

Investment in human capital: the importance of training and employee development in modern business

Ulaganje u ljudski kapital: značaj obuka i razvoja zaposlenih u savremenom poslovanju

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Article info

Original scientific paper

Received:

5 May, 2025

Revised:

29 December, 2025

23 January, 2026

Accepted:

2 October, 2026

Published online: 19 October, 2026

DOI:

<https://doi.org/10.71159/bizinfo260028J>

UDC/ UDK:

Abstract

Investing in human capital represents a key factor in maintaining a competitive advantage in modern business. Continuous employee training and professional development contribute to improved work performance, increased motivation, greater job satisfaction, and better adaptation to dynamic changes in the business environment. This paper examines the importance of employee training and development in companies in the Republic of Serbia, focusing on professional development and work efficiency. The research was conducted on a sample of 150 respondents employed in six companies operating in the transport, insurance, and technical sectors. Descriptive statistics and Pearson's correlation coefficient were used to analyse the data. The findings highlight the need for greater company involvement in employee training and development to respond more effectively to the challenges of modern business. The results contribute to a better understanding of the role of employee training and development in the strategic management of human capital.

Keywords: human capital, employee training, professional development, human resource management

Sažetak

Ulaganje u ljudski kapital predstavlja ključni faktor održavanja konkurentne prednosti u savremenom poslovanju. Kontinuirane obuke i profesionalni razvoj zaposlenih doprinose unapređenju radnog učinka, povećanju motivacije, većem zadovoljstvu poslom i boljem prilagođavanju dinamičnim promenama u poslovnom okruženju. U radu se ispituje značaj obuka i razvoja zaposlenih u preduzećima u Republici Srbiji, sa posebnim osvrtom na profesionalni razvoj i radnu efikasnost. Istraživanje je sprovedeno na uzorku od 150 ispitanika zaposlenih u šest preduzeća koja posluju u sektorima saobraćaja, osiguranja i tehničkih delatnosti. Za analizu podataka korišćene su deskriptivna statistika i Pirsonov koeficijent korelacije. Rezultati ukazuju na potrebu za većim angažovanjem preduzeća u oblasti obuka i razvoja zaposlenih kako bi se efikasnije odgovorilo na izazove savremenog poslovanja. Dobijeni nalazi doprinose boljem razumevanju uloge obuka i profesionalnog razvoja zaposlenih u strateškom upravljanju ljudskim kapitalom.

Ključne reči: ljudski kapital, obuke zaposlenih, profesionalni razvoj, upravljanje ljudskim resursima

1. Introduction

“Education is the most powerful weapon which you can use to change the world.” Nelson Mandela

In the third millennium, economic and social development increasingly depends on human capital, which has become one of the most valuable resources for companies. With rapid technological advancements, globalisation, and

changes in business operations, human capital encompasses not only employees' accumulated knowledge and skills but also their adaptability, creativity, capacity for innovation, and ability to collaborate. The importance of investing in human capital has been recognised across economies, particularly in relation to the application of scientific advances in production processes, the development of new technologies, improvements in management practices, and the

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organisation of production (Cvetanović & Despotović, 2014).

Human capital is an economic concept referring to the knowledge, skills, competencies, and other attributes possessed by individuals that are essential for performing economic activities (Cvetanović & Despotović, 2014). Companies that effectively manage their human capital and encourage continuous learning are better positioned to maintain a competitive advantage. In the modern business environment, the importance of human capital is also reflected in the transition from traditional work arrangements towards more flexible, digital, and multidisciplinary forms of employment.

Despite technological progress, human capital remains a key factor in business success, as innovation, critical thinking, and emotional intelligence cannot be entirely replaced by technology. Managing human capital therefore requires a comprehensive approach that encompasses not only the acquisition and development of skills but also the creation of a supportive working environment that encourages innovation, creativity, and continuous learning. Hybrid working models, the increasing use of artificial intelligence, and the automation of certain tasks present new challenges for human capital management, requiring companies to develop appropriate strategies for retaining and motivating employees.

Organisational culture also plays an important role in retaining skilled employees, who increasingly value flexibility, autonomy, and opportunities for professional development. Successful modern companies recognise human capital as a dynamic resource whose value depends on continuous investment in knowledge and the ability to create an environment in which employees can realise their potential. Although technology continues to transform business operations, employees' knowledge, skills, and innovative capabilities remain essential to achieving long-term organisational success.

As digital transformation reshapes traditional business models, companies need to invest in employee training to remain competitive. The importance of training and professional development can be considered from both individual and organisational perspectives. For employees, training and development contribute to career advancement, improved working conditions, greater job satisfaction, and increased motivation (Aslichah et al., 2024). From the organisational perspective, investment in employee training and development can contribute to cost reduction, innovation, and competitive advantage (Nadoveza, 2021).

These benefits highlight the need for continuous investment in employee training and development, supported by individual initiative and a willingness to acquire new knowledge (Stoffers et al., 2021). The role of training has evolved considerably over time. Whereas traditional training primarily focused on developing technical skills associated with operating equipment, contemporary training encompasses a broader range of

competencies required to achieve organisational objectives. Training now plays an important role in improving organisational performance by equipping employees with the knowledge and skills needed to support strategic goals and enhance operational efficiency (Nadoveza, 2021).

The aim of this study is to examine the importance of employee training and development in companies in the Republic of Serbia, with particular emphasis on different forms of professional development and the relationships between employees' demographic characteristics, including gender, age, and educational attainment, and their participation in training activities. The study seeks to identify patterns in employee education and professional development and to provide insights into their relationship with professional competencies and work efficiency across companies operating in different sectors and ownership structures.

2. Literature review

Technological development has significantly increased the importance of intangible resources in modern economies (Kovačević & Stanisavljev, 2021). Human capital is one of the most important intangible resources, encompassing employees' knowledge, professional skills, experience, and abilities (Dukić et al., 2023). Companies with qualified and motivated employees are better positioned to develop innovative products and services that meet customer needs (Urošević et al., 2024). Mankju (2013) emphasises that human capital, particularly knowledge and skills, can be enhanced through education, experience, and training. Similarly, Goldin (2016) highlights the importance of investing in education, health, and training to improve individual productivity. Pavlović and Račić (2012) define human capital as a broad range of knowledge, abilities, skills, and experience possessed by managers and employees, which enable organisations to provide high-quality products and services to their customers.

According to Sodikjonov (2020), human capital has several fundamental characteristics. It is inseparable from its owner and encompasses both inherited attributes and competencies acquired through education and social interaction. Like other forms of capital, it contributes to production processes and economic efficiency, while individuals can use their knowledge and skills to generate income, thereby justifying continued investment in education and training. Forrester et al. (2016) explain that human capital is developed through investment in education, health, entrepreneurial skills, access to information, economic freedom, security, culture, art, and science. Among these factors, education represents one of the principal mechanisms for developing human capital. Both formal and informal education contribute to the acquisition of knowledge and skills required for effective professional performance.

Kovačević and Stanisavljev (2021) argue that individuals who invest in informal education, including professional training and specialised courses, may gain an advantage

over those who rely exclusively on formal qualifications. In the context of technological progress, informal education has become particularly important for companies seeking sustainable growth and long-term competitiveness. According to Šormaz (2020), the principal forms of informal education include courses, seminars, lectures, conferences, workshops, training programmes, and volunteering (pp. 43–44). Nadoveza (2021) additionally identifies practical training programmes and knowledge development programmes as important forms of informal education (p. 86). Continuous education and training are essential for developing and maintaining a competitive advantage. A lack of alignment between employees' educational backgrounds and workplace training requirements may contribute to dissatisfaction and reduced productivity (Penjišević et al., 2024). Employee training should therefore support organisational innovation, foster a culture of continuous improvement, and encourage creative problem-solving.

Aslichah et al. (2024) emphasise that employees' knowledge and skills contribute to business innovation by enabling organisations to identify opportunities for improved performance. Slavković and Slavković (2019) define employee training as a process through which individuals acquire specific knowledge, skills, abilities, attitudes, and behaviours to improve job performance. Similarly, Nadoveza (2021) describes training as a planned organisational effort to enhance employee performance through the development of job-related knowledge, abilities, skills, and behaviours, emphasising its immediate relevance to current work tasks (p. 87). Yimam (2022) distinguishes between two theoretical approaches to employee training: the human capital-based approach and the technology-based approach. From a human capital perspective, investment in training is justified when the expected benefits of increased employee productivity exceed the associated costs. The technology-based approach, on the other hand, views training as a response to technological advancements and changes in work organisation that require employees to acquire new skills and competencies.

Aslichah et al. (2024) further emphasise that effective training supports the acquisition of qualifications, improves professional competencies, and creates opportunities for career development. Ilić et al. (2019) add that training programmes aligned with organisational strategic objectives contribute to their successful implementation and help establish working conditions that support continuous learning.

Nassazi (2013) identifies several benefits of employee training, including increased morale, confidence, and motivation, as well as reduced production risks and associated costs. Training can also strengthen employees' sense of job security, reduce absenteeism, encourage their involvement in organisational change, and improve their ability to adapt to new circumstances. Furthermore, it may create opportunities for salary increases and career advancement while contributing to the overall quality of human resources within an organisation.

Although the terms training and education are often used interchangeably, Nadoveza (2021) distinguishes between them. Training focuses on practising specific, interconnected tasks and developing the practical skills required for everyday work. It involves acquiring job-related knowledge and skills and adapting work practices to established rules, procedures, and standards.

Vujović et al. (2014) also distinguish between training and employee education, viewing education as a broader concept that provides benefits beyond the development of skills needed to operate equipment. Similarly, Slavković and Slavković (2019) emphasise the distinction between employee training and development. While training enables employees to perform their current tasks more effectively, development prepares them for future responsibilities and professional challenges. Vujović et al. (2014) further explain that employee development involves preparing individuals for future tasks and potential positions through formal education programmes, assessments of development potential, work experience, and social interaction. According to these authors, training is generally intended for all employees, whereas development activities are primarily directed towards those holding managerial positions. Nassazi (2013) identifies two principal approaches to employee training: on-the-job and off-the-job training. On-the-job training encompasses job rotation, mentoring, skills development, transfers, and orientation programmes, while off-the-job training includes conferences, lectures, formal courses, development programmes, role-playing exercises, and transactional training.

Mathis and Jackson (2007) identify four fundamental stages of effective employee training and development: assessing training needs, designing training programmes, implementing training activities, and evaluating their outcomes. Training evaluation is particularly important for determining whether the intended objectives have been achieved and whether the acquired knowledge and skills contribute to improved employee performance. In this context, Donald Kirkpatrick developed a model for evaluating training effectiveness at four levels: participants' reactions and satisfaction, learning outcomes reflected in changes in knowledge, skills, and attitudes, behavioural changes observed in the workplace, and organisational results (Urbancová et al., 2021). This approach provides a framework for assessing training outcomes beyond immediate participant satisfaction and considering their broader implications for organisational performance.

3. Research methodology

The research was conducted in April 2025 in the Republic of Serbia to examine the role of employee training and development in modern business. A questionnaire was developed to address the main aspects of the research and collect data relevant to its objectives. The questionnaire was designed by the authors specifically for this study rather than adopted from an existing research instrument. It consisted of three sections covering respondents'

sociodemographic characteristics, formal education, and informal education and professional development.

The first section collected information on respondents' gender, age, educational attainment, work experience, and employment status. These data provided a basis for describing the sample and examining potential relationships between demographic characteristics and participation in professional development activities. The second section focused on formal education, including educational attainment, fields of specialisation, further education, and perceptions of the relevance of formal qualifications to contemporary labour market requirements. Particular attention was paid to the relationship between educational attainment and employment, as well as the role of academic education in developing specific professional skills. The third section examined informal education, including participation in additional training, courses, seminars, online programmes, and other forms of independent learning. It also addressed the role of informal learning in developing competencies such as digital literacy, critical thinking, entrepreneurial skills, and adaptability to new technologies.

The study involved 150 respondents from six companies operating in the Republic of Serbia, comprising three privately owned and three state-owned companies. The companies represented different sectors, including technical activities, transport, logistics, and insurance. According to the sampling procedure described by the authors, respondents were selected using a random sampling method, with attention to gender, age, and educational attainment. The research examined various forms of employee training and development, including internal professional training, professional consultations, general training, and certification programmes. Particular attention was paid to differences in participation according to respondents' demographic characteristics, the sectors in which they worked, and company ownership structures. The study also examined respondents' perceptions of the contribution of training and professional development to their competencies and work efficiency. These outcomes were considered primarily in relation to employees' professional development and ability to perform work-related tasks, rather than as direct measures of companies' financial or operational performance. This distinction is important for interpreting the findings within the scope of the research.

The collected data were analysed using quantitative statistical methods in IBM SPSS Statistics, version 26. Descriptive statistics were used to summarise respondents' characteristics and their participation in different forms of education and training, while Pearson's correlation coefficient was applied to examine relationships between selected variables. The analysis was intended to identify associations rather than establish causal relationships. The findings provide insights into patterns of employee training and professional development across the companies included in the study and may contribute to a better understanding of human capital development in contemporary business.

4. Research results and discussion

The study involved 150 respondents, of whom 68% were men and 32% were women. The average age of the respondents was 47.81 years ($SD = 9.756$), with the youngest respondent aged 24 and the oldest 68. The respondents came from different municipalities in the Republic of Serbia, with the largest proportion residing in Užice (66.7%), followed by Požega (12%), Čačak (6%), and Prijepolje (3.3%).

Regarding educational attainment, the majority of respondents (81.3%) had completed secondary education, including 61.3% who had graduated from the Railway School in Belgrade and 6% from the Transport School "Pinki" in Novi Sad. A further 8.7% had completed undergraduate academic studies, including 2% who had studied at the Faculty of Economics in Kragujevac. Higher vocational education had been completed by 7.3% of respondents, while 2.7% held a master's or magister degree.

According to Attafar and Teimouri (2009), human resource management is a dynamic field that requires companies to continuously identify and respond to changing workforce development needs. Human capital in modern organisations can therefore be regarded as a dynamic resource, as employees with different skills, competencies, and expectations continuously enter the labour market. This requires companies to adapt their human resource management strategies to make effective use of employees' potential (Attafar & Teimouri, 2009). When asked whether they were employed in their field of expertise, 88% of respondents answered affirmatively, while 12% reported working outside their professional field.

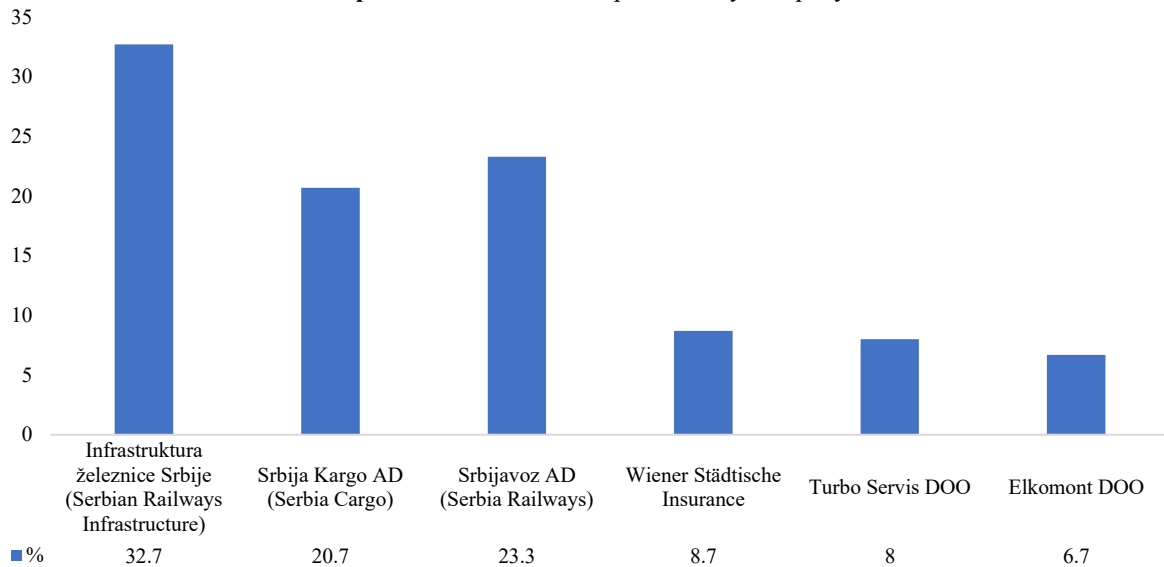
The relatively high proportion of respondents employed in their field of expertise provides an important context for examining their participation in professional training and development activities. However, the opportunities and requirements for further training may differ depending on the nature of the work and the sector in which employees are engaged. The inclusion of companies operating in different sectors therefore provides a basis for describing the training experiences of employees working in different organisational environments.

The relationship between employees' educational qualifications and their current positions is particularly relevant when examining opportunities for professional development. Employees working within their field of expertise may already possess the foundational knowledge and skills required for their positions, while additional training can help them respond to changes in job requirements and technological developments. Nevertheless, formal qualifications alone do not necessarily reflect the full range of competencies acquired through professional experience and workplace learning. Continuous professional development therefore plays an important role in maintaining and improving employees' competencies throughout their careers. The companies included in the research operate in different business

environments, with varying occupational requirements and opportunities for professional development. These differences provide an important context for interpreting respondents' participation in training activities, particularly when considering the relationship between formal education and additional professional

qualifications. Although the sample does not allow conclusions to be generalised to all companies in Serbia, it offers insight into the experiences of employees working in several distinct sectors. The distribution of respondents across the six companies included in the study is presented in Graph 1.

Graph 1. Distribution of respondents by company



Source: Authors' research

In the modern business environment, professional competence and continuous employee development are important factors in maintaining organisational competitiveness. Professional certification provides formal recognition of acquired knowledge and skills and may contribute to maintaining professional standards in specific occupational fields. Noe et al. (2017) emphasise that continuous professional development and certification can improve employee productivity and contribute to organisational competitiveness by supporting adaptation to changing business requirements. Similarly, Beydoun and Saleh (2023) argue that appropriate employee training and development programmes encourage innovation and contribute to improved organisational performance. Within this context, examining the professional qualifications and certification status of employees provides insight into their opportunities for further development.

The possession of professional certificates may be particularly relevant in sectors where employees perform specialised or technically demanding tasks. A lack of certification does not necessarily indicate insufficient professional competence, as employees may acquire relevant knowledge and skills through formal education, practical experience, and workplace training. Nevertheless, limited access to certification programmes may restrict opportunities for professional advancement, particularly in occupations where specific qualifications are required. The results concerning the possession of different types of certificates among respondents are presented in Table 1.

Table 1. Possession of certification

	Yes	No
Professional certificates	73.3%	26.7%
General certificates	99.3%	0.7%
Ethics and integrity	98%	2%
Computer skills	98%	2%
Dräger	1.3%	98.7%

Source: Authors' research

According to the research results, 80.7% of respondents had participated in some form of training within their company, while 19.3% had not. Internal professional training was the most frequently reported activity, attended by 76.7% of respondents, followed by professional consultations (46%) and general training (21.3%). Computer training was considerably less common, with only 2.7% of respondents reporting participation. These findings suggest that the training activities available to employees were primarily oriented towards the development of competencies directly related to their work, while opportunities for developing computer-related skills were relatively limited.

Regarding the perceived effects of training, 56% of respondents stated that the training they had attended had significantly helped them perform their work tasks, while 2% reported that it had not been beneficial. A further 18% did not provide an answer to this question. These findings indicate that a substantial proportion of respondents recognised the practical value of training for their professional activities. Fegade and Sharma (2023) similarly highlight the importance of employee training and development for work efficiency and effectiveness, arguing that investment in professional development contributes to a more qualified and motivated workforce.

and, consequently, to improved organisational performance.

The results also provide insight into employees' perceptions of their companies' contribution to professional development. Specifically, 34% of respondents believed that their company had a significant influence on their education and training, while 32.7% assessed this influence as moderate. Furthermore, 10% considered that their company adequately met their educational and training needs. Although these findings indicate that companies provide certain opportunities for professional development, they also suggest that existing programmes may not fully correspond to employees' expectations and changing workplace requirements. Greater attention to the diversity, accessibility, and practical relevance of training activities could therefore contribute to more effective human capital development.

Taken together, the findings highlight the importance of aligning employee training programmes with organisational needs and the competencies required in contemporary business. In addition to developing operational skills, companies may benefit from providing opportunities for broader professional development, including digital competencies and continuous learning. However, the results reflect respondents' reported participation and perceptions rather than independently measured improvements in work performance. Consequently, the findings should be interpreted as an indication of training experiences and perceived benefits within the companies included in the study.

To further examine the relationships between respondents' demographic characteristics and their participation in professional development activities, Pearson's correlation coefficient was applied. The analysis focused on identifying statistically significant associations between gender, educational qualifications, professional certification, and participation in different forms of training. As correlation analysis does not establish causal relationships, the results were interpreted in terms of the direction and strength of the observed associations. The relationships between gender and the selected variables are presented in Table 2.

Table 2. Correlations between gender and selected variables

Variables	Gender	
	Sig.(2-tailed) (p)	Pearson Correlation (r)
Professional qualifications	0.015	0.198
Professional certificates	0.004	0.233
Ethics and integrity	0.011	-0.208
Internal professional training	0.047	0.162
General training	0.007	0.218

Source: Authors' research

The results reveal statistically significant, although relatively weak, correlations between gender and several variables related to education and professional development. A positive correlation was identified between gender and educational qualifications ($r = 0.198$,

$p = 0.015$). According to the descriptive results, 73.8% of male respondents had completed secondary education, whereas 61.6% of female respondents had attained higher levels of education. These differences may be associated with the occupational structure of the companies included in the study, particularly the concentration of employees in transport and technical activities. However, the observed correlation should be interpreted with caution, as its direction depends on how gender and educational qualifications were coded in the dataset.

Statistically significant positive correlations were also identified between gender and professional certificates ($r = 0.233$, $p = 0.004$), internal professional training ($r = 0.162$, $p = 0.047$), and general training ($r = 0.218$, $p = 0.007$). The descriptive findings indicate that 74.5% of male respondents held professional certificates, while 66.6% of female respondents had participated in internal professional training. These results suggest differences in participation in professional development activities between male and female employees. Such differences may reflect variations in occupational responsibilities, training requirements, or access to development opportunities within the companies. Nevertheless, the relatively low correlation coefficients indicate that the strength of these associations is limited.

A statistically significant negative correlation was found between gender and the variable labelled ethics and integrity ($r = -0.208$, $p = 0.011$). This result indicates an association between the variables, but its substantive meaning depends on the measurement and coding of ethics and integrity. Consequently, it cannot be interpreted as direct evidence of differences in employees' ethical behaviour or professional values. Taken together, the findings indicate that gender is associated with certain aspects of educational attainment and professional development within the observed sample, although the relationships are relatively weak and may also reflect differences in job roles and organisational characteristics.

In addition to gender, the analysis examined the relationship between respondents' age and professional certification. A statistically significant weak negative correlation was identified between age and professional certificates ($r = -0.182$, $p = 0.026$), suggesting that older respondents were somewhat less likely to report possessing professional certificates, assuming that higher values of the certification variable indicate certificate possession. One possible explanation is that younger employees may be more inclined to obtain additional qualifications to strengthen their position in the labour market, whereas older employees may rely more heavily on professional experience and previously acquired competencies. Differences in access to training opportunities and the increasing availability of digital certification programmes may also contribute to this pattern.

Nevertheless, these explanations remain tentative, as the study did not directly examine the motivations underlying respondents' decisions to obtain professional certificates. The relatively weak correlation also indicates that age

alone provides limited information about certification status. In this context, organisational culture and opportunities for continuous learning may be important considerations. Amjad et al. (2024) similarly highlight the role of organisational culture in employee training and development and its relationship with work performance.

The relationship between educational qualifications and participation in professional development activities was also examined using Pearson's correlation coefficient. The results, presented in Table 3, show several statistically significant associations between respondents' educational qualifications and different forms of certification, training, and professional consultation.

Table 3. Correlations between educational qualifications and selected variables

Variables	Professional qualifications	
	Sig.(2-tailed) (p)	Pearson Correlation (r)
Possession of certificates	0.024	-0.184
Professional certificates	0.000	0.384
General certificates	0.024	-0.184
Ethics and integrity	0.001	-0.257
Computer certificates	0.000	-0.317
Internal professional services	0.000	0.415
Professional consultations	0.000	0.369

Source: Authors' research

Positive correlations were found between educational qualifications and professional certificates ($r = 0.384$, $p < 0.001$), internal professional services ($r = 0.415$, $p < 0.001$), and professional consultations ($r = 0.369$, $p < 0.001$). These findings suggest that respondents with higher educational qualifications were more likely to participate in certain forms of specialised professional development, provided that higher values of the variables represent higher educational attainment and participation. This may be related to the nature of their positions, which often require additional professional knowledge and continuous adaptation to changing workplace requirements. However, the results do not establish whether educational attainment directly influences participation in these activities.

Negative correlations were identified between educational qualifications and possession of certificates ($r = -0.184$, $p = 0.024$), general certificates ($r = -0.184$, $p = 0.024$), ethics and integrity ($r = -0.257$, $p = 0.001$), and computer certificates ($r = -0.317$, $p < 0.001$). These associations may reflect differences in the types of professional development pursued by employees with different educational backgrounds. Respondents with lower educational qualifications may place greater emphasis on general and computer-related certification, while those with higher qualifications may have more opportunities to participate in specialised training and professional consultations. Nevertheless, these interpretations should be treated as possible explanations rather than conclusions directly established by the statistical analysis.

The negative correlation involving ethics and integrity also requires careful interpretation. Without further information about how this variable was measured and

coded, the finding cannot be taken as evidence that employees with higher educational qualifications demonstrate lower ethical standards. Similarly, the distinction between possession of certificates and professional certificates should be clarified to establish whether these variables represent different types of qualifications. The observed relationships may also be influenced by occupational requirements, organisational policies, and access to training opportunities within the companies included in the study.

The results indicate that educational attainment is associated with different patterns of participation in professional development activities. Employees may pursue different forms of training depending on their existing qualifications, professional responsibilities, and opportunities for career advancement. Both formal education and workplace learning therefore remain relevant to the development of professional competencies. Although the findings are limited to the companies included in the sample, they provide useful information about the relationship between employees' educational backgrounds and their participation in additional professional training.

The findings indicate that employee training and professional development remain important areas for improvement in the companies included in the study. Although a considerable proportion of respondents reported participating in training activities, the programmes were primarily focused on acquiring or improving the skills required for everyday work. This suggests that greater attention could be given to developing a broader range of competencies, particularly those related to technological change, digitalisation, and more complex professional responsibilities. The results also indicate that opportunities for professional development may differ according to employees' educational qualifications and the requirements of their positions.

The effective implementation of training and development programmes requires an organisational environment that encourages learning and supports employees in acquiring new knowledge and skills. Management has an important role in identifying training needs, providing suitable development opportunities, and encouraging employees to participate in activities relevant to their professional responsibilities. In addition to traditional training methods, companies could consider online learning, mentoring programmes, and practical learning activities based on workplace challenges. Such approaches may help employees apply newly acquired knowledge in their daily work and respond more effectively to changing job requirements.

The findings also point to the need for a more systematic approach to employee development. Rather than focusing exclusively on immediate operational requirements, companies should consider how training activities can contribute to employees' longer-term professional growth. This is particularly relevant in sectors undergoing technological and organisational change, where existing

knowledge and skills may require regular updating. However, the present results are based on employees' reported experiences and perceptions, and therefore do not provide direct evidence of improvements in organisational performance resulting from training.

Overall, the study suggests that greater investment in employee training and development could benefit the companies examined, particularly through the introduction of more diverse programmes aligned with workplace requirements. The relationship between formal qualifications and participation in different forms of professional development also indicates that employees may have different training needs depending on their educational background and professional responsibilities. These findings support the importance of continuous learning as part of human capital management, while highlighting the need for further research into the effectiveness of specific training activities.

5. Conclusion

Investment in human capital is an important aspect of modern business management, particularly in an environment characterised by technological development and changing workplace requirements. Employee training and professional development enable companies to maintain and improve workforce competencies, while providing employees with opportunities to acquire knowledge and skills relevant to their current and future responsibilities. For this reason, training should be considered an integral part of human resource management rather than an activity undertaken only when immediate operational needs arise.

The research conducted among 150 employees from six companies in the Republic of Serbia showed that most respondents had participated in some form of professional training. Internal professional training was the most common form of development, while participation in computer training was considerably lower. More than half of the respondents considered the training they had attended beneficial for performing their work tasks. The correlation analysis also identified statistically significant relationships between selected demographic characteristics, educational qualifications, and participation in professional development activities. Although these relationships were generally weak to moderate, they suggest that employees' educational backgrounds and professional characteristics should be considered when planning training programmes.

The findings indicate that the companies included in the study could benefit from a broader and more systematic approach to employee development. Existing training activities appear to be largely focused on operational requirements, while greater attention could be given to digital competencies, specialised knowledge, and skills needed to respond to technological and organisational changes. Management should therefore seek to identify employees' development needs and provide suitable opportunities for continuous learning through

professional courses, mentoring, online programmes, and practical training.

The study has several limitations. The sample comprised 150 respondents employed in six companies, with participants residing in different municipalities in the Republic of Serbia. The limited number of companies and the lack of detailed information about the sampling procedure restrict the generalisability of the findings. The unequal representation of respondents across companies and sectors, together with the gender composition of the sample, may also have influenced the observed relationships between demographic characteristics and participation in professional development activities. Furthermore, the results are based on respondents' reported experiences and perceptions, while the research did not directly measure changes in employee productivity or organisational performance resulting from training. The correlational nature of the analysis also prevents causal conclusions. Future studies should include larger and more diverse samples, apply clearly defined sampling procedures, and examine the effects of specific training programmes on employee competencies and work performance.

Despite these limitations, the study contributes to a better understanding of employee training and professional development practices in selected Serbian companies operating in different sectors. Its main contribution lies in identifying patterns of participation in training activities and examining their relationships with employees' demographic and educational characteristics. The findings provide a basis for improving the planning of professional development programmes according to employees' qualifications, workplace responsibilities, and training needs. They also highlight the importance of a more systematic approach to human capital development in the companies examined.

Declaration of generative

AI in the writing process During the preparation of this manuscript, the author(s) did not use generative AI or AI-assisted technologies in the writing process.

References

- Amjad, A., Rehman, F., & Hashmi, M. A. (2024). The influence of training and development on healthcare employees performance: The moderating role of organizational culture. *Journal of Social Sciences and Media Studies*, 8(1), 158–167. <https://doi.org/10.58921/jossams.08.0issue%201.0350>
- Aslichah, A., Krishnawan, I., & Widaningsih, R. R. A. (2024). Assessing the impact of training and development programs on employee career growth and organizational success. *COSTING: Journal of Economic, Business and Accounting*, 7(6), 6000–6006. <https://doi.org/10.31539/costing.v7i6.13129>
- Attafar, A., & Teimouri, H. (2009). The challenges of human resource management development in third millennium. *The International Journal of Knowledge, Culture and Change Management*, 9(5), 1–16. <https://doi.org/10.18848/1447-9524/CGP/v09i05/49747>

- Beydoun, A. R., & Saleh, R. F. (2023). Literature review on training and development in work setting. *BAU Journal – Society, Culture and Human Behavior*, 4(2), Article 13. <https://doi.org/10.54729/2789-8296.1136>
- Cvetanović, S., & Despotović, D. (2014). Znanje kao komponenta ljudskog kapitala u modelima ekonomskog rasta. *Škola biznisa*, (1), 1–17. <https://doi.org/10.5937/skolbiz1-5976>
- Dukić, A., Stanić Jovanović, S., & Urošević, A. (2023). Intelektualni kapital i organizaciono učenje. In *Osmo međunarodna naučna konferencija: Pravo, ekonomija i menadžment u savremenim uslovima – Veštačka inteligencija (AI) – LEMiMA 2023* (Vol. 1, pp. 221–236).
- Fegade, T., & Sharma, P. (2023). Exploring the impact of employee training and development on organizational efficiency and effectiveness: A systematic literature review. *IOSR Journal of Business and Management*, 25(4), 56–63.
- Forrester, S. V., Ustinova, G. H., Kosyakova, I. V., Ronzhina, N. V., & Suraeva, M. O. (2016). Human capital in the innovative conditions. *International Electronic Journal of Mathematics Education*, 11(8), 3048–3065.
- Goldin, C. (2016). Human capital. In C. Diebolt & M. Hauptert (Eds.), *Handbook of cliometrics* (pp. 55–86). Springer.
- Ilić, M., Ristić, B., Andelić, S., & Miletić, L. (2019). Značaj obrazovanja i razvoja ljudskih resursa, ispitivanje stavova zaposlenih. *Železnice*, (2), 73–87. <https://www.casopis-zeleznice.rs/index.php/zeleznice/article/view/64/48>
- Kovačević, A., & Stanisavljev, S. (2021). Strategija obrazovanja i značaj edukacije kadrova za uspešno pozicioniranje kompanija. In *Sedma konferencija sa međunarodnim učešćem: Upravljanje znanjem i informatika* (pp. 237–245). Visoka tehnička škola strukovnih studija u Novom Sadu. <https://vtsns.edu.rs/kmi/Zbornik/index.html>
- Mankju, N. G. (2013). *Principi ekonomije*. Ekonomski fakultet u Beogradu.
- Mathis, R. L., & Jackson, J. H. (2007). *Human resource management* (12th ed.). Cengage Learning.
- Nadoveza, B. (2021). Značaj obrazovanja kao društvene delatnosti. *Revija prava – javnog sektora*, 1(2), 81–108.
- Nassazi, A. (2013). *Effects of training on employee performance: Evidence from Uganda* [Bachelor's thesis, Vaasa University of Applied Sciences]. Theseus. <https://www.theseus.fi/handle/10024/67401>
- Noe, R. A., Hollenbeck, J. R., Gerhart, B. A., & Wright, P. M. (2017). *Human resource management: Gaining a competitive advantage* (10th ed.). McGraw-Hill Education.
- Pavlović, N., & Račić, Ž. (2012). *Prikaz i značaj komponenti intelektualnog kapitala u savremenom okruženju*. <https://www.vps.ns.ac.rs/Materijal/mat7941.doc>
- Penjišević, A., Sančanin, B., & Turanjanin, D. (2024). The importance of training for the development and strengthening of a company's competitive position. *BizInfo (Blace) Journal of Economics, Management and Informatics*, 15(1), 57–63. <https://doi.org/10.5937/bizinfo2401057P>
- Slavković, A., & Slavković, V. (2019). The importance of training in contemporary organizations. *Hotel and Tourism Management*, 7(2), 115–125. <https://doi.org/10.5937/menhottur1902115S>
- Sodirjonov, M. M. (2020). Education as the most important factor of human capital development. *Theoretical & Applied Science*, 4(84), 901–905. <https://doi.org/10.15863/TAS.2020.04.84.161>
- Stoffers, J., Eringa, K., Niks, J., & Kleefstra, A. (2021). Workplace innovation and organizational performance in the hospitality industry. *Sustainability*, 13(11), Article 5847. <https://doi.org/10.3390/su13115847>
- Šormaz, G. (2020). Značaj neformalnog obrazovanja za privredu Srbije. *Trendovi u poslovanju*, 8(2), 39–48. <https://doi.org/10.5937/trendpos2002039Q>
- Urbancová, H., Vrabcová, P., Hudáková, M., & Ježková Petrů, G. (2021). Effective training evaluation: The role of factors influencing the evaluation of effectiveness of employee training and development. *Sustainability*, 13(5), Article 2721. <https://doi.org/10.3390/su13052721>
- Urošević, A., Dukić, A., & Marković, Z. (2024). The impact of intellectual capital on ROA as a significant indicator of financial performance. *BizInfo (Blace) Journal of Economics, Management and Informatics*, 15(1), 27–34. <https://doi.org/10.5937/bizinfo2401027U>
- Vujović, S., Premović, J., & Grujić, B. (2014). Kadrovi u turizmu – specifičnosti obrazovanja kadrova za turizam. *Ekonomski vidici*, 19(4), 437–447.
- Yimam, M. H. (2022). Impact of training on employees performance: A case study of Bahir Dar University, Ethiopia. *Cogent Education*, 9(1), Article 2107301. <https://doi.org/10.1080/2331186X.2022.2107301>

