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## The Role of Artificial Intelligence (AI) in Shaping the Educational Capital of Students at the University of Rzeszów: A Comparison with Traditional Teaching

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### **Abstract:**

**Purpose:** The purpose of this article is to explore the potential of artificial intelligence used in higher education and to identify the challenges and benefits associated with its implementation in the academic environment in Poland. Particular attention was paid to the impact of AI on the educational process of students, in the context of an analysis of its cooperation with the traditional teaching model implemented by a human teacher.

**Design/Methodology/Approach:** In order to achieve the research objectives, the theoretical part of the study employed a literature analysis using the narrative review method and critical analysis of scientific sources. In the empirical part, a quantitative approach was adopted using the diagnostic survey method. The research tool was the author's survey questionnaire, made available electronically through the Google Forms platform. The survey covered full-time and part-time students of the University of Rzeszów. The analysis focused on the perception of the use of AI tools in education, their impact on the development of competences, the level of acceptance and the relationship between AI and traditional academic teaching. In addition, the analyses made use of reports and databases collected by Google Scholar and ResearchGate, as well as reports and analyses taking into account the Polish context (e.g. stat.gov.pl, Randstad.pl).

**Findings:** Students perceive artificial intelligence as a useful support in everyday educational tasks, especially where speed and efficiency matter. For complex tasks, such as dissertations or assessments, they approach AI with more caution. Respondents appreciate AI mainly in teaching technical skills and as an aid to language learning, but are sceptical about its role in teaching soft skills. They emphasise the irreplaceable function of the teacher in shaping relationships and values. The most preferred form of learning appears to be a hybrid model, combining digital technologies with direct didactic contact.

**Practical implications:** In the context of the implementation of artificial intelligence in academic education, it is necessary to adopt a balanced, responsible approach, adjusted to the specificities of higher education institutions. It is advisable to develop a hybrid model, combining traditional teaching with AI capabilities, while maintaining the role of the teacher as mentor and guide. The implementation of AI should be done in a phased and transparent manner, taking into account the opinions of students and staff. Raising users' awareness of the technology's possibilities and limitations through workshops and practical activities is

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also of key importance. The greatest potential for the application of AI lies in the teaching of technical and hard skills, while for languages and soft skills it should have a supporting function.

**Originality/Value:** The originality of the article consists in conducting an empirical study on the role of artificial intelligence in shaping the educational capital of students in Poland in relation to the traditional model of teaching implemented by a human teacher, which was verified both through a literature review and empirical research conducted among students of a selected university. The results make a unique contribution to the literature on the subject and provide practical recommendations for educational policy.

**Keywords:** Higher education, technological change, human capital, skills, occupational choice.

**JEL codes:** I23, O33, J24.

**Paper type:** Research article.

## 1. Introduction

In educational processes around the world, influenced by the dynamic development of digital technologies, artificial intelligence (AI) is increasingly playing a key role in building the career capital of young people. The introduction of modern AI-based tools creates new opportunities in the formation of educational capital, influencing learning effectiveness, access to knowledge and the development of digital competences.

The accumulated educational capital is part of the mechanism through which today's rapidly changing labour market functions, also increasingly shaped by the development of technology, including artificial intelligence. Therefore, on the one hand, the transparency and relevance of the actions taken by young people leading to the building of educational capital that responds to the new realities becomes important since it is they, as the new generation of workers, who shape the structure of the labour supply.

On the other hand, if the profile of educational career capital is not adapted to the technological transformation and competence challenges of the contemporary labour market dominated by, among other things, automation and AI, it will not find demand from employers. Consequently, it will be difficult for graduates to find a rewarding job in their learned profession.

One of the key advantages of using AI in education is the possibility of personalising the learning process. AI-based systems analyse students' performance, preferences and learning style, adjusting the pace and material difficulty level to suit individual needs. In the traditional teaching model, where lectures dominate, personalisation is much more difficult to achieve.

The use of AI enables students to receive rapid feedback on their progress. Unlike traditional forms of assessment, which tend to be subjective and time-delayed, AI algorithms allow for ongoing monitoring of knowledge and competence. Moreover, the use of AI fosters the development of digital skills, which are an indispensable component of modern educational capital.

In an AI-supported education model, the role of the teacher also changes – from being the main source of knowledge, the teacher becomes a mentor, guide and facilitator of the learning process. The student, in turn, takes more responsibility for his or her own development, becoming a more autonomous participant in the educational process. In the traditional approach, the relationship is reversed – the teacher remains the central figure in the educational process.

The objective of this article is to identify the potential of AI in academic education and to point out the challenges and benefits of its implementation in the context of the Polish academic environment. The main focus is on the impact of artificial intelligence on the educational process of students in the context of comparison with the traditional teaching model implemented by a human teacher.

The article includes a synthetic review of the literature on the research undertaken. The empirical part is based mainly on the analysis of the results of primary research, conducted in the form of a diagnostic survey among the student community of a selected university in Poland. An analysis was made of the role of artificial intelligence in shaping the educational capital of students at the University of Rzeszów, with a particular focus on comparing its effects with traditional teaching methods. Key conclusions are presented in the final part.

## **2. Literature Review**

Contemporary research on occupational and educational development increasingly emphasises the importance of the various forms of capital that an individual accumulates along their life path. One of the key concepts in this area is career capital – the wide range of skills, experiences and networks that allow an individual to function effectively in the labour market and develop professionally.

Career capital is the foundation on which the further development of an individual is based, and its building is a continuous process, connected with both formal education and practical experience.

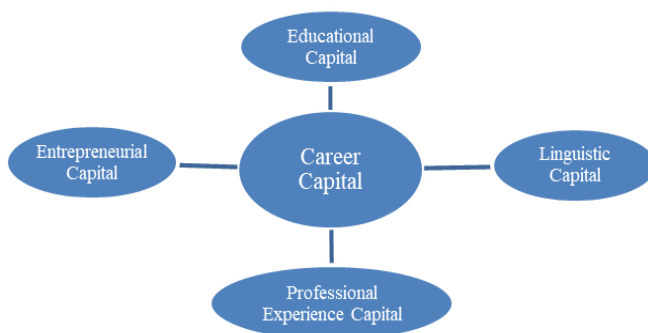
According to A. Bańka, career capital should be understood as “accumulated competences, which an individual acquires in the course of education, work, life experience, social and cultural experience” (Bańka, 2006).

Acquired competences are a resultant of both participation in the educational process, personal interests and predispositions, as well as opportunities arising from

the socio-economic status of an individual, and undertaken professional activity. According to A. Bańka, the career capital accumulated by university graduates determines their success on the labour market. It is a predictor of employability after graduation and the entire professional development (Bańka, 2005).

E. Turska distinguishes several types of career capital, i.e., educational capital, professional experience, entrepreneurship and language capital (Figure 1).

**Figure 1.** Types of career capital



**Source:** Own elaboration based on Turska, 2014.

In the context of the issues addressed in this article, as well as assuming that the primary source of a career is education, in the following part of the study attention is focused on educational capital, which is one of the components of career capital and, in general, includes knowledge, qualifications and competences acquired in the process of formal and informal education. Educational capital plays a key role in shaping career opportunities and influences the ability to adapt to changing labour market conditions.

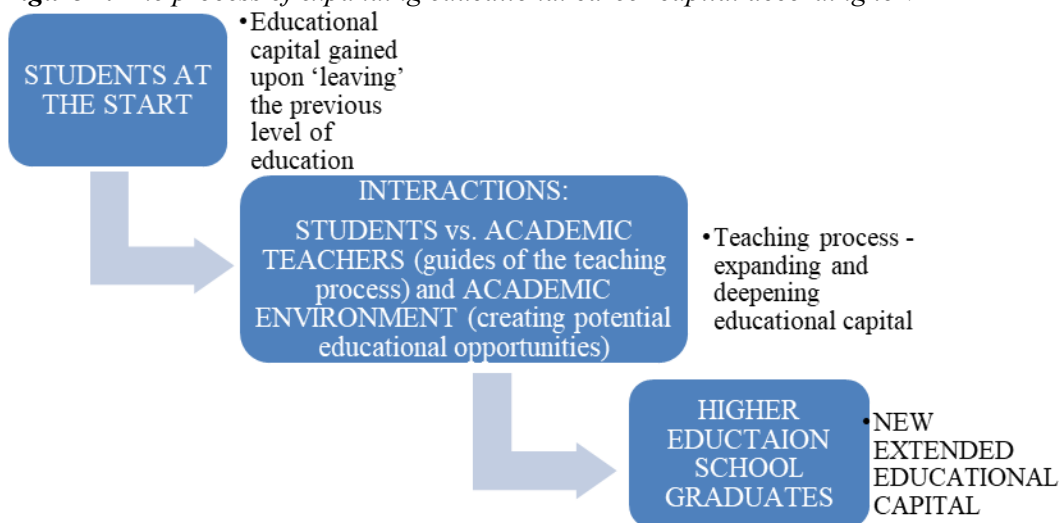
At the same time, it should be borne in mind that the other forms and types of career capital (e.g. cultural capital, social capital, financial capital, entrepreneurial capital, professional experience capital, linguistic capital or reputation capital) are no less important, both at the time of career start and in the course of the entire career, and this list is not complete.

Educational capital should be seen as the difference between the stock of initial knowledge and the knowledge acquired by an individual after the completion of the educational process (Dworak, 2012). To date, no tool has been constructed that precisely values and estimates human capital (also career capital) represented by both students and university graduates (Wiktorzak, 2011).

A graphical illustration of the value of human capital, represented by the so-called *Virtual Production Line*, which compares the process of creating and expanding an

individual's human capital to the so-called *Classical Production Line*, seems quite interesting (Walukiewicz, 17). The Virtual Production Line can also be referred to the process of expanding career capital in the field of education (Fig. 2). Higher education graduates, having completed the didactic process, create new value that is brought to the labour market, thus supplying it with new capital.

**Figure 2.** The process of expanding educational career capital according to VPL



**Source:** Own elaboration based on Wiktorzak, 2009; Walukiewicz, 2011; Barwińska-Malajowicz, Tęcza, 2019.

Lecturers, academic staff and the wider academic environment play a key role in building students' educational capital. They are the ones who create an environment conducive to acquiring knowledge, developing skills and shaping attitudes that translate into future occupational and social opportunities for graduates.

Academic teachers, as guides in the teaching process, influence the quality of knowledge imparted, inspire independent thinking, develop a critical approach to information and support the development of analytical and communicative competences.

In turn, the broader academic environment (as the institutional, infrastructural and social environment of the university) offers a wide range of educational opportunities, e.g., access to library resources, laboratories, exchange programmes, research projects, internships, study circles or academic and professional events (Figure 2).

These, and a number of other similar opportunities, increase students' chances of active and multidimensional participation in the learning process, and furthermore enable the development of cultural and social capital and facilitate networking.

The dynamic transformations taking place in the contemporary labour market require a constant redefinition of the essence of professional choices, a different approach to planning one's professional future, taking into account both traditional individual conditions and aspects, as well as the context of changes related to the transformations taking place in the labour market in the era of globalisation and progressive digitisation.

The old model of professional activity assuming the following sequence of events, unchanging in time: deciding on the choice of occupation – the stage of acquiring education (going through the various stages of education) – entering the labour market – practising the learned occupation until retirement, no longer corresponds to the surrounding reality (Barwińska-Małajowicz, 2015).

In recent years, there has been a noticeable increase in interest in the role of artificial intelligence (AI) in learning processes, which is reflected in numerous studies devoted to the impact of modern technologies on the development of young people's educational capital.

A fundamental reference point for these analyses is Pierre Bourdieu's theory of capital (Bourdieu, 1983), which allows us to identify the mechanisms of accumulation, reproduction and exchange of cultural, social and economic capital in the educational field.

The integration of AI in educational processes opens up new possibilities and, at the same time, challenges the redefinition of traditional mechanisms of access to knowledge and the development of young people's competences.

Extending classical concepts of capital to include a digital dimension is essential to capture contemporary educational realities. Ragnedda and Ruiu (2020) introduce the notion of digital capital, defined as the sum of digital resources and competences to function effectively in a digital environment, which interacts with cultural and social capital allowing one to influence one's position in the educational process.

They emphasise that digital capital plays a key role in shaping individuals' experiences and opportunities in the digital sphere, influencing educational attainment and various aspects of social life (Ragnedda *et al.*, 2019).

Digital capital can be presented synthetically as a set of skills and access to a set of digital competences and technologies (Oluwatimilehin *et al.*, 2021). Pitzalis and Porcu (2024), on the other hand, highlight the link between digital competences and various dimensions of cultural and educational capital.

It is also emphasised in the literature on the subject that AI is an active component of education, as it influences the relationships between entities and shapes new forms of symbolic and economic capital. Davies *et al.* use Pierre Bourdieu's theoretical

framework to analyse how artificial intelligence is developed and implemented in education, focusing on aspects such as personalisation, the mobilisation of educational capital and inequalities in access to AI tools (Davies *et al.*, 2021).

They point out that AI technology has the potential to change traditional structures of power and influence in education, with learning processes becoming increasingly commercialised and platformised. These dynamics call for new insights into the formation of educational capital in the digital age, thus generating the need to undertake further research in this area.

The ethics of using AI in education is also an important part of the discussion. Holmes *et al.* (2022) point to the need to develop an ethical framework to ensure responsible, fair and transparent use of AI in educational contexts, which is essential to maintain the inclusivity and quality of education in the implementation of AI technologies in education.

The OECD has developed a comprehensive Skills Strategy that targets a useful approach to the opportunities and challenges of skills development in the digital economy. This approach consists of three main steps, notable among which is the use of AI technologies to improve access to and quality of education and training, e.g. through online courses, new learning tools in schools or recognition of skills acquired through informal learning (OECD, 2016).

In conclusion, the growing role of artificial intelligence in education requires an interdisciplinary approach that combines classical sociological theories, such as Bourdieu's concept of capital, with modern research on technology, ethics and digital equality. Only such a comprehensive framework will make it possible to fully understand and evaluate the impact of AI on the formation of young people's educational capital and to compare it with traditional teaching models.

### **3. Research Methodology**

In order to achieve the research objectives, the theoretical part of the study employed an analysis of the literature on the subject using a narrative review method and a critical analysis of scientific sources. The empirical part presents an analysis of the results of the authors' own research. A quantitative approach was adopted using the diagnostic survey method.

The aim of the authors' own research was to determine the role of artificial intelligence in shaping students' educational capital and to compare its effectiveness and perceptions with traditional teaching methods. The research sample included students at the University of Rzeszów (UR).

The research focused on finding out students' opinions on the use of AI-based tools in the learning process, their impact on the development of knowledge, skills and

competences, and the extent to which AI supports or replaces classical forms of academic education.

To carry out the study, the authors adopted a quantitative approach, using a diagnostic survey based on the authors' questionnaire, which was distributed electronically using the Google Forms platform.

A total of 241 students completed the questionnaire. The data obtained enabled a detailed analysis of the perceived impact of artificial intelligence on the quality of education, differences in the effectiveness of learning using AI and traditional methods, the degree of students' acceptance and readiness to use AI technologies in education, barriers and concerns related to the implementation of AI in the academic environment, as well as students' attitudes towards AI technologies in the context of dynamic digital transformation processes in Poland.

The survey was conducted among students of the Faculty of Economics and Finance at the University of Rzeszów. Respondents represented fields such as Economics, Finance and Accounting, and the research group included both full-time and part-time students.

The research questionnaire in an online format enabled a wide range of respondents to be reached quickly and efficiently, while ensuring the anonymity and comfort of the participants.

In addition, reputable databases such as Google Scholar and ResearchGate were used, as well as reports and analyses including Polish contexts (e.g. [stat.gov.pl](http://stat.gov.pl), [Randstad.pl](http://Randstad.pl)). Literature searches were conducted using keywords such as artificial intelligence, educational capital, teaching method.

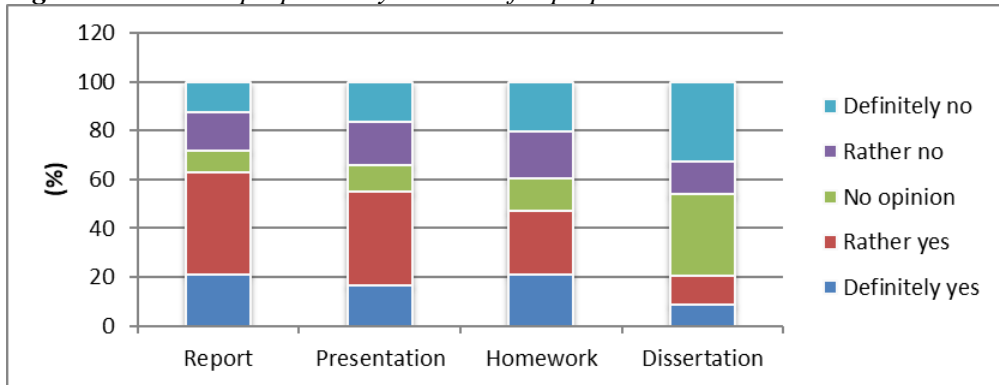
#### **4. Research Results and Discussion**

Modern education increasingly involves contact with new technologies, and artificial intelligence (AI) is beginning to play an increasingly important role in the learning process and in the preparation of educational materials. The data analysis provides interesting insights into how students perceive the usefulness of AI in different areas of learning.

AI was by far the most frequently indicated in the context of homework preparation. More than 65% of respondents answered "definitely yes" or "rather yes" (see Fig.3), which indicates that AI is seen as a quick and effective tool to support everyday tasks of less formal importance.

A similar attitude was observed for reports (62.65% positive responses) and presentations (55.19%). It can therefore be concluded that AI is most readily used for short-term, repetitive tasks that do not necessarily require deep content analysis.

**Figure 3.** For what purpose do you use AI for preparation?



**Source:** Own elaboration.

A slightly less enthusiastic approach was noted in the case of note-taking. Although almost half of the respondents declare that they use AI for this purpose (46.89%), at the same time nearly 40% do not use this option. It can be assumed that many students still prefer their own style of note-taking and information selection. Very few students pointed to AI in the context of thesis preparation. Only 20.33% said they used AI for this purpose, while as many as 66.39% expressed no opinion or a negative stance (of which 32.78% answered “definitely not”).

Such a large difference may be due to both academic regulations and the belief that a thesis should be the result of an independent and original effort. Interestingly, the high percentage of “no opinion” responses (33.61%) may also suggest that many respondents have not yet been exposed to writing such a thesis or are still unsure how to safely and ethically use AI for this purpose.

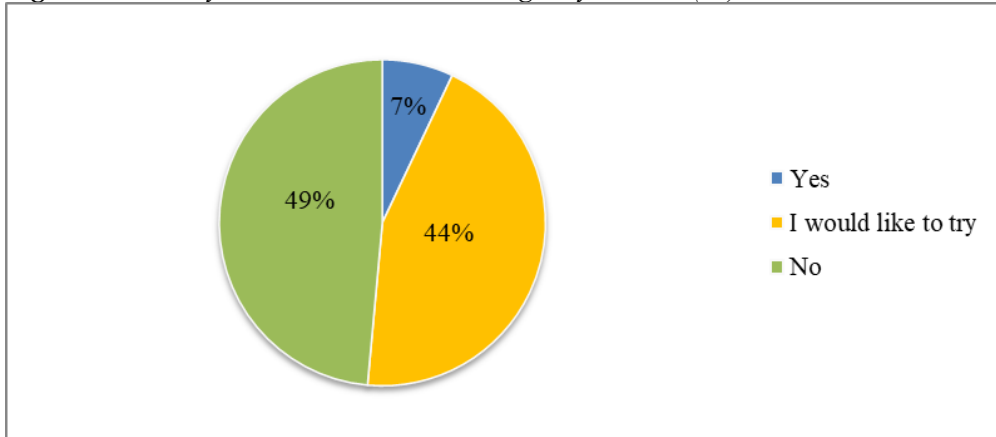
In this context, it is worth recalling the position of Holmes *et al.* (2022), who highlight the need to develop an ethical framework to ensure responsible, fair and transparent use of AI in education. Such frameworks are key to maintaining the inclusivity and quality of education in the implementation of AI technologies in academia.

With the rapid development of AI technology, questions are increasingly being asked about its potential use in education, including in the context of replacing or supplementing the traditional role of the teacher. The question “Would you like a class to be taught by a robot (AI)?” generates a lot of emotion and prompts deeper reflection on the future of the teaching process.

An analysis of the students’ responses shows that almost half of the respondents (49%) do not express a desire to participate in AI-taught classes (Figure 4). This is a clear indication that despite the increasing presence of technology in everyday life, education remains a space where human contact and interaction with the teacher is

still very important. Opposition to robotic teaching may stem from a lack of trust in technology, fear of losing interpersonal relationships or concerns about the quality of the knowledge being imparted in a purely automated model. On the other hand, as many as 44% of respondents said they would be willing to try this form of teaching.

**Figure 4.** *Would you like the class to be taught by a robot (AI)?*



**Source:** *Own elaboration.*

This is a group that is open to experimentation and new forms of education and sees the potential in modern solutions. They are likely to be those who see the advantages of AI in terms of personalisation of content, accessibility of materials or automation of the assessment process. Their answer “I would like to try it” does not imply explicit agreement with a complete change in the teaching model, but rather an expression of curiosity and readiness to explore new possibilities.

In contrast, only 7% of the survey participants answered unequivocally “yes”, indicating that there are still few convinced enthusiasts of AI teaching. Such a result may mean that students – despite their general interest in new technologies – expect AI’s support in education rather than its full autonomy as a teacher. Robots are recognised as an innovative educational tool. Many researchers take the view that technology can change current approaches to education and facilitate student learning in a variety of educational settings (Anwar *et al.*, 2019; Evripidou *et al.*, 2020; Lin *et al.*, 2022).

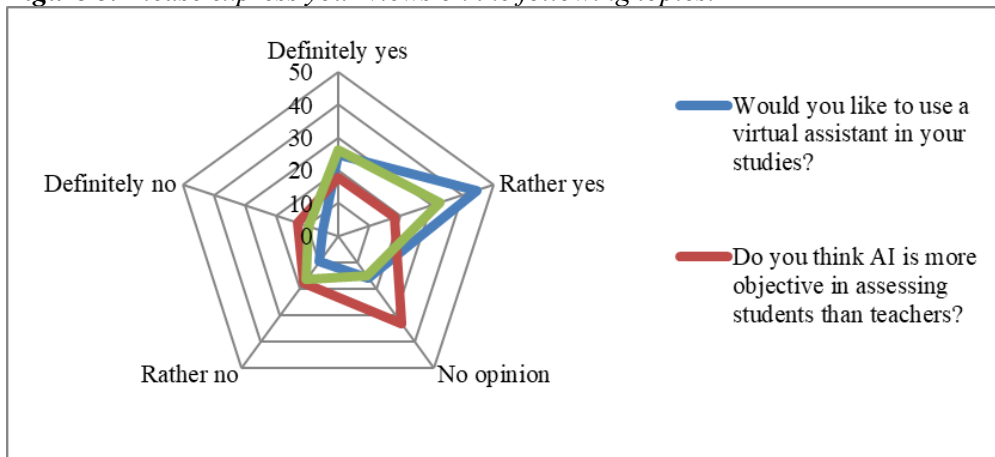
Evripidou *et al.* (2020) indicated that educational robots could lead to the development of students’ skills, e.g. through problem solving, self-efficacy, creativity, collaboration/cooperation skills, and mathematical thinking (Chevalier *et al.*, 2020). Contemporary higher education is looking more and more boldly towards solutions based on artificial intelligence. AI tools are becoming part of everyday life.

By far the greatest support was given to the idea of introducing a virtual assistant to support learning (Figure 5). As many as 168 students (69.71%) expressed a positive

attitude towards such a solution, of which 60 students (24.90%) marked the answer “definitely yes” and 108 students (44.81%) marked the answer “rather yes”. This shows that students see AI as a useful tool to facilitate studying, organising materials or accessing knowledge.

Only 35 students (14.52%) said they were reluctant to use a virtual assistant, which may be due to concerns about becoming too dependent on technology, loss of independence or privacy issues. 38 students (15.77%) remain undecided; perhaps they need more information or practical experience with such tools. A much greater divide is revealed in the responses to the question “Do you think AI is more objective in assessing students than teachers?”. Only 87 people (36.10%) agreed, of which 43 people (17.84%) answered “definitely yes” and 44 people (18.26%) answered “rather yes”.

**Figure 5.** Please express your views on the following topics.



**Source:** Own elaboration.

However, almost as many students – 74 people (30.70%) – expressed the opposite opinion (43 people “rather not” and 31 people “definitely not”). Significantly, the largest group was those who had no opinion on the subject – as many as 80 people (33.20%). This may indicate insufficient knowledge of grading algorithms or distrust of “soulless” systems that do not take into account the context or individual difficulties of the student. The third question concerned students’ willingness to participate in an educational experiment in which an artificial intelligence would teach the class for a whole semester.

Interestingly, as many as 142 students (58.92%) were willing to participate: 63 students (26.14%) definitely and 79 students (32.78%) answered “rather yes”. This demonstrates students’ openness to innovation and curiosity about what alternative forms of learning could look like. However, 63 people (26.14%) declared that they would not want to take part in such an experiment and 36 people (14.94%) had no

opinion. This shows that although many students see the potential of AI in the role of lecturing, it is still the case that for some of them technology cannot replace humans in the teaching process.

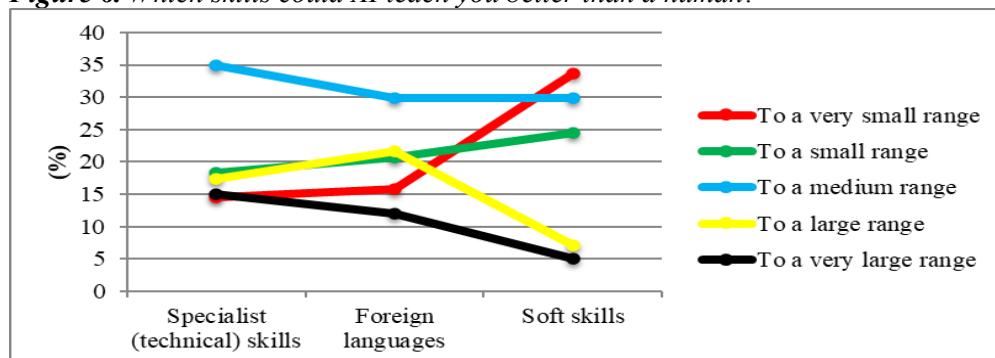
The development of artificial intelligence (AI) is prompting an in-depth reflection on its role in the teaching process, especially in terms of imparting different categories of skills. The question of whether and to what extent AI could teach students specific competences more effectively than humans becomes relevant in the context of education transformation.

Respondents perceive the greatest effectiveness of AI in teaching specialised (technical) skills. As many as 35% of students (84 respondents) believe that AI could teach them such skills to a medium extent, and another 17% (42 respondents) to a high extent (see Fig.6). Furthermore, as many as 15% of respondents (36 people) see very high potential for AI in this area. Only 14.5% (35 people) believe that AI could teach them this type of competence to a very low degree, and 18% (44 people) to a low degree.

These data indicate a relatively high acceptance of AI in the teaching of technical topics, which may be due to the perception that these competences are based on logic, structure and repetitive patterns, which are the natural operating environment of algorithms. With regard to language learning, students' opinions are more varied. The largest group – 30% (72 people) – assessed that AI could teach them languages in the medium range.

In contrast, 22% (52 people) indicated a high range and 12% (29 people) a very high range. At the same time, around 36% of respondents (87 people in total) indicated that AI could only teach them languages to a small (21%) or very small (16%) extent. These results may indicate limited confidence in AI in an area where not only grammar is important, but also cultural context, interaction and emotionality of speech – features that are still the domain of humans.

**Figure 6.** Which skills could AI teach you better than a human?

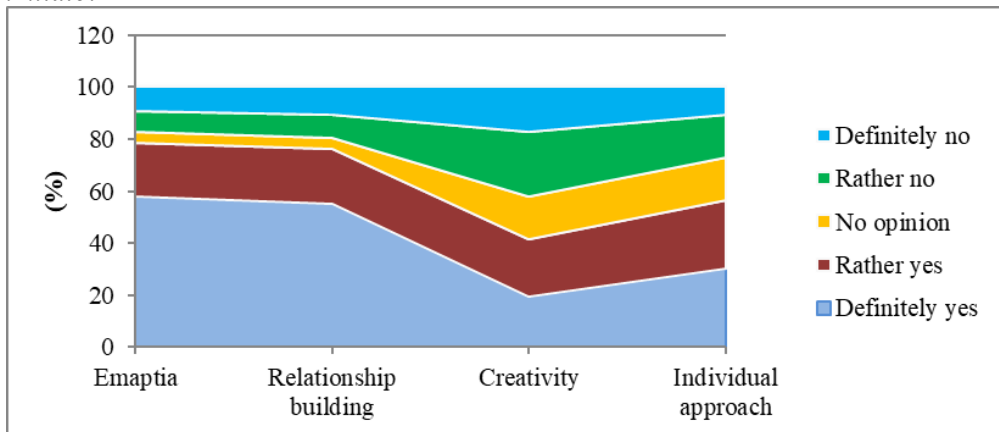


**Source:** Own elaboration.

The lower ratings were given to the potential of AI to teach soft skills such as interpersonal communication, empathy, teamwork skills or emotion management. As many as 34% of students (81 people) felt that AI could teach them such skills to a very low degree, and 24% (59 people) to a low degree. This gives a total of 140 people (58%) with a low level of confidence in AI in this area.

Only 7% of respondents (17 people) indicated that AI could effectively teach them soft skills to a high degree, and only 5% (12 people) to a very high degree. Although 30% of respondents (72 people) felt that AI could teach these skills to a medium extent, the overwhelming number of responses support the belief that the development of soft skills requires interpersonal relationships, emotional sensitivity and social context, which AI cannot fully replicate yet.

**Figure 7.** *What attributes/skills of a human teacher a robot will never be able to imitate?*



**Source:** *Own elaboration.*

Based on the survey results, the perceptions of attributes and skills of human teachers that respondents believe AI and robots would never be able to imitate were analysed (Figure 7). The question focused on five key competences: empathy, relationship building, creativity, personal approach and the ability to motivate. The results provide valuable information about the limits of trust in AI in the context of relational and emotional aspects of the learning process.

The greatest belief in AI's inability to emulate concerns empathy. As many as 58.09% of respondents, corresponding to 140 students, chose the "rather yes" response, suggesting that they believed in AI's inability to show empathy in a manner comparable to humans. A further 20.33% (49 people) had a similar opinion, but with less certainty.

Only 4.56% (11 people) had no opinion on the subject, while 7.88% (19 people) and 9.14% (22 people) expressed the belief that AI could potentially demonstrate

empathy. These results show that empathy – as a competence deeply rooted in human emotional sensitivity - remains, in students' perception, beyond the reach of machines and algorithms. Similar trends can be seen for relationship-building skills. More than half of respondents (55.19%, or 133 people) marked the answer “rather yes”, with a further 21.16% (51 people) agreeing to a lesser extent. Only 4.15% of respondents (10 people) had no opinion, while the percentage of those who felt that AI could effectively build interpersonal relationships totalled 19.5% (47 people).

This indicates a high level of scepticism about AI's capabilities for social interactions, which require subtlety, context and the ability to read non-verbal cues. If universities do not start offering a more holistic approach to education, they may gradually lose their current role. Algorithms such as ChatGPT are getting better and better at supporting the learning process, and their rapid evolution means that traditional education programmes in their current form are losing out in competition with modern technologies (Strannegård and Lars, 2023)

In the context of creativity, the results are significantly scattered. Only 19.50% of students (47 people) felt that AI would not be able to imitate human creativity, while as many as 41.91% of respondents (101 people in total) expressed the opposite opinion, of which 24.90% (60 people) ticked the answer “rather not” and 17.01% (41 people) “definitely not”. This distribution of responses may be due to the fact that AI is increasingly being used to generate text, graphics, music and design solutions, raising doubts among students about the exclusivity of human creativity.

At the same time, around a fifth of respondents remain undecided, indicating the need for further social dialogue on the limits of “artificial creativity”. The results regarding the individual approach are more balanced. Some 30.29% of students (73 people) believe that AI will not be able to imitate the individual approach of the teacher, while a further 26.14% (63 people) partially agree with this position.

However, already 26.97% of respondents (65 people) have the opposite opinion, including 16.18% (39 people) who answered “rather not” and 10.79% (26 people) who selected “definitely not”. This distribution may be due to the increasing popularity of algorithms personalising educational content, which mimic individual learning paths, although not necessarily reflecting human intuition or emotional understanding of the other person.

When it comes to AI's ability to motivate students, respondents' opinions are also divided. Only 26.14% of them (63 people) believe that AI will never be able to motivate effectively, while 23.65% (57 people) had a similar opinion to a moderate degree. At the same time, 31.12% of respondents (75 people) expressed the opposite view, including 20.33% (49 people) who answered “rather not” and 10.79% (26 people) who chose “definitely not”. This may suggest that motivation – although partly based on external stimuli – also requires emotional factors, authority,

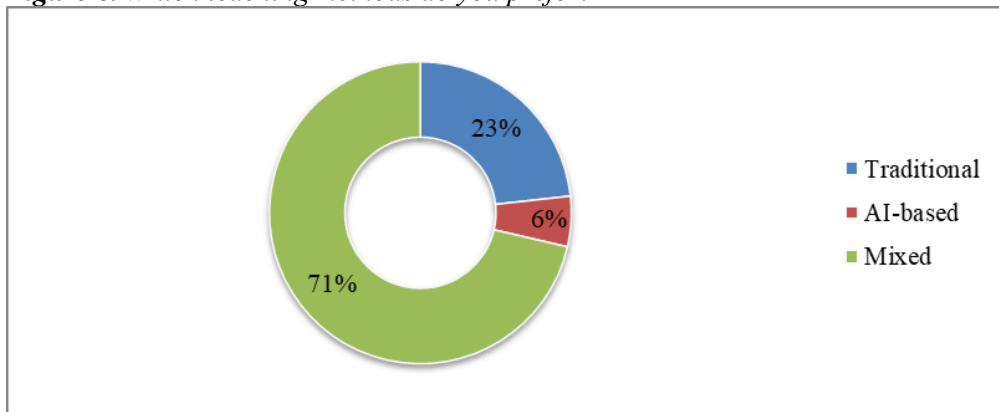
understanding of the learner's situation and interpersonal contact, which AI cannot yet fully replicate.

Respondents were asked to indicate their preferred teaching approach from among three possibilities: traditional methods, AI-based methods and a mixed approach, combining elements of the two previous ones (Figure 8).

The mixed approach was the most popular, indicated by as many as 71% of the students, corresponding to 172 students. This result suggests that the vast majority of respondents see potential in integrating traditional forms of learning with modern technological solutions, while balancing the human aspect with the opportunities offered by digital tools. This indicates an increased awareness among students of the advantages of didactic diversity and flexibility of approach to the learning process.

Blended methods can enable more personalised learning, faster access to information, and increased interactivity and student engagement. In their analysis of the role of AI-teachers, Malik and Shah argue that optimal effectiveness is achieved through a co-teaching model, that is, the interaction of a human teacher and artificial intelligence. AI supports the teaching process, but the teacher retains the key role of motivating, ethically and emotionally supporting students (Malik and Shah, 2025).

**Figure 8.** *Which teaching methods do you prefer?*



**Source:** *Own elaboration.*

Traditional methods were indicated by 23% of respondents, or 56 students. Although they are a minority, this result shows that there is still a significant group of people who value conventional forms of teaching, based on direct contact with the teacher, lectures, discussions and classical learning materials. It can be assumed that for these students interpersonal relationships, the authority of the lecturer and the structured nature of classes are important.

The least popular approach was found to be methods based solely on artificial intelligence, indicated by only 6% of the respondents, which corresponds to about 13

people. Such a low percentage may reflect a limited confidence in fully automated forms of teaching or a lack of belief that AI can effectively replace traditional forms of teaching. It may also be due to the perception of AI as an enabler rather than a full-fledged replacement for the teacher. Respondents may be concerned about a lack of flexibility, emotional engagement or difficulty in adapting material to individual needs, aspects that are associated with human teaching.

## **5. Conclusions and Recommendations**

Career capital, and in particular its educational component, is nowadays a key determinant of an individual's position in the labour market and their occupational development. The literature on the subject emphasises that competences acquired both in the course of formal and informal education, combined with the influence of the academic environment, play an important role in the process of building resources enabling effective functioning on the labour market.

At the same time, dynamic technological transformations, including progressive digitisation and the development of artificial intelligence, introduce new conditions for understanding and constructing educational capital, indicating the need to reinterpret it in light of contemporary social and economic challenges. A special role is attributed to new technologies, including precisely artificial intelligence, which create new opportunities and change the way educational capital is acquired and used.

Artificial intelligence finds its place primarily in everyday educational tasks where efficiency, speed and form of presentation matter. The more relevant, complex and formal the nature of the task (such as a thesis), the greater the caution and reluctance of users to engage AI. This demonstrates a growing awareness among students of both the possibilities and limitations of this technology.

The survey results show a clear division of opinion and a moderate openness of students to the automation of education. The majority of respondents prefer to remain cautious, with a small percentage declaring full confidence in AI as a tutor. The key, therefore, seems to be not so much to replace humans with technology, but to look for balance and complementarity so that artificial intelligence becomes a support for the teacher rather than a successor.

Students are generally positive about the supportive role of AI, especially when it comes to helping them learn (e.g. via a virtual assistant) and experimental forms of using it in teaching. However, where assessment is involved – an activity strongly linked to human judgement, empathy and context – there are greater concerns and uncertainties. It is therefore worth continuing to educate people about the possibilities and limitations of AI, and to implement it in a phased and transparent way, taking full account of student feedback.

The surveyed group of students would most likely entrust AI with teaching technical skills, where logic, structure and precise rules dominate. In the area of foreign languages, AI is seen as a useful tool to support, but not replace, the teacher. The greatest scepticism concerns the teaching of soft skills, where humans still play a key role.

The need for a hybrid approach in education is confirmed; AI can be an excellent complement to the didactic process, especially in terms of hard knowledge, but the role of the teacher remains irreplaceable, especially in shaping students' personalities and social skills.

The surveyed group recognises that empathy and relationship building are absolutely inadequate qualities for AI. Doubts about AI in terms of individual approach and motivation are less clear, while in the context of creativity, students seem to recognise the greater potential of the technology, although not without reservations.

These results underline the importance of the humanistic aspect in the teaching profession, which – despite the dynamic development of AI – still plays an irreplaceable role in shaping relationships, values and emotional support in the educational process.

Students prefer a hybrid model of teaching that draws on both the potential of modern technology and the value of traditional contact with a lecturer. Although some respondents remain attached to classical methods and a few declare their readiness to learn exclusively with AI, the predominant choice of the hybrid option suggests a direction for the development of education oriented towards the integration of digital solutions with teachers' experience and competences.

In the face of the dynamic development of artificial intelligence in academic education, it becomes necessary to develop responsible and sustainable strategies for its implementation, adapted to the realities of higher education institutions. The results of the survey conducted among students at the University of Rzeszów show a growing interest in the technology, but also a clear need for caution. In light of this, it is worth pointing out several directions that can effectively support the process of building contemporary students' educational capital.

Firstly, it seems optimal to develop a hybrid teaching model that integrates traditional academic methods with the opportunities offered by AI. Students recognise the value of contact with the lecturer, but at the same time are keen to use technological tools to support the learning process. This format allows the advantages of both approaches to be exploited: the human-to-human relationship and interaction, and the efficiency and flexibility of digital solutions.

Another recommendation is the phased and transparent implementation of tools based on artificial intelligence. It is crucial that students and teachers understand the

purposes of using the technology and know its limitations. Open communication and taking into account the voices of users – including their concerns and doubts – increase trust and facilitates the adaptation of new solutions in the academic environment.

It is also impossible to overlook the role of the teacher, which takes on a new dimension under conditions of increasing automation. It is worth emphasising the function of mentor, guide and shaper of soft skills, social relations and values. These areas remain beyond the reach of algorithms and their importance in the development of educational capital – especially in the context of future careers – is considerable.

Developing students' awareness of the possibilities and limitations of artificial intelligence is also an important part of supporting the teaching process. Workshops, hands-on activities and critical analysis of AI tools should be a regular part of academic training. Such an approach enables a more informed, ethical and responsible use of new technologies, as well as better preparation for their application outside the walls of the university.

A final recommendation is to focus AI applications primarily on teaching technical and hard skills. It is in these areas that artificial intelligence best performs its functions. In the teaching of foreign languages or soft skills, AI can play a supporting role, but will not replace the experience and sensitivity of the lecturer. Therefore, the introduction of AI should take into account the specificities of the subjects and adapt to their nature.

In summary, the coexistence of classical and digital forms of capital points to the need for a holistic approach to competence development in the reality of a dynamically changing world. In the context of the role of artificial intelligence in shaping the educational capital of young people, there is a noticeable shift in emphasis from traditional learning models to technological solutions that offer new possibilities for personalisation, accessibility and educational efficiency.

A comparison of these two approaches highlights the need for them to complement each other, which can contribute to a fuller development of students' educational potential and better prepare them for the challenges of the contemporary labour market.

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