

DIGITAL SKILLS AND CAREER ADAPTABILITY AMONG YOUTH IN KAZAKHSTAN: THE TRANSITION FROM HIGHER EDUCATION TO A TRANSFORMING LABOUR MARKET

¹Dana BURKHANOVA, ²Moldir AKMADI, ³Anel NURKANAT

¹Nazarbayev University, Astana, Kazakhstan

²Kazakh National Women's Teacher Training University, Almaty, Kazakhstan

akmadi.moldir@gmail.com

³Astana IT University, Astana, Kazakhstan.

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Abstract. The transition from higher education to employment is becoming increasingly difficult, as digitalization shifts job requirements and places greater emphasis on people's ability to adapt, learn, and manage their own careers. This study examines the relationship between digital competence, career adaptability, practical experience and the degree with which young people in Kazakhstan feel ready to enter the labor market. The study was conducted from January to April 2026. The sample used for analysis consisted of 1,015 university and college students, as well as recent graduates at various stages of transition from education to work. Career adaptability was assessed using six indicators related to career planning, job flexibility, adapting to changes in the labor market, confidence in acquiring new skills, developing a career development strategy in the context of digital transformation, and an emphasis on the skills being transmitted; this measure showed a satisfactory internal sequence (α Kcronbach = 0.860). Digital competence was found to be significantly related to perceived readiness for work, although this link was weak and non-linear, $\chi^2(12) = 77.69$, $p < 0.001$, V Kramer = 0.160. Both internship experience and current employment status were also significantly related to willingness, but the scale of the effect was small. By contrast, neither adaptability to a career nor willingness to consider alternative career paths showed a significant link to perceived readiness. The results show that availability of digital, adaptive, or empirical resources does not automatically lead to greater readiness for employment. For young people facing changes in the labor market in Kazakhstan, a key issue may be not only acquiring employment resources, but also conditions that allow those resources to be turned into real labor-market opportunities.

Keywords: digital competence, adaptability to career, readiness for the labor market, employment of graduates, transition from education to work, youth employment, Kazakhstan.

ЦИФРОВЫЕ НАВЫКИ И КАРЬЕРНАЯ АДАПТИВНОСТЬ МОЛОДЁЖИ В КАЗАХСТАНЕ: ПЕРЕХОД ОТ ВЫСШЕГО ОБРАЗОВАНИЯ К ТРАНСФОРМИРУЮЩЕМУ РЫНКУ ТРУДА

¹Дана БУРХАНОВА, ²Мәлдір АҚМАДИ, ³Анель НУРКАНАТ

¹Назарбаев университет г. Астана, Казахстан

²Казахский национальный женский педагогический университет,
г. Алматы, Казахстан

³Университет Astana IT, г. Астана, Казахстан

ҚАЗАҚСТАН ЖАСТАРЫНЫҢ ЦИФРЛЫҚ DAҒДЫЛАРЫ МЕН МАНСАПТЫҚ БЕЙІМДЕЛГІШТІГІ: ЖОҒАРЫ БІЛІМНЕН ТРАНСФОРМАЦИЯЛАНУШЫ ЕҢБЕК НАРЫҒЫНА ӨТУ

¹Дана БУРХАНОВА, ²Мәлдір АҚМАДИ, ³Анель НУРКАНАТ

¹Назарбаев Университеті, Астана, Қазақстан

²Қазақ ұлттық қыздар педагогикалық университеті, Алматы қ., Қазақстан

³Astana IT Университеті, Астана, Қазақстан

Аңдатпа. Жоғары білімнен жұмысқа ауысу барған сайын күрделене түсуде, өйткені цифрландыру жұмыс орындарына қойылатын талаптарды өзгертеді және адамдардың бейімделу, үйрену және өз мансабын басқару қабілетіне көбірек көңіл бөледі. Бұл зерттеу цифрлық құзыреттілік, мансапқа бейімделу, практикалық тәжірибе және Қазақстандағы жастардың еңбек нарығына шығуға дайын болу дәрежесі арасындағы байланысты қарастырады. Зерттеу 2026 жылдың қаңтарынан сәуіріне дейін жүргізілді. Талдау үшін пайдаланылған үлгі 1015 университет пен колледж студенттерінен, сондай-ақ білім беруден еңбек қызметіне ауысудың әртүрлі кезеңдеріндегі соңғы түлектерден тұрды. Мансапқа бейімделу мансапты жоспарлауға, жұмыс икемділігіне, еңбек нарығындағы өзгерістерге бейімделуге, жаңа дағдыларды игеруге сенімділікке, цифрлық трансформация контекстінде мансапты дамыту стратегиясын әзірлеуге байланысты алты индикатормен бағаланды. және берілетін дағдыларға баса назар аудару; бұл шара қанағаттанарлық ішкі дәйектілікті көрсетті (α Кронбаха = 0.860). Бұл байланыс әлсіз және сызықтық емес болғанымен, цифрлық құзыреттілік еңбек қызметіне қабылданатын дайындықпен айтарлықтай байланысты екені анықталды, $\chi^2(12) = 77,69$, $p < 0.001$, V Крамера = 0.160.

Аннотация. Переход от высшего образования к трудоустройству усложняется, поскольку цифровизация меняет требования к рабочим местам и делает больший акцент на способности людей адаптироваться, учиться и управлять своей собственной карьерой. В данном исследовании рассматривается связь между цифровой компетенцией, адаптивностью к карьере, практическим опытом и степенью, с которой молодые специалисты в Казахстане чувствуют себя готовыми к выходу на рынок труда. Исследование было проведено с января по апрель 2026 года. Выборка, использованная для анализа, состояла из 1015 студентов университетов и колледжей, а также недавних выпускников на различных этапах перехода от образования к трудовой деятельности. Адаптивность к карьере оценивалась с помощью шести индикаторов, связанных с планированием карьеры, гибкостью работы, адаптацией к изменениям на рынке труда, уверенностью в приобретении новых навыков, разработкой стратегии развития карьеры в контексте цифровой трансформации, и акцент на передаваемые навыки; эта мера показала удовлетворительную внутреннюю последовательность (α Кронбаха = 0.860). Так, цифровая компетентность значительно связана с воспринимаемой готовностью к трудовой деятельности, хотя эта связь была слабой и нелинейной, $\chi^2(12) = 77,69$, $p < 0.001$, V Крамера = 0.160.

Тағылымдамадан өту тәжірибесі де, қазіргі жұмыс жағдайы да дайындықпен айтарлықтай байланысты болды, бірақ есер ету ауқымы аз болды. Керісінше, мансапқа бейімделу де, мансапты дамытудың балама жолдарын қарастыруға дайын болу да қабылданған дайындықпен айтарлықтай байланысты көрсеткен жоқ. Нәтижелер цифрлық, адаптивті немесе эмпирикалық ресурстардың болуы автоматты түрде жұмысқа дайын болуға әкелмейтінін көрсетеді. Қазақстандағы еңбек нарығындағы өзгерістерге тап болған жастар үшін негізгі проблема жұмысқа орналастыру ресурстарын иелену ғана емес, сонымен қатар осы ресурстарды еңбек нарығының нақты мүмкіндіктеріне айналдыруға жағдай жасайтын шарттар болуы мүмкін.

Түйінді сөздер: цифрлық құзыреттілік, мансаптық бейімделгіштік, еңбек нарығына дайындық, түлектердің жұмыспен қамтылуы, білім беруден еңбекке өту, жастарды жұмыспен қамту, Қазақстан.

Как опыт стажировки, так и текущий статус занятости также были значительно связаны с готовностью, но масштабы эффекта были небольшими. Напротив, ни адаптивность к карьере, ни готовность рассматривать альтернативные пути развития карьеры не показали существенной связи с воспринимаемой готовностью. Результаты показывают, что наличие цифровых, адаптивных или эмпирических ресурсов не приводит автоматически к большей готовности к занятости. Для молодых людей, сталкивающихся с изменением на рынке труда в Казахстане, ключевой проблемой может быть не только приобретение ресурсов трудоустройства, но и условия, позволяющие превратить эти ресурсы в реальные возможности рынка труда.

Ключевые слова: цифровая компетенция; адаптивность к карьере; готовность на рынке труда; трудоустройство выпускников; переход от образования к работе; занятость молодежи; Казахстан.

Introduction

Today, the transition from higher education to employment is becoming less predictable. Technological changes affect both the nature of work and how young professionals enter the labor market. In the context of the transformation of the modern labor market, the readiness for employment of graduates is determined not only by the availability of formal educational qualifications, but also by the totality of professional, digital and adaptive resources, ensuring a successful transition from education to employment. Employers now operate in environments where digital skills, problem-solving, communication, adaptability, and willingness to learn are as important as traditional occupational knowledge. The review of young professionals' sustainability studies emphasizes adaptability, problem-solving, communication, teamwork, and willingness to learn as key skills that remain relevant in changing labor markets (Abelha et al., 2020; Monteiro et al., 2023). Digitalization is complicating this transition, as technological skills are now linked to the ability of individuals to learn, update existing skills, and take advantage of new job opportunities (Caroline et al., 2025). Having digital skills and being willing to navigate a changing career landscape are related but different issues, as having technical skills does not guarantee a clear career strategy, confidence in switching jobs, or willingness to cross professional boundaries. Today's job opportunity includes not only what young people know, but also what they can and want to do as they develop that knowledge. Fugate et al. (2004) note that employability does not arise from how human and social capital, professional identity, and personal adaptability interact. Rather than viewing employment status as proof of employment, this view focuses on resources that help people recognize and act on career opportunities. McArdle et al. (2007) showed that adaptability and professional

identity are crucial for understanding labor-market behavior and transitions. In career theory, adapting to changes in the workplace is considered an active process. Young professionals prepare, react and take control of changing career situations (Savickas, 2013). Career adaptability includes four main resources: care, control, curiosity, and confidence. These resources show whether young professionals think about their future job, see themselves as able to influence it, explore possible paths, and believe that they can cope with work challenges (Savickas, 2012). These skills are especially important during the transition from education to work for young professionals. At this stage, structured learning environments give way to the labor market, which requires more personalized decisions about skills, professions, and career paths. Caroline's (2025) study shows the link between digital literacy and employability, while pointing out that context, behavior, and career-related factors need more attention. This means that digital skills should be viewed as part of a broader set of resources, rather than as a separate guarantee for job-seekers.

Kazakhstan's labor market shows relatively low overall unemployment, but significant changes in how education and skills are linked to job opportunities. According to the Bureau of National Statistics, the unemployment rate in 2025 was 4.6%; among people aged 15-34, it was 3.1%. However, 5.8% of young people were neither employed nor in education or training in the fourth quarter of 2025 (National Statistics Bureau of Kazakhstan, 2026). The figures reflect overall labor-market participation, but tell less about how well young people are prepared for jobs that require more technology and flexibility. Previous assessments of the country's higher education and training systems have raised concerns about how well academic qualifications are being transformed into practical skills for work. A survey of higher education in Kazakhstan conducted by the OECD found that there is still room for improvement in teaching skills related to work and economic change (OECD, 2017). The OECD's next skills strategy for Kazakhstan focused on skills development, adult learning, effective use of skills, and adaptation to digital change as part of broader national policies (OECD, 2021). Since then, Kazakhstan has added employment and training measures, including youth work-on-the-job programs, first-job initiatives, and online skills development. In 2025 alone, 30,600 people joined youth internships, and 7,100 people joined the "First Workplace" program (Ministry of Labor and Social Protection of the Population, 2026). The scale of this effort shows that helping young people remains a major political challenge, even at relatively low unemployment.

The aim of the research is to study the relationship between digital competencies, career adaptability and perceived readiness for the labor market among young people in Kazakhstan, as well as to assess the contribution of practical experience, professional and transferred skills, and the socio-educational characteristics of differences in readiness to transition from education to employment. In particular, the analysis aims to determine whether higher levels of digital competence are associated with perceived greater readiness for the job market and whether career adaptability has a positive link to such readiness, as well as whether the experience of an internship is Skills and transferable competencies strengthen young people's ability to navigate changing employment environments.

The object of the study focuses on young people in transition from education to work in a context of digitalization and labor-market transformation.

The subject of the study is the relationship between digital competencies, professional adaptability, practical experience, professional and transferable skills, as well as perceived readiness to enter the labor market among young people in Kazakhstan.

The study's *hypothesis* suggests that higher levels of digital competence and professional adaptability are positively correlated with perceived willingness of young people to enter the labor market in Kazakhstan.

Theoretical framework. This study is based on career theory (Savickas, 1997, 2013) and a psychosocial model of employment (Fugate et al., 2004), which explains how young people use their individual resources to work in the labor market, which is becoming more uncertain and focused on technology. Career-building theory defines career adaptability as a psychosocial ability that helps to manage changes in work, relying on future orientation, agency, research and confidence (Savickas & Porfeli, 2012). Studies link career adaptability with employability, professional activity and a smooth transition from school to work (Koen et al., 2012; Rudolph et al., 2017; Monteiro et al., 2019). Fugate et al. (2004), McArdle et al. (2007) note that employability is a combination of adaptability, career identity and personal and social resources, not just a measure of the status of work. In today's labor market, digital skills are an important part of personal resources, but their importance also depends on people's ability to update their skills, adapt to changing job demands, and turn their skills into employment opportunities. (van Laar et al., 2017; Abelha et al., 2020; Caroline et al., 2025).

Research methods. This study used a quantitative cross-sectional survey method to examine the relationship between digital competence, career adaptability and perceived readiness for the labor market among young people in Kazakhstan. Data were collected between January and April 2026 using a standardized bilingual (Kazakh-Russian) questionnaire. The final sample included 1,015 respondents in the transition from education to employment. The study sample is based on a non-probability target sample, as inclusion of respondents was determined with compliance to criteria. The criteria for inclusion were training at the time of research or completion within the previous two years. The criteria of residence and specialization have also been added. The total number of respondents 1,015 provided a sufficient empirical basis, taking into account the general population which at the beginning of the 2025-2026 academic year was 1,240,100 students who are in the process of studying and 628,200 completed their studies during the last two years (National Statistics Bureau of Kazakhstan). The questionnaire included indicators of perceived employability, professional and digital competencies, transferred skills, practical experience and career adaptability. The latter was assessed through six five-point points of the Ликert type concerning career planning, readiness to change careers, adjustment to changing labor market demands, confidence in acquiring new skills, and career development strategy, and the perceived importance of the transferred skills. The negatively formulated element of adaptability was encrypted before constructing a composite measure. The internal sequence of

six points was satisfactory (α Kronsbach = .860). Statistical analysis using IBM SPSS Statistics. Sociodemographic characteristics of respondents are shown in Table 1.

Table-1. Socio-demographic Characteristics of Respondents (N = 1,015)

Categories	N	%
Survey language		
<i>Kazakh</i>	794	78.2
<i>Russian</i>	221	21.8
Age		
≤ 20 years	624	61.5
21–23 years	181	17.8
24–26 years	103	10.1
≥ 27 years	107	10.5
Gender		
<i>Female</i>	323	31.8
<i>Male</i>	692	68.2
Place of residence prior to enrolment in the educational institution		
<i>City (regional centre / capital)</i>	460	45.3
<i>Small town / urban settlement</i>	219	21.6
<i>Rural area</i>	336	33.1
Type of educational institution		
<i>National / research university</i>	598	58.9
<i>Regional public university</i>	205	20.2
<i>Private university</i>	120	11.8
<i>Educational institution abroad</i>	61	6.0
<i>College / technical and vocational institution</i>	31	3.1

Note: Compiled by the authors.

As can be seen in table 1, the final analytical sample included 1,015 respondents. The survey was carried out mainly in Kazakh (78.2%), and 21.8% of respondents chose Russian. The sample was relatively young: 61.5% were aged 20 or younger, followed by 21–23 years (17.8%), 27 years or older (10.5%) and 24–26 years (10.1%). Men made up 68.2% of the sample and women 31.8%. In terms of social background, 38.1% reported that both parents had a higher education, while about one-third (33.3%) came from families where parents had a secondary or specialized secondary education. Respondents also represented various territorial strata of the population: 45.3% from large urban areas, 21.6% from small towns or settlements and 33.1% from rural areas. More than half (58.9%) studied or attended national or research universities, and the rest regional public universities, private universities, foreign institutes and colleges or technical schools.

Literature review. The transition of young professionals from education to employment is now viewed as a process that is influenced by qualifications, skills, practical experience and personal career resources, not just educational achievement. Research in the field of employment is not limited to academic achievements, but also to expe-

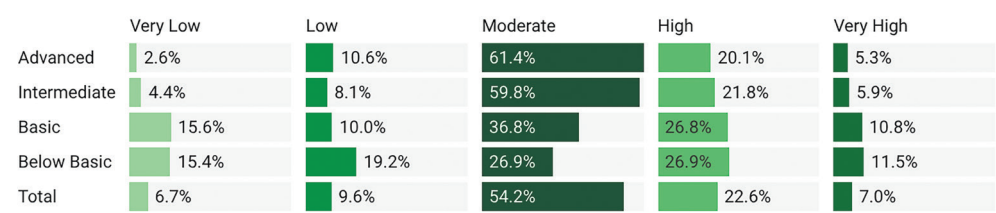
periences gained during internships and social connections (Fugate et al., 2004; Tomlinson, 2017; Clarke, 2018). Programs such as work-integrated learning and internships help students apply their knowledge and skills to relevant work experiences (Jackson, 2015). At the individual level, professional knowledge is combined with skills such as communication, problem-solving, teamwork, critical thinking, and adaptability, which are changing the demands of work (Polakova et al., 2023). Talluri et al. (2024) notes that job opportunities are increasingly linked to self-regulating resources, and these resources help young professionals actively manage their skills development and career choices, rather than just gather skills. Further, digital skills affect not only the ability to perform technology-related tasks, but also access to information, job networks, and opportunities for learning and hiring through digital means. However, their value in the labor market extends beyond technical skills. Research by Adegbite (2024) shows that the ability to apply digital knowledge to changing working conditions is as important as having specific technological skills. Kumi et al. (2024) found that technological readiness is linked to adaptive career behavior through professional adaptability. In addition, recent research by Z-generation students has shown that digital adaptation skills significantly enhance the development of digital competencies related to employability (Imjai et al., 2025). This distinction is becoming more relevant now that gaps in digital skills continue to exist, even with greater access to technology. Simply familiarizing oneself with digital tools in education does not guarantee readiness for work without opportunities for continuous learning and practical application of skills (Wild & Schulze Heuling, 2020). Recent international data support the idea of viewing digital competence as part of a broader system of job resources, rather than as a separate factor for job placement.

Career adaptability is also one of the ways that skills shape employability. Studies based on career-building theory show that adaptability enhances skills in managing career transitions, job search confidence, and as a consequence, employment outcomes (Guan et al., 2013; Rudolph et al., 2017; Monteiro et al., 2019). Career adaptability foreshadowed both job-seeking confidence and subsequent employment for university graduates. Meta-analytical data confirm a strong link between adaptive resources and various career adjustment outcomes. Recent research continues to support this idea. Career adaptability is related to perceived future employability among recent graduates (Azalea et al., 2026). Studies in the field of adult youth link adaptability and career choices with future job prospects and active career development (Kim et al., 2024). In general, the literature indicates that labor-market readiness is best understood as a result of the interaction of resources, including digital and vocational skills, transferable skills, practical experience, and adaptability in career. However, these links have not yet been studied in Kazakhstan. It is crucial to find out whether digital skills and career adaptability are linked to a stronger sense of readiness in the labor market in a country's specific context - from education to work.

Results and Discussion

The results of the research show that there is a weak but significant relationship between digital competence and perceived work readiness, where $\chi^2(12, N = 1.015) = 77.69, p < .001$, Cramer's $V = 0.160$.

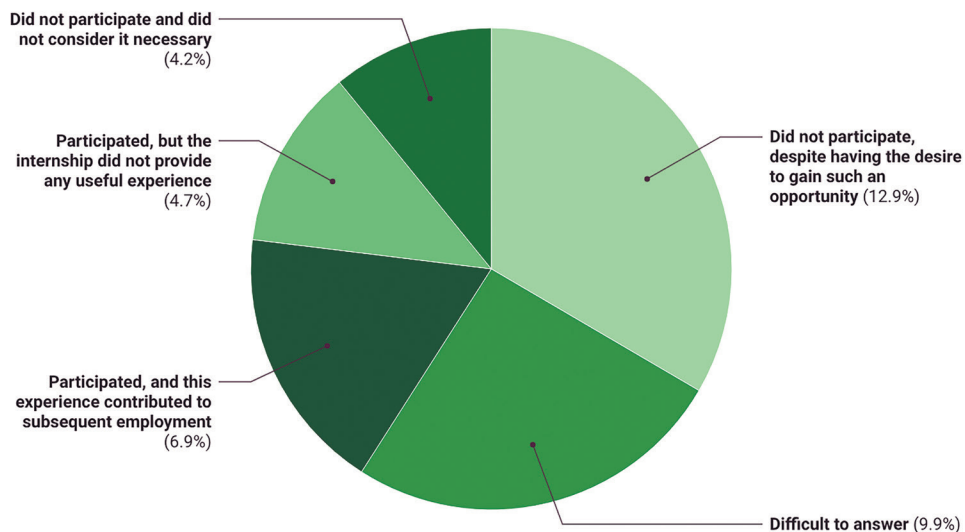
Throughout the sample, perceived readiness was mostly in the medium category, although the way it was distributed varied greatly depending on the level of digital competence (see figure 1). Of those who said they had a high level of digital competence, 61.4% rated their work readiness as moderate, while only 20.1% rated it as high and 5.3% as very high. The same pattern was observed among those with an average level of digital competence, where 59.8% said their readiness was moderate and 27.7% high.



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Figure-1. Digital competence and perceived labor market readiness (N = 1,015)
Note: Compiled by the authors.

On the other hand, a group with basic digital competence, on the contrary, showed less than 36.8% in the category of moderates, further low readiness showed 15.6% and high readiness 37.6%. The results show that there is a significant link between digital competence and perceived work readiness, but this link is not uniform. because digital competence does not necessarily mean higher perceived readiness to enter the labor market. Furthermore, a link between internship and practical experience of training and perceived willingness to work was found, although this link is as weak as the previous one, it is still significant $\chi^2(16, N = 1.015) = 47.58, p < .001, V \text{ Kramer} = .108$. The way responses were distributed indicates that interning did not always lead to higher readiness (see Figure 2).



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Figure-2. Experience of completing an internship or practical training depending on perceived readiness for the labor market (N = 1,015)

Note: Compiled by the authors.

As shown in figure 2, 57.7% of those who said that their internship helped them get a subsequent job rated their readiness as moderate, while 24.0% said they felt highly or very well prepared. Quite surprisingly, among those who completed the internship but did not find it useful, the corresponding figure was higher - 34.8%. Among those who wanted to do an internship but could not get one, the picture was more fragmented, with 27.4% reporting low or very low readiness, while 33.9% reported high or very high readiness. The largest share of people who said they were highly or very highly prepared 52.1% was found in a group that did not complete the internship because it was not considered necessary, although this group was small ($n = 48$). In general, the results show a statistically significant but only limited link between traineeship and job readiness and, more importantly, suggest, that the mere completion of practical training should not be regarded as a clear sign of perceived greater readiness for employment.

There was no significant link between the desire to consider other career options and perceived readiness for employment, $\chi^2(16, N = 1.015) = 13.14, p = .663$, Kramer $V = .057$. Those intending to stay in their area of qualification showed only 37.2%, while others are already looking for alternative career paths, where the figure is 28.5%, so as shown above the connection is not significant. Therefore, openness to related professions, freelance work or entrepreneurship does not by itself affect whether respondents are ready to enter the labor market. Further, the study of the relationship between adaptive career resources and perceived labor-market readiness did not reveal a significant link. Correlations were low for career planning ($\rho = 0.031$,

$p = 0.330$), willingness to change occupational fields ($p = 0.032$, $p = 0.310$), confidence in acquiring new professional skills ($p = .016$, $p = .621$), and career development strategies in the context of digital transformation. ($p = 0.032$, $p = 0.307$), and for the perceived importance of transferred skills ($p = 0.034$, $p = 0.282$).

The backward-coded indicator indicating the ability to adapt to changing labor market demands was also not associated with readiness ($p = 0.009$, $p = 0.771$). However, adaptive career outcomes were substantially interlinked. For example, confidence in acquiring new skills was positively linked to the availability of a digital career development strategy ($p = 0.649$, $p < 0.001$). Thus, while attitudes toward career planning, confidence, flexibility, and skill orientation formed a related group, they did not lead to a higher perceived level of labor-market readiness in this sample. The study also found a significant relationship between current employment status and perceived readiness for work, $\chi^2(20, N = 1.015) = 54.95$, $p < 0.001$, V Kramera = 116, although the association size was small. Of the respondents who are currently working in their field, 31.1% said that their readiness was high or very high, compared to 25.2% for those working outside their field and 24.3% for those whose current experience consisted only of an internship. For people currently out of work or looking for a job, the picture was more varied: 31.9% said their readiness was high or very high, but this group also included the largest share of people reporting low or very low readiness at 20.9%.

The results show that current employment does indeed distinguish perceived labor-market readiness, even if employment itself does not lead to a simple increase in readiness. Overall, the results suggest that there has been a significant link between digital competence and perceptions of labor-market readiness, but it is non-linear. Young professionals with a high level of digital competence were mostly found in the moderate readiness group, while those who had only basic digital skills were categorized by categories having similarly equally high readiness. who had an advanced level of digital competence. The conclusion does not diminish the importance of digital competence for the labor market, but rather implies that digital skills should be viewed as a motivating resource, whose value depends on the circumstances in which they are acquired and put into practice. Just as in a recent study by Caroline et al. (2025) they moved away from the idea of digital literacy as an independent asset for employment, which shows that the link between digital literacy and employment is -Still heavily dependent on context and that there is no universally accepted measure to show how digital competence translates into employment in various professions. The current findings apply this argument to Kazakhstan, and having advanced digital skills can broaden an individual's range of capabilities, without necessarily leading to confidence that these capabilities will ensure an effective transition into the labor market. This point is particularly relevant in the labor market, where expanding education and digitalization are occurring alongside persistent concerns about how much of the skill is being translated into skills that fit specific professions. The same can be said about practical experience. The relationship between participation in an internship and a sense of readiness did not show a strong link, although it was significant. In essence, respondents who found their internship useful for job placement did not show the

highest level of readiness. Of course, practical experience cannot be derived from participation in an apprenticeship alone, but nevertheless training integrated into the work environment is usually linked to the development of employability, as it enables students to understand expectations in the workplace. Meet professional networks and be able to apply your knowledge in a specific subject (Jackson, 2015). On-the-job learning can contribute to the employability of graduates, and that digital literacy may be one way to achieve this. However, such benefits depend on the quality, relevance and structure of the experience rather than on the formal organization of the internship. Thus, the findings from Kazakhstan raise a more specific question about what internships actually offer; workplace exposure may increase awareness of work requirements, but not necessarily lead to greater confidence in their execution. In some cases, practical experience may even lead to a more realistic understanding of the gap between university training and employers' expectations. This view is consistent with the broader literature on employment, which views work experience as one of several resources rather than a direct pathway to employability.

The inference that has the greatest theoretical significance relates to career adaptability. Various indicators such as career planning, willingness to change professional fields, confidence in acquiring new skills, adapting to changing job market demands, digital career strategy, and focus on transferable skills, turned out to be significantly related to perceived willingness. What is analogous to international research linking career adaptability with employability, self-employment, and successful career transitions (Rudolph et al., 2017). Career adaptability is systematically associated with adaptive reactions and several outcomes of adaptation, including employability. Longitudinal studies involving university graduates have also shown a link between adaptability and self-efficacy in job search, as well as subsequent employment outcomes (Guan et al., 2013) while more recent data from Azalea et al. (2026) suggest that various aspects of adaptability to a career affect the perception of future employability in different ways among working and unemployed graduates. The absence of a similar link in the current sample should therefore not be taken as evidence that adaptability is irrelevant.

Further, confidence in the opportunity to acquire new skills was substantially correlated with career development strategy during the digital transformation ($\rho = 0.649$, $p < 0.001$). Young people can have a consistent set of adaptive benchmarks that include planning, belief in their ability to learn, identification of transferable competencies, and consideration of career change. Without considering these factors as evidence that they are now willing to compete for jobs. The difference corresponds to career theory, provided that adaptability is viewed as a psychosocial resource for solving transition problems and not as the result of the transition itself (Savickas & Porfeli, 2012). In fact, meta-analytical studies separate adaptive resources from adaptive responses and adaptation outcomes rather than treating them as equivalent constructions. In the case of Kazakhstan, the process of turning adaptive resources into a sense of readiness may thus be supported by additional conditions not covered solely by individual attitudes towards careers, such as access to relevant work experience, information about employers, professional networks, institutional support for career and opportunities to showcase your skills. There was a significant link between employment status and perceived willingness. Respondents who

worked in their field were more likely to say that they felt prepared than those who worked in another field or whose experience was based mainly on an internship. At the same time, a group that was unemployed or seeking employment included people from both ends of the readiness scale. It follows that readiness cannot simply be reduced to employment status. Some young people may enter the workforce without a strong sense of career readiness, while others who are currently out of work may still consider themselves well-prepared. This conclusion is consistent with psychosocial approaches to employability, which distinguish whether an individual has a job and resources, and how they perceive their ability to receive, retain, or move between employment opportunities (Fugate et al., 2004; McArdle et al., 2007). Which also helps to explain why in this study the willingness to pursue alternative paths, such as freelance professionalism, entrepreneurship or work in related professions, was not significantly linked to willingness. While openness to alternatives may indicate flexibility in career direction, flexibility alone does not prove that a person has the resources, experience, or opportunity framework needed to act on these alternatives. All in all, the results show that the transition from education to employment should not be viewed as a simple process of accumulation, in which more digital skills, more adaptability, and more practical experience inevitably lead to higher levels of readiness. Human capital becomes important as a result of its interaction with adaptive and contextual resources, rather than simply because it is available (Fugate et al., 2004). It is also consistent with recent reviews that consider problem-solving, communication, teamwork, adaptability, and learning readiness as interlinked elements of employment rather than as separate guarantees of success in the labor market (Monteiro et al., 2023). However, the current data include an important condition and even if such career resources are present together at the individual level, it cannot be assumed that they will be embodied in a sense of readiness for the labor market.

Conclusion

The study examines the relationship between digital competence, professional adaptability and practical experience in the labor market, as well as how these factors are related to young people's perception of their readiness for transition from education to employment in Kazakhstan. Moreover, the results point to a differentiated model in which career-related skills, experiences, and benchmarks take separate positions in the transition to work. Digital competence was significantly linked to perceived readiness for work, though this link was small and not linear. Similarly, internship experience and current employment status were linked to willingness, but the size of their impact was small, and in no case did a large experience lead to an apparent increase in perceived readiness. On the other hand, willingness to consider alternative career paths had nothing to do with readiness. The same applies to the comprehensive measure of career adaptability and all its individual components, such as career planning, job flexibility, confidence in acquiring new skills, and having a career development strategy. However, these different attitudes towards careers are related, which shows that they form a coherent adaptive resource cluster, although they did not directly lead respondents to judge their immediate employability. The research hypothesis that greater digital competence and career adaptability would be positively correlated with perceived

willingness in the labor market has been only partially confirmed. Despite the general association's support for digital competence, the observed model does not allow for the simple assertion that increasing digital competence should lead to greater readiness. With regard to the aspect of vocational adaptability, no support was found. Current results show that having adaptive career resources and perceiving oneself as ready to enter the labor market should not be treated as equivalent outcomes. The availability of resources does not guarantee that they will lead to labor-market readiness. While digital competence can contribute to the development of human capital, career planning can provide direction and internships can provide an opportunity to familiarize oneself with working conditions, the practical value of these resources seems to be how they relate to real professional opportunities and experience. This point is particularly important when it comes to the transition from education to work, because job opportunities and career changes are closely linked but still considered separate processes. In summary, it is important to note that mechanisms mediating and modifying the relationship between individual resources and the outcomes of the transition to employment also require further study. These may include access to internships and training, quality of career counseling, professional networks, employer requirements, and institutional support from educational institutions. The combination of self-rated indicators with objective employment characteristics and employer evaluations is methodologically relevant, allowing a more comprehensive study of the transition from education to professional activity. Such an approach would create a framework for identifying the combination of individual, educational and structural labor-market resources that are most relevant to enhancing employability and career sustainability of students and recent graduates in Kazakhstan under conditions of ongoing digital transformation.

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Авторлар туралы мәлімет / Сведения об авторах / Information about authors

Dana Burkhanova	PhD, Associate Professor, School of Sciences and Humanities, Nazarbayev University, Astana, Kazakhstan, e-mail: dana.burkhanova@nu.edu.kz , ORCID ID: https://orcid.org/0000-0001-6206-4331
Moldir Akmadi	PhD, Department of Social and Humanitarian Disciplines, Kazakh National Women's Teacher Training University, Almaty, Kazakhstan, e-mail: akmadi.moldir@gmail.com , ORCID ID: https://orcid.org/0000-0003-0789-3684
Anel Nurkanat	Master of Sociology, Senior Lecturer, School of General Education, Astana IT University, Astana, Kazakhstan, e-mail: aylenaan@gmail.com , ORCID ID: https://orcid.org/0009-0004-6370-0116
Дана Қамаловна Бурханова	PhD, қауымдастырылған профессор, Жаратылыстану, әлеуметтік және гуманитарлық ғылымдар мектебі, Назарбаев Университеті, Астана, Қазақстан. e-mail: dana.burkhanova@nu.edu.kz , ORCID ID: https://orcid.org/0000-0001-6206-4331
Мөлдір Арманқызы Ақмади	PhD, Қоғамдық-гуманитарлық пәндер кафедрасы, Қазақ ұлттық қыздар педагогикалық университеті, Алматы, Қазақстан, e-mail: akmadi.moldir@gmail.com , ORCID ID: https://orcid.org/0000-0003-0789-3684
Анель Нұрқанатқызы Нұрқанат	Әлеуметтану магистрі, аға оқытушы, Жалпы білім беру пәндері мектебі, Astana IT Университеті, Астана, Қазақстан, e-mail: aylenaan@gmail.com , ORCID ID: https://orcid.org/0009-0004-6370-0116
Дана Камаловна Бурханова	PhD, ассоциированный профессор, Школа естественных социальных и гуманитарных наук, Назарбаев Университет, Астана, Казахстан, e-mail: dana.burkhanova@nu.edu.kz , ORCID ID: https://orcid.org/0000-0001-6206-4331
Мөлдір Арманқызы Ақмади	PhD, и.о. доцента кафедры общественно-гуманитарных дисциплин, Казахский национальный женский педагогический университет, Алматы, Казахстан, e-mail: akmadi.moldir@gmail.com , ORCID ID: https://orcid.org/0000-0003-0789-3684
Анель Нурқанатқызы Нұрқанат	Магистр социологии, старший преподаватель, Школа общеобразовательных дисциплин, университет Astana IT, г. Астана, Казахстан. e-mail: aylenaan@gmail.com , ORCID ID: https://orcid.org/0009-0004-6370-0116