and professional integrity; sector-specific content (e.g. economic crime, maritime trade).

Formats and Delivery Modes of Lifelong Learning

Participants discussed their preferences regarding the formats and delivery modes of lifelong learning programmes and emphasised the need for flexibility, practicality and accessibility. In particular, they emphasised the value of practical workshops, interactive learning methods, such as group discussions, simulations and case-based activities, and digital learning options that enable easier integration into stressful working lives. Many participants favoured practical, hands-on learning over purely theoretical events.

They appreciated training formats that allow for active engagement, simulations and direct application of knowledge. As one participant commented:

It should be a concrete experience where participants are involved in the learning process and not just reading from slides. [Note: PowerPoint presentation; FG_Health Sciences]

When discussing the mode of delivery, participants generally favoured a hybrid model combining online and face-to-face formats. Many pointed out that while the theoretical content could be taught effectively online, the practical skills would still need to be learnt face-to-face. The availability of recorded sessions was seen as highly beneficial, especially for those who must balance work and other commitments. As one participant said:

A hybrid format would be best, online for the theoretical parts, but live for anything practical. [FG_Management]

Participants also discussed organisational aspects of training delivery. Weekend workshops proved to be the preferred option, especially on Saturdays, to minimise conflicts with work commitments. Shorter, intensive training sessions over a few days were seen as more effective than weekly training sessions spread over a long period of time. As one participant reflected:

It is easier to take away more if the training is compressed into one or two days than if it is spread over weeks. [FG_Education]

Flexibility and accessibility were recurring themes. Participants emphasised that online or hybrid options make it easier for those who live outside major cities or have irregular working hours to participate. At the same time, they pointed out that where physical attendance is required, particularly for skills-based or technical training, this needs to be carefully planned and communicated in advance.

The Role of the Alumni Club in Lifelong Learning

The participants saw the Alumni Club as much more than a symbolic association. They described it as a vibrant, dynamic community that can contribute significantly to graduates' continuous learning, career development and professional identity after graduation. Participants further reflected on the potential role of the Alumni Club in supporting lifelong learning after graduation. In all focus groups, participants saw the Alumni Club as an important

platform for bringing graduates into contact with each other, promoting professional networking and facilitating access to further educational opportunities.

Networking was seen as one of the key strengths of the Alumni Club. Participants valued the opportunity to keep in touch with former classmates and build new professional relationships, particularly through themed events, discussion panels and mentoring activities. As one participant noted:

The Alumni Club can serve as a meeting place for alumni and employers where experiences can be shared and knowledge exchanged. [FG_Health Sciences]

In addition to promoting networking, participants suggested that the Alumni Club could play an important role in supporting the content of the programme. They suggested that alumni feedback could be systematically collected to improve study programmes and develop tailored educational offers that meet the actual needs of the labour market. As one participant explained:

The Alumni Club should be a place where a graduate can turn to for further education and professional development [FG_Management]

Participants also emphasised the importance of maintaining a strong sense of belonging to their alma mater. Several participants pointed out that a positive, active alumni community would enhance a sense of pride in belonging to their university, which could have long-term benefits for both the individual and the institution. As one participant said:

It is important to create a community that alumni are proud of and want to stay connected to. [FG_Education]

In addition, participants emphasised that the Alumni Club could foster a culture of lifelong learning by actively promoting opportunities and motivating graduates to further develop their skills. As one participant said:

The Alumni Club could help us maintain the habit of learning together, sharing experiences and broadening horizons. [FG_Management]

Suggestions for Improving Lifelong Learning

The participants made several suggestions to improve the accessibility, relevance and effectiveness of lifelong learning programmes for alumni. Two

overarching needs emerged: increasing the availability and flexibility of learning opportunities and better matching educational content to the actual needs of graduates and the labour market.

Many participants expressed a desire for better accessibility, including more funded and free learning opportunities. Financial barriers were often cited as a major obstacle to participation in further education programmes. Flexibility in the organisation of educational activities, such as offering hybrid formats, online access and scheduling sessions at weekends, was also repeatedly emphasised. As one participant suggested:

It would be helpful if the content could be recorded and made available later so that more people could benefit from it despite busy schedules.
[FG_Health Sciences]

Participants also stressed the importance of better aligning the content of lifelong learning programmes with the real needs of alumni. They emphasised that continuing training should be designed to match market trends, new technologies and the specific professional contexts in which alumni work. As one participant emphasised:

There is a need for more focused, practical courses – something that really deals with what we face in our work, not just theoretical overviews.
[FG_Management]

The development of micro-credits and modular learning pathways was seen as a particularly promising strategy. Participants appreciated the idea of short, subject-specific programmes that would allow them to build their skills gradually and flexibly according to their evolving needs. As one participant said:

Micro-credentials for specific skills would be very useful, especially if they could be combined into larger qualifications over time. [FG_Education]

Finally, participants argued in favour of greater interdisciplinarity in educational offerings and suggested linking areas such as digital skills, green skills, entrepreneurship and communication. As one participant said:

It is important to integrate different areas, digital, green, management, because real work situations require a combination of skills. [FG_Management].

Discussion

The findings of this study provide important insights into the lifelong learning needs of alumni and fit well with the evolving discourse on the role of higher education institutions in supporting professional and personal development after graduation (Gish-Lieberman et al., 2021; Varadarajan et al., 2023). By identifying alumni motives, barriers, preferred learning formats and content areas, the study wanted to provide information for more responsive educational provision that reflects real-world needs.

Participants consistently emphasised the importance of continuous learning for both professional and personal development, mirroring previous studies highlighting the increasing need for upskilling and reskilling in a rapidly changing labour market (Ahsan et al., 2023; Brown et al., 2021). Alumni expressed a strong interest in developing not only vocational skills, but also digital and green skills, emphasising the importance of integrating frameworks such as DigComp (Vuorikari et al., 2022) and GreenComp (European Commission, 2022) into lifelong learning initiatives. In addition, several participants stressed the need for interdisciplinary approaches that combine areas such as digital literacy, environmental sustainability and leadership skills to better meet the complex demands of the modern workplace.

Particularly noteworthy is alumni interest in micro-credentials, which aligns with the emerging international consensus that micro-credentials offer a flexible, modular and accessible pathway to acquiring and demonstrating specific competences (Ahsan et al., 2023; European Commission, 2020). Participants appreciated the potential of micro-credentials to support progressive professional development, facilitate career transitions and fill specific skills gaps without the need for full degree programmes. This finding reflects a broader trend that recognises micro-credentials as an innovative response to the demand for more flexible and personalised forms of education (Fabjan et al., 2024; Gish-Lieberman et al., 2021; Varadarajan et al., 2023). Moreover, alumni expressed a preference for flexible learning formats, such as hybrid models, online sessions, weekend workshops and shorter, intensive modules that fit into demanding professional schedules.

Another important contribution of the study is that it shows a positive change in the perception of the role of the Alumni Club. Alumni now increasingly see the club not just as a social network, but as a focal point for professional development, networking, mentoring and feedback for curriculum innovation. This increased role aligns with other authors' suggestions that lifelong learning ecosystems should utilise alumni networks to promote

ongoing engagement and skills development (European Commission, 2001, 2020; Fabjan et al., 2024).

Despite these promising results, some challenges remain. Alumni cited financial and time constraints as major barriers to participation in lifelong learning activities, confirming previous research on the structural barriers to participation in adult learning (Brown et al., 2021; Gish-Lieberman et al., 2021). In addition, access to high-quality, customised content and practice-oriented learning experiences remains a key expectation.

Based on the results, several directions for future research are derived from this study. Further studies could investigate how micro-credentials can be systematically integrated into alumni services and continuing education programmes in various fields. Research is also needed on how partnerships between universities and employers can strengthen the recognition and value of micro-credentials in different sectors (Fabjan et al., 2024; Perkins & Pryor, 2025; Varadarajan et al., 2023). Longitudinal studies could examine the long-term impact of lifelong learning initiatives based on micro-credentials on alumni careers. In addition, more in-depth qualitative research could examine how interdisciplinary learning pathways improve alumni satisfaction and career readiness. Finally, empirical studies should evaluate the effectiveness of flexible models, such as hybrid and modular formats, in promoting alumni engagement in lifelong learning.

While this study provides important insights into the lifelong learning needs of graduates, it also has some limitations that need to be considered. Firstly, the use of a purposive sample from three disciplines at a single institution limits transferability to a broader base. Although qualitative research does not aim for statistical generalisation (Polit & Tatano Beck, 2018), transferability depends on dense descriptions that have been carefully documented to support informed reader judgements (Smith, 2018). Secondly, although thematic saturation was achieved across the three focus groups, the voluntary nature of participation may have introduced selection bias, as more engaged alumni were likely to self-select into the study. Nonetheless, the targeted selection and detailed documentation of participant characteristics support analytical generalisation and contextual transferability (Polit & Tatano Beck, 2018). Finally, as with all qualitative research, the findings represent interpretations that are situated within a specific cultural and institutional context. Readers are therefore encouraged to consider the results as analogously transferable rather than universally generalisable (Polit & Tatano Beck, 2018; Smith, 2018).

Despite certain limitations, this study emphasises the critical role of higher

education institutions in supporting the evolving learning needs of alumni through flexible, relevant and accessible lifelong learning opportunities. Micro-credentials, alumni engagement and strong institutional support structures emerge as key elements in building a sustainable, forward-looking approach to alumni development.

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Razvoj kompetenc alumnov: vseživljenjsko učenje in izzivi sodobnega delovnega okolja

Vseživljenjsko učenje je ključno za profesionalni in osebni razvoj alumnov ter prilagajanje izzivom sodobnega trga dela. Raziskali smo potrebe alumnov po vseživljenjskem učenju in identificirali ključna vsebinska področja ter kompetence, ki jih želijo razvijati, s posebnim poudarkom na zelenih in digitalnih kompetencah ter načinih, oblikah in organizacijski strukturi vseživljenjskega učenja. Izvedena je bila kvalitativna raziskava s pomočjo polstrukturiranih intervjujev v treh fokusnih skupinah ($n = 19$). S tematsko analizo smo identificirali pet tem: (1) potrebe po vseživljenjskem učenju; (2) ključna vsebinska področja vseživljenjskega učenja; (3) načini, oblike in organizacijska struktura vse-

življenjskega učenja; (4) vloga alumni kluba; (5) predlogi za izboljšave. Rezultati ponujajo temelje za razvoj ciljno usmerjenih mikrodokazil, ki bodo podpirala alumne pri krepitvi kompetenc in uspešnem vključevanju v sodobno delovno okolje.

Ključne besede: mikrodokazila, alumni klub, diplomanti, univerza, zeleni prehod