Soft, hard, and digital skills for managers in the digital age: Business requirements and the need to master them

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Abstract. Digitalisation in Ukraine and the world changes products, services, and business processes, affecting the number and quality of jobs due to the need for digital skills. Employers are requiring new skills from candidates in job profiles for existing managerial positions. The purpose of this study was to investigate the impact of soft skills, hard skills, and digital skills on managers in the era of digitalisation based on the analysis of business requirements. The following methods were used: theoretical generalisation and comparison (disclosure of the content of each group of skills), analysis (skills most frequently and most demanded by employers), statistical method (summary and grouping of data collected from the job search portal), synthesis (combination of different types of information), and concretisation (identification of problems in the legislative and regulatory framework of Ukraine). The study established the ratio of skill groups in the analysed positions: sales manager, HR manager, and logistics manager mainly need the following skill groups: soft and hard, but to varying degrees. Soft skills are essential for the positions of sales manager and HR manager, while hard skills prevail for the position of logistics manager. Only project managers need hard skills and digital skills because of their specificity. To provide a better understanding and visualisation of complex information about competencies or skill levels, the authors first introduced a "three-zone competency stoplight" and a colour matrix of the result of soft, hard, and digital skills requirements of employers by position. Three skills groups are proposed to be represented in different colours: orange (soft), pink (hard), and green (digital), which will allow businesses to use this visualisation to see the zones that correspond to their job offers and understand what skills they will require from candidates for the relevant position and to what extent. The practical significance of the study is the possibility of using its results in the development of educational programmes for planning the development of necessary disciplines

Keywords: professional competencies; logistics manager; sales manager; HR manager; project manager; job advertisement; skill ratio

● INTRODUCTION

Different digitalisation technologies have different effects on employment and skill requirements. However, the general conclusion in expert studies is that there is an expected increase in demand for highly skilled workers who, on the one hand, can stimulate the development of technologies and design digital solutions for production systems and workplaces, and, on the other hand, can effectively implement and support digital solutions (e.g., through data

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processing and analysis) (What about skills…, n.d.). Such statements enabled an in-depth study of this issue.

A significant number of researchers from different countries worked on the study of different skill groups, in different fields of activity and in different countries. This topic is quite popular, but over time, it requires more and more research. M. Poláková *et al.* (2023) pointed out in their paper that there is a marked demand in technologically driven areas for soft communication skills such as critical and analytical thinking, problem solving, communication skills, and creativity with flexibility. In addition, it is noted that people must have balanced software and digital skills to succeed in a future characterised by technological progress. N. Shah *et al.* (2023) focused on the future career development of students of higher educational institutions in Pakistan. In their study on soft skills, they identified, in their opinion, three main ones: creative self-efficacy, confidence in problem solving, and teamwork, which will promote employment and fulfil their role in preparing graduates for an unpredictable labour market. As part of the review of digital competencies for the project management position, S. Marnewick & A. Marnewick (2021) pointed out the need to be digitally competent, and this requires digital intelligence. The acquisition of digital intelligence is being introduced. Competencies related to digital intelligence are formulated. Some of the main ones, according to the researchers are online communication and collaboration. The study was conducted to determine the digital intelligence of project managers in the context of South Africa.

The required skill groups for construction companies and construction economists were considered. In addition, T. Tsyfra *et al.* (2022) in their paper pointed out that the world is now breaking the VUCA (volatile, uncertain, complex, ambiguous) era to BANI (brittle, anxious, nonlinear, incomprehensible) world, which will allow sectors of the economy and spheres of life to make a digital leap towards digital skills. As for the necessary set of skills for a manager, the researchers noted the insufficiency of the traditional division into hard skills and soft skills and added a separate group of qualities – digital skills. Digital skills are defined as the ability to find, evaluate, use, share, and create content using digital devices such as computers and smartphones. However, the researchers noted that such a soft skill as lifelong learning is extremely important.

The library industry needs its own individual set of skills to develop library-user relations based on civilizational challenges. O. Ivashkevych (2023) pointed out that among the three groups of skills: soft, hard, digital, prospects are seen in the application of soft skills as a cluster of success in this industry. For future social workers, according to T. Kochubey & Y. Tkachuk (2021), it is necessary to develop a triad of skills: hard skills, soft skills, and digital skills. The researchers have established a relationship between them. However, soft skills were distinguished as necessary for the successful work of social workers who receive education in modern Ukrainian higher education institutions.

To adapt to the changes of the digital age, neither the old ways of managing processes nor the employees themselves are enough. Nowadays, top managers need to be exceptional in having (or creating) a digital vision, meaning they need to imagine how their company will use technology in the future and implement a people-centred approach. Managers need to make sure that their employees have up-to-date relevant skills that will help them adapt to work with new technologies. To ensure successful management activities of future managers of enterprises, G. Cherusheva (2023) argue that in the process of their professional training, it is extremely necessary to develop "soft skills". The researcher cited the key structural components of soft skills and substantiated their socio-economic role. Just as for future business leaders, the development of soft skills is important for future education managers, but their set has its own characteristics. Y. Yampol *et al.* (2023) pointed out that in order to improve the quality of training in educational institutions for future education managers, it is necessary to develop such soft skills as leadership, communication skills, motivation, creativity and innovation, adaptability, and conflict resolution. To obtain the profession of a teacher in the context of professional activity, N. Nosovets *et al.* (2021) introduced a new group of skills, such as "self skills", which, according to researchers, can develop the inner core of all competencies, on which all others are built.

The paper "Identifying leadership skills required in the digital age" by the German authors M. Klus & J. Müller (2020) is of interest. The researchers used a three-stage study design and compared leadership skills described in the literature with statements of managers and data obtained from job advertisements for leadership positions. It was determined that the key challenges for managers are a high level of information diversity, a wide range of business problems, the speed of change, and a heavy workload. The purpose of the study was to determine the essence and composition of soft skills, hard skills, digital skills, their impact on groups of related specialities (subtypes) of the manager profession, such as: sales manager, HR (human resources) manager, logistics manager, and project manager. In order to achieve the stated purpose, the following tasks were set: to evaluate and specify the existing skills related to the professional activity of the manager in terms of improving the quality of training; to suggest a skill ratio based on the application of the methodology "three-zone competency stoplight" for candidates for four positions of the manager profession for different companies with different types of economic activity; to draw conclusions about the importance for managers to develop different skills groups to further understand what skills the business needs and what skills they lack, in what area they need to develop to get the desired position.

● LITERATURE REVIEW

The issue of the definition and necessity of soft and hard skills is mainly studied by companies that offer vacancies to future professionals and show how to develop important skills for employment. Researchers mainly investigate these concepts from the perspective of their theoretical meaning or disclosure of the components that relate to them. N. Nosovets *et al.* (2021) conducted a theoretical study of the content of the concept of "self skills", self-competence in the context of professional activity of a teacher, which is associated with a change in the learning paradigm

in the New Ukrainian School and will provide for a change in the attitude towards the school teacher. The activity of a modern teacher should motivate him to creativity and self-improvement, self-management, self-development, etc. According to researchers, the teacher should be capable of constant change, i.e., develop their own "self skills" and be able to motivate their students.

T. Kochubey & Y. Tkachuk (2021) in their study considered the problems of developing the competencies of future social workers. The need for applicants to develop the skills of three skills groups was noted. The researchers suggested that soft skills include communication skills, the ability to solve problems comprehensively, critical thinking, emotional intelligence, empathy, decision-making ability, and flexibility. Social workers in their professional activities should effectively communicate with various groups of the population with the state's demand for high quality of services provided. In the context of the current issue, Y. Yampol *et al.* (2023) considered the importance of developing soft skills among education managers to improve the quality of training in educational institutions. The researchers noted that future organisers and managers of educational institutions are future leaders who should develop leadership, communication skills, and the ability to resolve conflicts. In addition, the ability to plan, organise, and monitor the work of the team, and help it achieve good results.

G. Cherusheva (2023) emphasised the extremely necessary task of the system of professional training of future senior personnel of the country. Possible challenges in the system of higher education in the development of the country's managerial potential are noted, since it has a special mission to create creative leaders. The main approaches to defining the concept of "soft skills" and its structural components: creativity, critical thinking, communication, and cooperation were considered. The paper substantiates the introduction of a new approach to the development of educational programmes that should represent a set of competencies, according to which employers will evaluate potential candidates for managerial positions, which will serve as effective human resource management in the company. M. Poláková *et al.* (2023) noted that among the important challenges facing Industry 4.0 is the issue of effectively managing the role of human resources in the context of the current digital revolution. New technologies can exacerbate labour shortages, reduce human labour, and allow organisations to allocate human resources to higher-value-added capacities. The digital revolution, which is characterised by the need for dynamic competencies and the acquisition of knowledge and expertise from external sources, can be of great importance and will require careful consideration of human resource management.

N. Shah *et al.* (2023), using a quantitative approach, developing and analysing a questionnaire for data collection, highlighted the importance of communication skills in students' career development and their future career intentions. The study aims to help higher education students in Pakistan in the digital age to understand what issues require serious concentration for their survival. The subject of study by S. Marnewick & A. Marnewick (2021) was digital competencies, which are considered important in project management in the digital economy. It also provides

recommendations for organisations on how to plan and structure training and improve the skills of their current project managers. It is established that joint efforts are required to improve the skills of project managers.

T. Tsyfra *et al.* (2022) focused on the development and use of digital skills by construction economists at the turn of the era of VUCA-world and BANI-world concepts. The study notes that given the current realities of globalisation of socio-economic institutions and institutions, challenges related to climate change, pandemics, military conflicts and natural disasters, digitalisation skills will replace the "soft" skills that construction economists need, both in the training of such specialists and in continuous education throughout life. O. Ivashkevych (2023) investigated the resource content of soft skills components as an integral success option. It is noted that the librarian who will be more successful in the face of global changes in the role and multifunctionality of libraries will acquire new skills, expand their specialisation in their profession: coaching consultant, social media marketing specialist, event manager, etc. Those who understand teamwork will acquire the ability to plan options and approaches, master knowledge, be effective in achieving goals, feel confident, self-sufficient, and comfortable. A modern library and information specialist will know, apply, and plastically accumulate the advantages of soft skills both in the personal and career spheres, and, accordingly, will influence life in the country. M. Klus & J. Müller (2020) explored how leaders should lead organisations and their employees in the increasingly digitalised business environment and what skills are needed to succeed. It is found that although the development of digital technologies significantly changes the work environment in organisations and creates new challenges for managers, there are still challenges and technological changes associated with the requirements for the skill set required for managers.

The analysis of studies has shown that Ukrainian and foreign authors have paid sufficient attention to the concepts and components of "soft skills", while "hard" and "digital skills" have been rather neglected. The need to apply different skill groups in different positions was considered. But time is changing rapidly, even epochs and circumstances are changing, which will constantly require additional research.

● MATERIALS AND METHODS

The materials used for this study are important sources of information that allowed considering different models and approaches for determining the essence and composition of soft, hard, and digital skills, conducting a detailed analysis of each group of skills to understand the difference between them. The main sources of the research are the Resolution of the Cabinet of Ministers of Ukraine No. 1341 "On Approval of the National Qualifications Framework" (2011), European Commission European Skills, Competences, Qualifications and Occupations (ESCO) (European skills/competences..., n.d.), Educational and professional programme "Management" (2023). The data from the Robota.ua (n.d.) portal were used to analyse the required skills based on the requirements of employers according to the proposed distribution for the group of related specialities (subtypes) of the profession of manager, such as: logistics

manager, project manager, sales manager, and HR manager. After analysing job advertisements, key trends and principles were identified that can serve as a basis for further recommendations in substantiating the need to master the components of each skill group for each of the subtypes of the manager profession.

The first method used in the study to reveal the content of each skills group was the method of theoretical generalisation and comparison. This method helped to consider the essence of the definitions "soft skills", "hard skills", and "digital skills", and prove that they can be divided into three different equivalent groups of skills. The analysis was used to reveal the most frequent and popular components of the selected skills groups by employers, which helped to understand and reveal the components of each skill and prove its significance. This method was also used to investigate the skills that employers require from a candidate for the relevant position, which allowed distributing the skills that employers put forward into three skill groups and three positions.

The statistical method was used to summarise and group data collected from the Robota.ua portal, to determine the share of each skill group in a potential candidate for the following positions: logistics manager, project manager, sales manager, and HR manager. Data processing helped to distribute skills by position and determine the required percentage of digital skills, soft skills, and hard skills, which proved that employers require specialists with digital skills. The next method was synthesis, which was used to combine different types of information, concepts, and approaches to prove that there is indeed a need to separate "digital skills" into a separate group of skills. This method helped to better understand and interpret various aspects of the need for the emergence of a third group of skills in the digital age. It also helped to explore the most important digital skills to learn from experts.

To visually represent the distribution of skills in companies, the authors first developed and implemented the method of "three-zone competency stoplight", based on the idea of a three-zone stoplight, where each zone reflects the corresponding level of skills. The companies are located in different colour-coded zones in the respective cities, which corresponds to the competencies they require from job candidates. Other methods used in the study were generalisation and concretisation. The first of these methods was used to summarise key findings and key aspects of the study. In particular, this method allowed focusing on the most important ideas and results of the study. It also helped to clarify the results and highlight the need to constantly learn new skills and new technologies in the digital age. The concretisation was used to identify problems in the legislative and regulatory framework of Ukraine, which turned out to be outdated and required updating.

● RESULTS AND DISCUSSION

General set of skills and analysis of soft skills, hard skills, and digital skills that are most in demand by employers

The result of the learning process is obtaining a profession that consists of the acquired knowledge, skills, and abilities. The Resolution of the Cabinet of Ministers of Ukraine No. 1341 "On Approval of the National Qualifications Framework" (2011) defines the concept of "skill" as "the ability to apply knowledge to perform tasks and solve problems". Skills can be divided into different types of thinking: logical, creative, and intuitive. They are also called cognitive. There are also practical skills that consist of manual dexterity, the possibility of applying practical methods, materials, tools and instruments, and communication. Therefore, a graduate of an educational institution, getting a particular profession, must possess a set of skills that can be both cognitive and practical. In the business world, employers have long used the concepts of "soft skills" and "hard skills", which implies exactly the skills acquired in the course of training.

With the rapid transition of the entire world to online, new opportunities for work in various sectors of the economy have emerged. However, new problems and challenges have emerged. They can be solved by understanding and mastering new competencies, such as "digital skills". No less valuable skills have emerged, and in the context of digitalisation, perhaps the most important ones. Technology companies and all organisations in the digital economy are beginning to understand that digital skills are vital for employees in the digital age. According to McKinsey, in the 8 weeks of 2020, the world has made a 5-year leap in the introduction of digital consumer and business solutions. An unprecedented acceleration of digital transformation has begun (Digital competence…, 2021). Active digitalisation and the transition to online, remote work, telecommuting is not something temporary or short-term, but something that will remain with us for a long time, which should be clearly understood. The paper examines what groups of skills (soft, hard, digital) and in what proportion company managers want their employees to have and how to achieve a balance between them. Therefore, each skill group is analysed in more detail and their needs are determined by employers.

Soft skills (flexible skills) are universal competencies. Some sources define them as "situational skills, knowledge, and character traits that can be used in any job" (What are hard skills and soft skills…, n.d.). Their development continues throughout life and is difficult to measure. Most often, the degree of manifestation depends on the type of personality, character traits, and temperament. An analysis of soft skills, which, according to various sources, are the most frequently used and demanded by employers, was carried out (Table 1).

Table 1. Soft skills that are the most frequently required by employers

Source	List of soft skills
What are hard skills and soft skills: How the employer evaluates us (n.d.)	• ability to work in a team; • critical thinking; • leadership; • creativity; • ability to meet deadlines; • responsibility and discipline

Table 1, Continued

Source	List of soft skills
M.M. Robles (2012)	• honesty; • sociability; • courtesy; • responsibility; • social skills; • positive attitude; • professionalism; • flexibility; • teamwork; • work ethic
Educational and professional programme "Management" (2023)	• technologies of effective thinking; • management skills; • leadership; • time management; • public speaking; • responsibility and discipline
J. Andrews & H. Higson (2008)	• professionalism; • reliability; • ability to cope with uncertainty; • stress tolerance; • ability to plan and think strategically; • ability to communicate and interact with others both in a team and over a network; • good written and oral communication skills; • ICT (information and communications technology) skills; • creativity and self-confidence; • good self-control and time management skills; • willingness to learn and take responsibility

Source: summarised by the authors

The components of managerial skills may include: administrative activities, leadership and motivation, supervision of people, organisation, planning and scheduling of work and activities, decision-making, recruitment and hiring, allocation and control of resources, development of goals and strategies, and establishment and development of teams. The European Commission ESCO provides a classification of skills that are relevant to the EU labour market, education, and training (European skills/competences…, n.d.). There is a whole block of cross-cutting skills and competencies that can be classified as universal, i.e., flexible skills. The skills group "Basic skills and competencies" is the basis for interaction with other people, and for development and learning as a person. These include the ability to understand, speak, read, and write in the language(s), work with numbers and measures, and use digital devices and applications. It includes such components as mastering languages, working with digital devices and applications, and working with numbers and measures.

Skills such as "Mental abilities and competencies" are related to the ability to apply thought processes of collecting, conceptualising, analysing, synthesising, and/or evaluating information obtained as a result of observation, experience, reflection, reasoning, or communication, or generated by them. These include the ability to evaluate and use various types of information to plan activities, achieve goals, solve problems, and perform complex tasks in a routine and new way. These include problem solving, information processing, ideas and concepts, planning and organisation, creative and innovative thinking.

Group skills such as "Self-management skills and competencies" include demonstrating a desire to learn, perform effectively, take a proactive approach, and maintain a positive attitude. Mastering this skill requires people to understand and control their own capabilities and limitations, and use this self-awareness to manage activities in different contexts. These include the ability to act reflexively and responsibly, accept feedback, adapt to changes, and seek opportunities for personal and professional development.

Group skills "Social and communication skills and competencies" refers to the ability to interact positively and productively with others. This manifests itself in communicating ideas effectively and empathetically, aligning own goals and actions with the goals and actions of others, acting in accordance with values, ensuring the well-being and progress of others, and demonstrating leadership qualities. It has the following components: compliance with the code of ethics of conduct, leadership of others, support of others, cooperation in teams and communities, and communication. Such a group of skills as "Life skills and competencies" is of interest. They consist of the application of civic skills and competencies, environmental skills and competencies, the application of general knowledge, the application of cultural skills and competencies, the application of health-related skills and competencies, and the application of entrepreneurial and financial skills and competencies. From the standpoint of employers, soft communication skills are of paramount importance for entry-level success in the workplace.

Hard skills are professional skills; these are the skills and knowledge necessary for a particular job and a particular profession (What are hard skills and soft skills…, n.d.). In other words, these are the technical skills and knowledge required to perform the relevant work in the job description. Hard skills are those achievements that are included in the resume, what can be learned and tested, such as education, work experience, knowledge, and skill level. Hard skills are characterised by: a list of knowledge and skills that can be objectively evaluated and verified;

availability of educational documents; certificates of the level of proficiency of certain knowledge.

Examples include the ability to type quickly, speak foreign languages, know programming languages, and perform mathematical calculations. In other words, any skill can be assessed objectively, and to gain the necessary knowledge, one must study, and a certificate or diploma will be a confirmation (What are hard skills and soft skills…, n.d.). If the applicant is studying to become a manager, they will definitely need such a hard skills group as "Application of entrepreneurial and financial skills and competencies", which will help to effectively manage their own and other people's finances and resources. A person with these skills will be able to demonstrate perseverance, openness to opportunities and risks, the ability to mobilise resources, and a willingness to learn from their own experience. This group of skills can be divided into two components: the first is the ability to "show an entrepreneurial spirit", and the second is the ability to "manage financial and material resources".

The first component of the skill will enable a person to learn how to develop, organise and manage their own business, identifying and exploiting opportunities and mobilising resources with a view to profitability. Demonstrate a proactive attitude and determination to achieve business success. They will also learn how to strive for company growth, lead the technological development of the organisation, identify pricing opportunities, new processing opportunities, analyse supply chain strategy, learn how to identify market niches, processes for re-design, attract new customers, identify innovative packaging concepts, identify new business opportunities, etc. The second acquired component of the above skill will help to effectively carry out financial planning, using loans, savings, investments and pensions to achieve short- and long-term goals, using financial advice with critical thinking, comparing offers when purchasing products or services, and actively choosing appropriate insurance products.

Digital skills are defined as the skills required to use digital devices, communication applications, and networks to access and manage information. Digital skills, as defined by UNESCO, are the ability to use digital devices, applications, and networks to access and manage information (Digital competence…, 2021). In 2021, the University of Edinburgh named the five most important digital skills for learning: effective literature and source searching, data management, communication, software use, and cybersecurity. Bubble has added two more skills – text processing and data visualisation. An analysis of digital skills, which, according to various sources, are the most frequent and in greatest demand among employers, was carried out (Table 2). The components of digital skills proposed to be applied by state institutions of Ukraine and the European Union are analysed (Table 3).

Table 2. Digital skills that are most in demand among employers

Source	List of digital skills
University of Edinburgh (Digital competence…, 2021)	• effective search for literature and sources; • data management; • communication; • use of software; • cybersecurity
Bubble (Digital competence…, 2021)	• effective search for literature and sources; • data management; • communication; • use of software; • cybersecurity; • text processing; • data visualisation
City administration experts (CFO and digitalization…, 2023)	• basic knowledge of modern digital technologies and ability to apply them; • digital thinking and the use of digital technologies in solving problems; • data management skills – business intelligence-based decision-making; • use of digital channels for internal and external interaction; • digital ethics – understanding the principles of behaviour in a digital environment; • knowledge of information security principles

Source: summarised by the authors

Table 3. Digital skills offered by government agencies

Source	List of digital skills
Digital competence framework for Ukrainian citizens (The Ministry of Digital Transformation…, 2021)	• fundamentals of computer literacy; • information literacy and ability to work with data; • creation of digital content; • communication and interaction in the digital society, security in the digital environment; • solving problems in a digital environment and lifelong learning
ESCO European Commission (European skills/ competences…, n.d.)	• work with computers: using computers and other digital tools to develop, install, and maintain ICT software and infrastructure, and to view, search, filter, organise, store, extract, and analyse data, collaborate and communicate with others, and create and edit new content; • information skills: collecting, storing, monitoring, and using information; conducting research, investigations and testing; maintaining documentation; managing, evaluating, processing, analysing, and monitoring information and predicting results

Source: summarised by the authors

The digital competence framework for Ukrainian citizens reveals the concept of the above digital skills (The Ministry of Digital Transformation…, 2021). And each component can be detailed depending on the level of proficiency in a particular skill. Information skills of working with a computer depending on the position, for example, logistics manager, may include obtaining skills to manage digital documents, link data between all internal business units, integrate ICT data, digitise documents, create databases of freight rates, plan enterprise resources, manage a standard system, combine data from sources to provide a single view of the totality of this data, manage quantitative data, transfer existing data, use special software for data analysis, keep computer records of railway (transport) traffic, coordinate database resources, use software libraries, use geographic information systems, manage flight data transmission program, perform data mining, perform data cleaning, store digital data and systems, maintain warehouse accounting databases, create digital files, develop data transmission services for navigation purposes, etc.

Thus, the essence and structure of each skill group (soft, hard, digital) was investigated. It was established that an unambiguous interpretation has not been developed, but depending on the profession, employers may need these skills in different proportions. Professional skills and knowledge (hard skills) are more important mainly for specialists in theoretical areas, for developers, engineers, and designers. The overall success of their work often depends on their professional skills. But the ability to communicate is sometimes not important at all. For example, for software development specialist, the most important ones will be digital skills, such as perfect command of HTML and CSS, knowledge of frameworks and libraries, knowledge of JavaScript, the ability to compose queries, and many other important professional knowledge. These will also be hard skills for them. Soft skills will receive less attention.

Certain professions require a balance of hard, digital, and soft skills. These are lawyers, economists, teachers, and doctors. How they interact with their environment is just as important as their professional competencies. For example, an editor of an online publication needs completely different skills: their area of interest is content planning, assigning tasks to authors, editorial work, and knowledge

and ability to use genre stylistics. This position requires all skills in equal proportion. Translator must be proficient in the language and translation techniques, which are hard skills together with digital skills, which will guarantee the translator a successful professional activity. Soft skills will also be required to organise interaction between people, teamwork, etc. For the position of Chief Financial Officer (CFO), according to a survey conducted by the Kyiv City State Administration in 2020, according to the respondents, the following skills and competences are required for the position of CFO, which are in the greatest demand for digital transformation,%: analytics, data skills (66%); methods and tools for digitalising products and services (66%); process and project management (58%); self-education and adaptation (57%); technological expertise (50%); strategic thinking (46%); communication skills (39%); creativity, ingenuity (35%); programming, algorithmic thinking (25%) (CFO and digitalization…, 2023).

HR experts agree that soft skills are the benefits of the future. Over time, even in theoretical disciplines, someone who knows how to communicate and understands teamwork will be more successful. And they are also likely to make more progress in their career. Thus, it is analysed and proved that soft, hard, and digital skills are skills of the same level and can be divided into three separate groups. However, while today's universities teach soft and hard skills, digital skills remain underdeveloped. According to statistics, in 2024 there will be a growing demand for specialists with digital literacy: 24% of employers suggest that over the next 5 years, finding employees with the right skill set will remain their biggest challenge; 50% of all employees will need retraining over the next 5 years; 85% of Americans believe that digital skills will be important for success in the modern workplace (What are digital skills, 2022). The number of vacancies requiring digital skills is projected to grow by 12% by 2024; 94% of business leaders expect employees to gain new skills at work.

Analysis of skills put forward by employers in the labour market

The analysis of skill requirements for potential candidates for the sales manager is carried out (Table 4). Data from the website Robota.ua (n.d.) was used as the basis.

Table 4. Analysis of skills required by employers from a candidate for the position of sales manager

Company	Skills (functional responsibilities)		
	soft skills	hard skills	digital skills
MatroLuxe LLC	• maintaining a customer base and finding new opportunities; • active sales and execution of plans; • maintaining accompanying sales documentation; • conducting presentations; • controlling accounts receivable; • expanding customer base	• maintaining a customer base and finding new ones; • maintaining accompanying sales documentation; • working in a designated area	• maintaining a customer base and finding new ones; • expanding customer base; • fulfilment of objectives; • knowledge of office software: MS Word, Excel, 1C.8, Bitrix24
Sky-Energy	• attracting potential clients to cooperate from the existing "warm" contact base; • building and maintaining long-term customer relationships; • customer advice on products and delivery terms; • conducting negotiations and meetings to expand the product range and analyse customer needs	• active customer search and engagement; • ensuring sales volumes based on a working customer base at a given level; • preparing commercial offers and providing necessary information on customer requests; • implementing the sales plan; • control of mutual settlements and work with accounts receivable; • ensuring high-quality document flow with clients	• working with the 1C database; • study and thorough knowledge of the product range; • interacting with the company's structural divisions

| Company	Skills (functional responsibilities)		
	soft skills	hard skills	digital skills
Nestle Ukraine LLC	• coordination and control of work with clients; • ensuring that short-and long-term goals and key performance indicators are met; • developing and approving a procurement plan and budgets for sales development	• conducting annual negotiations and agreeing on terms of cooperation with clients; • coordinating the principles of placement of Nestle equipment and products in the sales divisions of clients; • approval and implementation of the customer procurement plan; • developing a strategy for cooperation between Nestle and key clients	• planning and implementation of promotional activities, analysis of their effectiveness; • search for new opportunities for the company's business growth in the client
Alfatech Trading House LLC	• visiting regular customers to boost and increase sales; • commercial support of transactions; • sale of truck, industrial, and agricultural tires; • searching for and attracting new counterparties to cooperate, working with the existing customer base; • working with accounts receivable	• knowledge of primary accounting documentation; • implementation of the sales plan and objectives set by management	• searching for and attracting new counterparties to cooperate, working with the existing customer base
Woodyloftstyle	• providing high service; • advising clients by phone and in the office; • full support of the client at all stages (from the meeting to the delivery stage)	• implementation of the sales plan; • working with documents	• maintaining a customer base in a customer relationship management (CRM) system

Note: LLC – limited liability company
Source: developed by the authors based on Robota.ua (n.d.)

The result of the analysis (Table 4) showed that soft skills are preferred for the position of sales manager of the company, because this profession is more related to working with clients. The specifics are that Sky-Energy, which belongs to the electrical engineering industry and Nestle Ukraine, which is engaged in retail, needs candidates with more developed hard skills, although another retail company (Alfatech Trading House LLC) pays more attention to soft skills. The production companies Matro-Luxe LLC and Woodyloftstyle need employees with more developed soft skills. This shows that the distribution of skills requirements often depends on the type of activity of the company.

The analysis allowed building a "competency stoplight" (Fig. 1), which clearly shows the extent to which different companies require different skills.
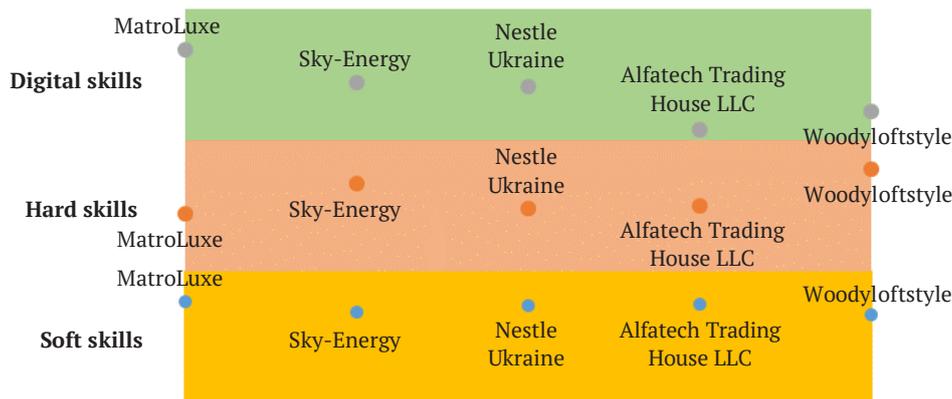
Figure 1. "Competency stoplight", built for the position of sales manager
Source: compiled by the authors

The analysis of skills for the position of HR manager is carried out, which is shown in Table 5. It became clear that the same requirement can be assigned to multiple skills at the same time.

For example, such a skill as "interviewing" was classified as a soft skill because it requires good communication skills, the ability to listen and create a friendly and open atmosphere during the interview. It was also classified as hard skills, which may require specific technical skills, such as the ability to create interview questions, maintain documentation, and assess candidates using appropriate methods.

Table 5. Analysis of skills required by employers from a candidate for the position of HR manager

Company	Skills (functional responsibilities)		
	soft skills	hard skills	digital skills
EVA	• coordination of the project "Mentoring system for new employees"; • development of certification procedures for various levels of both office and retail positions	• development of online surveys, tests, and competency assessment questionnaires; • coordination of events in the distance learning system, user support; • organisation and conduct of personnel assessment; • summing up results and reporting	• updating existing evaluation procedures (revision, updating); • conducting an analysis
Silpo	• organisation of motivational events; • adapting new employees	• search and selection of supermarket staff	• search and selection of supermarket staff; • maintaining HR records
Ukrposhta	• adapting new employees; • conducting interviews	• active search for candidates for open vacancies; • conducting interviews	• active search for candidates for open vacancies; • conducting interviews
DTEK LLC	• preparation of meetings with employees (collecting information by department, preparing presentations, receiving and analysing feedback); • support of corporate events and dates (preparation of greeting materials, organisation of contests and flash mobs); • search for ideas for internal communications (formal and informal), participation in the development of communication plans and strategies	• content and administration of the enterprise page on the corporate portal on the Share Point platform (writing texts of various topics, shooting videos, technical placement); • filling and monitoring the state of information stands in structural units; • search for ideas for internal communications (formal and informal), participation in the development of communication plans and strategies	• content and administration of the enterprise page on the corporate portal on the Share Point platform; • preparation of text and photo materials; • participation in the development of communication plans and strategies
Windows "STEKO"	• ensuring effective search, selection, and adaptation of personnel; • development of corporate culture	• ensuring effective search, selection, and adaptation of personnel; • monitoring of team climate, organisation of corporate events	• monitoring of team climate, organisation of corporate events

Source: developed by the authors based on Robota.ua (n.d.)

Similarly, with the skill "active search for candidates for open vacancies": it was assigned to soft skills, because it requires knowledge of various sources of candidate search, the ability to use various search methods, such as the Internet, databases, professional networks, etc. It was also classified as hard skills, as it requires the use of online platforms to find candidates, such as job sites, professional networks, etc. Based on the results of the study, a "competency stoplight" for the position of HR manager is constructed, which is shown in Figure 2.
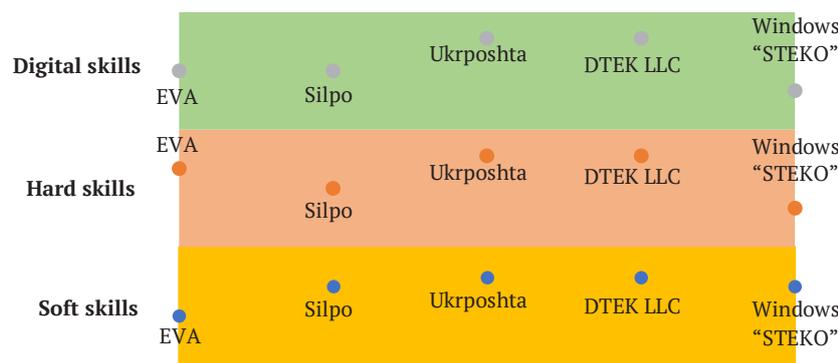
Figure 2. "Competency stoplight", built for the position of HR manager

Source: compiled by the authors

"Competency stoplight" has three skill zones. It shows that companies in the retail industry need different skill ratios: Silpo requires more soft skills, EVA gives a greater advantage to candidates with hard and digital skills. Ukrposhta and DTEK LLC companies need specialists with an equal amount of soft skills, hard skills, and digital skills. The production company of the Windows "STEKO" needs specialists in soft skills and hard skills equally, and half as many digital skills. The analysis of skills for the position of logistics manager is carried out, which is shown in Table 6.

Table 6. Analysis of skills required by employers from a candidate for the position of logistics manager

Company	Skills (functional responsibilities)		
	soft skills	hard skills	digital skills
INTERPIPE	• ability to understand and analyse production plans for appropriate logistics process planning; • search and organise transport to fulfil production plans; • willingness to participate in projects aimed at implementing digital tools and optimising logistics processes	• ability to work with numerical information and perform analysis to calculate logistics needs; • defining and organising transport for effective implementation of implementation plans; • ability to create documentation for logistics operations, such as bills of lading; • ability to organise and maintain a database for effective monitoring of shipments	• ability to work with digital tools, which includes participation in projects to implement digital technologies and optimise logistics processes
PepsiCo	• high communication skills to ensure effective interaction between logistics and other services; • ability to analyse data and make informed decisions; • monitoring and reconciliation of service level indicators and communication with the sales department; • organisation and management of interaction with logistics partners; • ability to organise and conduct activities aimed at improving interaction with partners	• knowledge of and ability to work with Microsoft Office, Excel, 1C; • skills in controlling the storage of inventory items in warehouses; • ability to participate in budgeting and cost tracking processes; • active search and implementation of ideas for cost optimisation and improvement of logistics processes; • manage initiatives and processes aimed at optimising and reducing costs	• knowledge and skills of working with various applications, including Microsoft Office and Excel, which is important for digital work and data analysis
INVOGUE Fashion Group	• organisation and resolution of issues related to cargo delivery from other countries and on the territory of Ukraine; • communication with transport companies; • coordination with the supplier of the planned shipment date and terms of shipment	• monitoring the implementation of product supply contracts; • monitoring and ensuring timely shipments; • timely distribution of shipping documents; • reconciliation of mutual settlements with suppliers	• using spreadsheets and financial planning programmes; • using inventory and shipment monitoring systems to optimise the movement of goods
Meest	• organisational skills for resource allocation and logistics process planning; • communication skills for effective cooperation and coordination of details with carriers; • communication and analytical skills to effectively control and ensure high quality of services; • analytical thinking and ability to evaluate potential partners in the transportation market	• choosing the best routes and vehicles; • monitoring and analysis of logistics processes; • tracking and verification of transport and customs documents; • financial skills for controlling payment for services and mutual settlements	• use of specialised programmes for analysing logistics process data, cargo tracking, or other tools for optimising and automating logistics tasks
Nova Poshta	• ability to manage time effectively and provide high-quality customer service; • communication skills for successful cooperation and sale of international cargo transportation services; • ability to analyse and use data to evaluate the effectiveness of a delivery service; • documentation and reporting skills; • organisation and efficient distribution of applications among freight forwarders	• skills in planning and controlling loading processes according to schedules; • registration of documentation, preparation and planning of transportation routes; • knowledge and skills of participating in tender procedures to attract new customers and carriers; • ability to analyse rates in the transport services market and interact with them; • control of completeness and execution of product and accompanying documentation, ensuring proper execution of documents; • skills in financial accounting and mutual settlements; • financial skills and operational efficiency in the context of cash transaction processing	• knowledge of digital tools for automating reporting and document management

Source: developed by the authors based on Robota.ua (n.d.)

Thus, for the position of logistics manager (Table 6), companies mostly equally prefer soft and hard skills. Digital skills are not important to them. This is due to the specifics of the logistics activity itself, which is clearly shown in Figure 3.

Figure 3. "Competency stoplight", built for the position of logistics manager

Source: compiled by the authors

The analysis of skills for the project manager position is shown in Table 7. The corresponding skills ratio for this position significantly depends on the type of activity of the company.

Table 7. Analysis of skills required by employers from a project manager candidate

Company	Skills (functional responsibilities)		
	soft skills	hard skills	digital skills
InnovateRecruit	• interaction with partner banks, introduction of new agreements, support of current processes; • cooperation with Diia and company representatives; • pre-sale preparation of clients; • implementation of new projects of the company; • analytical skills; • strategic thinking	• proficiency in Corezoid; • ability to manage IT projects; • skills in implementing, developing, and supporting new products	• knowledge and skills in SEO promotion and Google advertising
PrivatBank	• coordination of the development team, analysts and testers; • solving problems and managing IT support risks in a project; • communication with customers, team members, and third-party suppliers	• planning and management of IT projects in the banking sector; • identification and management of risks related to IT projects, with a focus on banking aspects and auditing; • preparation of reports on the progress of the project and its status; • ensuring compliance with deadlines and quality of task completion; • development and compliance with information technology project management standards and methodologies; • preparation of reports and presentations for stakeholders in Ukrainian and English; • follow best project management practices, such as Project Management Institute or Agile; • compliance with banking-specific data security and confidentiality standards	• definition of requirements related to IT projects, including IT audit and IT risks; • development and compliance with IT project management standards and methodologies; • compliance with banking-specific data security and confidentiality standards
VARUS	• interaction with stakeholders; • effective communication with different departments and management levels	• planning, execution, and control of projects related to the development and optimisation of IT infrastructure; • resource planning: optimising the use of human and material resources to maximise project efficiency; • monitoring and reporting: systematic monitoring of project progress, analysis of results and preparation of reports for internal and external stakeholders; • risk management: identifying and managing project risks to ensure their successful completion; • creating technical documentation for the project; • experience in creating technical documentation; • knowledge of Corezoid and Creatio CRM	• skills in developing and updating technical documentation for projects; • ability to use graphical tools to display the architecture and interaction of system elements; • skills in working with web services and processing data in JSON format; • experience in implementing and optimising Corezoid and Creatio CRM systems

Company	Skills (functional responsibilities)		
	soft skills	hard skills	digital skills
Canyon Development	• organisation of meetings and interaction with key project participants; • use systematic monitoring to provide information about the status of the project and understand its progress; • fast response and effective problem solving; • effective interaction with various project participants	• designing a new product or functionality; • consideration of all factors that affect development, including employee qualifications, risks, and dependence on third-party services; • systematic monitoring to keep a "finger on the pulse" and understand the progress of the project	• use of modern tools and techniques in the design process; • using planning optimisation software; • using tools to systematically monitor and analyse project progress; • using technologies to effectively solve problems and optimise workflows; • using email, chats, video conferencing, and other means for effective real-time communication
Allo	• actively participate in project work and take initiatives to improve processes; • ability to focus on the needs of customers and partners, cooperation to achieve common goals; • cooperation and coordination with other departments	• management and organisation of project stages to achieve the set goals; • control and maintenance of process automation; ensuring the stability and efficiency of current processes; • creation and approval of documents regulating work processes; • experience in project implementation and administration; • experience in writing and developing documents regulating work processes; • ability to formulate requirements and specifications for projects	• ability to work with tools for planning, reporting, and monitoring projects; • ability to use Jira, Confluence, and Google Workspace for effective project management; • ability to work with electronic documents, including technical specifications and orders; • using tools to automate and optimise business processes

Source: developed by the authors based on Robota.ua (n.d.)

For example, InnovateRecruit is a recruitment agency that requires mostly soft skills from project manager. Canyon Development, an IT company, needs digital skills more, although soft skills are also considered important. Companies that carry out sales (Allo and VARUS) and banking activities (PrivatBank) give a greater advantage to hard skills, followed by digital skills. Soft skills are considered not important enough. Based on the results of the study, a "competency stoplight" was built for the project manager position, which is shown in Figure 4.
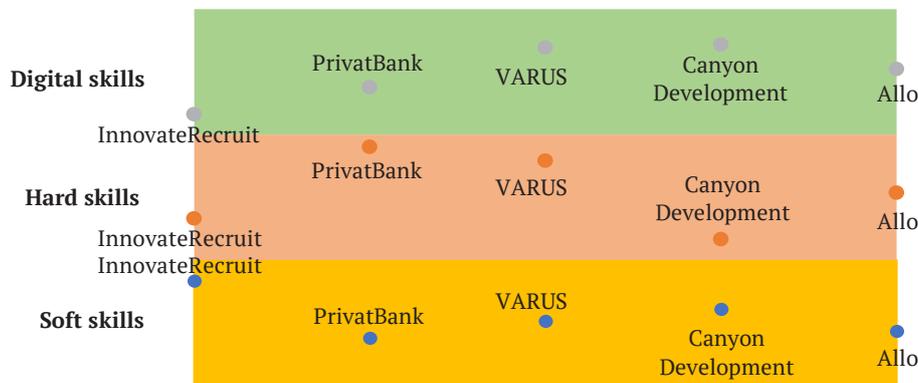

Figure 4. "Competency stoplight", built for the position of project manager

Source: compiled by the authors

Having analysed the functional responsibilities (skills) of 20 Ukrainian companies with different types of economic activity for four subtypes of the managerial profession, it was found that each position requires all groups of soft, hard, and digital skills. However, by depicting this ratio as a percentage, a colour matrix of the result of competence requirements was obtained, as shown in Table 8.

Table 8. Colour matrix of the result of soft, hard, and digital skills requirements of employers by position

Position	Soft skills	Hard skills	Digital skills
Sales manager			
HR manager			
Logistics manager			
Project manager			

Source: developed by the author

Analysing skills and understanding the differences between the skills groups is important for everyone, namely for students to understand their strengths and choose the career path that best suits their skills and interests. Some professions require more soft skills, such as leadership and communication, while others focus more on hard skills, such as programming or engineering. For candidates for the position to achieve greater success in their professional activities, understanding the difference between these types of skills helps a person better manage their career development. For example, knowing that digital skills are becoming increasingly important in today's world, a person can focus on learning digital technologies to improve competitiveness in the labour market (for businesses themselves, to build effective teams). The ability to balance a team of people with different skills helps to ensure greater success in achieving the organisation's goals to increase the productivity and efficiency of employees. When employees understand the difference between these types of skills, it is possible to more effectively identify staff training and development needs to achieve better results at work.

Importance of different groups of professional competences: analysis of Ukrainian and international experience

Ukrainian and foreign researchers have made a significant contribution to the field of research studying various skill groups. V. Rogo *et al.* (2020) examined the impact of transformational leadership and communication skills of a construction project manager on factors of its success. It was noted that construction projects are among the most complex, and the lack of influential leaders makes their productivity quite low. The result was a vision of transformational leadership and communication skills among project managers to address failures in the construction industry in Indonesia. T. Tsyfra *et al.* (2022) examined the required skill groups for construction companies and construction economists in Ukraine. N. Nosovets *et al.* (2021) investigated a similar issue in the context of the teaching profession and for this professional activity it was proposed to introduce a new group of skills such as "self skills", which will include skills of self-development, self-improvement, self-management and adaptation, which may be extremely relevant for the future teacher. Ultimately, it is the teacher who prepares people for life in an uncertain future, and if the teacher is capable of constant change, they will be able to teach young people to do the same.

T. Kochubey & Y. Tkachuk (2021) offered to develop a triad of skills for future social workers, but focused on the development of soft skills. Professional activity of such specialists will require communication with children, teenagers, the elderly, victims of violence, war, prisoners, etc., and each group of the population must find "its own key", be empathetic, and communicate without conflict. Therefore, the researchers suggest that it is soft skills combined with hard skills that can ensure effective and high-quality work. O. Ivashkevych (2023) proposed individual skill set for 5 the development of the library-user relationship for the library industry. G. Cherusheva (2023) emphasised the development of soft skills to ensure successful management activities of future business leaders, and training managers.

For this purpose, it is recommended to establish a new approach to defining a set of competencies in the educational programmes that future managers will study, which would allow creating effective personnel management systems in the future. Y. Yampol *et al.* (2023) focused on improving the quality of education in educational institutions for future education managers. Understanding that further positive changes in society depend on the future head of the educational institution. By focusing on leadership qualities, researchers have proven that it is the manager-leader who can effectively influence the innovative learning process and create a stimulating learning environment.

A. Hidayati *et al.* (2020) studied the position of project manager and pointed out to global software development teams the need to learn Scrum techniques, which can be attributed to both hard skills and digital skills at the same time. The most important hard and soft skills are established. S. Marnewick & A. Marnewick (2021) also considered the position of project manager in their study and pointed out that this position requires the development of digital skills to a greater extent. A new type of intelligence was introduced, such as digital intelligence, which was considered for project managers in the context of South Africa. N. Shah *et al.* (2023) considered soft skills in order to develop the future careers of Pakistani higher education students, thus preparing them for an unpredictable job market. M. Poláková *et al.* (2023) emphasised the importance of soft skills for technologically driven fields. It was also noted that it is important to have balanced software and digital skills that will thrive in the future. M. Klus & J. Müller (2020) used a three-stage design of the study, which was of particular interest to the authors of this paper. Special attention was paid to leadership skills.

M. Al Asefer & N.S. Zainal Abidin (2021) in their paper examined soft skills and employment opportunities from the standpoint of employers. The current study is consistent with the findings that higher education institutions need to understand what employers want from graduates. In turn, the researchers found that hard skills help to find a job, while soft skills help to maintain a job. It has been established that in order to grow quickly in a profession, it is necessary to combine hard and soft skills. This topic was expanded by C. Jantarachot & C. Lalaeng (2023), who investigated the causal variables of hard and soft skills that affect the performance of future managers. The study used multiple regression analysis, which proved which skills need to be given more attention and developed, and which affect the performance of graduates.

A separate issue for the study was the need for "soft skills" and "hard skills" for a modern business leader, which was addressed by N.M. Makhnachova & A.K. Midlyar (2017). The researchers have made a comparative characterisation of them and identified the influence of personal qualities of a manager on the process of personnel management at an enterprise and their importance in the process of team development, and have proposed "soft skills" for a manager of an enterprise, dividing them into four blocks. But the researchers did not consider the question of what digital skills are necessary for the head of a modern enterprise in the context of digitalisation. S.I. Marin-Zapata *et al.* (2022) conducted a systematic review of the business literature to explore the meaning of the terms "competencies" and "soft

skills". The answers to three questions were examined: how are soft skills and competencies conceptualised in the literature; what are the main theories used in the study of soft skills and competencies; what are the main characteristics of research from a methodological standpoint? It was found that a significant share of business research lacks a solid theoretical foundation, while the rest suffers from theoretical dispersion. A theoretical model was developed that explained the relationship between concepts, considering reasonable theoretical views.

The comparison of soft and hard skills and determination of their importance in the US energy sector was covered by W. Lyu & J. Liu (2021). The researchers took job advertisements from the internet for 10 years as a database. It is proven that vacancies in the US energy sector increasingly require a high level of "soft" skills, but when analysing the skill requirements between the four main professions, significant differences were found. The results showed that more attention should be paid to "hard" skills in human resource management, rather than following the growing trend of "soft" skills in hiring. A. Sopa *et al.* (2020) measured the impact of hard and soft skills on employees' ability to be innovative in Indonesia using organisational training as an intermediary variable. Researchers have proposed a model for increasing the innovation ability of employees through hard and soft skills with organisational training as an intermediary.

The digital age and modern living conditions make people think about the future. S. Sumchenko (2022) considered the most relevant skills in today's context. A detailed analysis of seven skills was carried out and it was noted what skills are inherent in specialists in any field, why their acquisition is an integral part of professional training, and their development is a lifelong process. The same opinion is shared by G. Santos *et al.* (2021) in skill analysis for quality managers 4.0. The researchers argue that it is difficult to predict what skills people who will work in quality management in a few years will need. If an organisation wants to compete based on quality and innovation in the future, it is important to ensure that quality professionals are supported by senior management.

CONCLUSIONS

The study summarises the components of the three groups of skills and examines in detail the essence of each of them. Their analysis was carried out by a detailed study and processing of job advertisements for 20 Ukrainian companies with various types of economic activity. It is established that business requires candidates for positions in the manager profession to possess all groups of skills, but in different ratios. For the position of sales manager, soft skills are preferred. Companies belonging to the electrical and retail industries need candidates with more advanced hard skills. It is established that the distribution of requirements for skills often depends on the type of activity of the company. For the HR manager position, the same requirement can be assigned to several skills at the same time. It is established that companies need three skills groups equally, regardless of the type of activity. None of the companies under study are dominated by soft skills, which may seem strange at first glance.

For the position of logistics manager, companies need both soft and hard skills equally. Digital skills are not important to them. The study suggests that this is conditioned by the specifics of logistics activities. The position of project manager significantly depends on the type of activity of the company. For example, a recruitment agency requires mostly soft skills. An IT company focuses on digital skills, although soft skills are also considered important. Retail companies and banks prefer hard skills, followed by digital skills. Soft skills are considered not important enough. The method of "three-zone competency stoplight" was introduced, which is based on the idea of displaying each zone with the appropriate level of skills for their distribution in companies. This helped to visualise the information provided, which will help both employers and job candidates to see the areas that their vacancy corresponds to and understand what skills are required and to what extent, or to understand what skills are lacking and in what areas to develop in order to obtain the desired position. The results of the study show that there are differences in the very wording of the corresponding skill groups and their correlation. Therefore, this area of research has considerable potential.

CONFLICT OF INTEREST
None.

REFERENCES

[1] Al Asefer, M., & Zainal Abidin, N.S. (2021). Soft skills and graduates' employability in the 21st century from employers' perspectives: A review of literature. *International Journal of Infrastructure Research and Management*, 9(2), 44-59.

[2] Andrews, J., & Higson, H. (2008). Graduate employability, 'soft skills' versus 'hard' business knowledge: A European study. *Higher Education in Europe*, 33(4), 411-422. doi: 10.1080/03797720802522627.

[3] CFO and digitalization: How to lead the process and remain effective. (2023). Retrieved from https://finacademy.net/ua/materials/article/finansovyj-direktor-i-cifrovizaciya.

[4] Cherusheva, G. (2023). Conceptual approaches to the definition of "soft skills" in modern models of managerial competence. *Organizational Psychology. Economic Psychology*, 1(28), 128-137. doi: 10.31108/2.2023.1.28.13.

[5] Digital competence. What skills should be developed during a pandemic? (2021). Retrieved from https://eufordigital.eu/uk/digital-competence-what-skills-do-you-need-to-develop-during-the-pandemic/.

[6] Educational and professional programme "Management". (2023). Retrieved from https://duan.edu.ua/images/head/Quality_Edu/OPP_drafts/2023-2024/Final/OPP_Management_bak.pdf.

[7] European skills/competences, qualifications and occupations (ESCO). (n.d.). Retrieved from https://ec.europa.eu/social/main.jsp?catId=1326&langId=en.

[8] Hidayati, A., Budiardjo, E.K., & Purwandari, B. (2020). Hard and soft skills for scrum global software development teams. In *ICSIM '20: Proceedings of the 3rd international conference on software engineering and information management* (pp. 110-114). Sydney: ICSIM. doi: 10.1145/3378936.3378966.

[9] Ivashkevych, O. (2023). Soft skills as a vector of the mainstream in the library industry. *Ukrainian Journal of Library and Information Science*, 12, 56-66. doi: 10.31866/2616-7654.12.2023.293571.

[10] Jantarachot, C., & Lalaeng, C. (2023). Hard and soft skills affecting the work performance of graduates. *Asian Administration and Management Review*, 6(1), 105-116. doi: 10.14456/aamr.2023.10.

[11] Klus, M., & Müller, J. (2020). Identifying leadership skills required in the digital age. *CESifo Working Papers*, 2020, article number 8180. doi: 10.2139/ssrn.3564861.

[12] Kochubey, T., & Tkachuk, Y. (2021). Social soft skills in the system of competencies of future social workers. *Social Work and Social Education*, 2(7), 42-50. doi: 10.31499/2618-0715.2(7).2021.244074.

[13] Lyu, W., & Liu, J. (2021). Soft skills, hard skills: What matters most? Evidence from job postings. *Applied Energy*, 300, article number 117307. doi: 10.1016/j.apenergy.2021.117307.

[14] Makhnachova, N.M., & Midlyar, A.K. (2017). Soft skills for an enterprise manager. *Global and National Problems of Economy*, 17, 380-383.

[15] Marin-Zapata, S.I., Román-Calderón, J.P., Robledo-Ardila, C., & Jaramillo-Serna, M.A. (2022). Soft skills, do we know what we are talking about? *Review of Managerial Science*, 16, 969-1000. doi: 10.1007/s11846-021-00474-9.

[16] Marnewick, C., & Marnewick, A. (2021). Digital intelligence: A must-have for project managers. *Project Leadership and Society*, 2, article number 100026. doi: 10.1016/j.plas.2021.100026.

[17] Nosovets, N., Piskun, O., & Rekun, O. (2021). Theoretical research of the concept "teacher's self skills". *Bulletin of the National University "Chernihiv Collegium" Named After T.G. Shevchenko*, 14-15(170-171), 32-36. doi: 10.5281/zenodo.5938997.

[18] Poláková, M., Horváthová Suleimanová, J., Madzík, P., Copuš, L., Molnárová, I., & Polednová, J. (2023). Soft skills and their importance in the labour market under the conditions of Industry 5.0. *Heliyon*, 9(8), article number e18670. doi: 10.1016/j.heliyon.2023.e18670.

[19] Resolution of the Cabinet of Ministers of Ukraine No. 1341 "On Approval of the National Qualifications Framework". (2011, November). Retrieved from https://zakon.rada.gov.ua/laws/show/1341-2011-%D0%BF#Text.

[20] Robles, M.M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business Communication Quarterly*, 75(4), 453-465. doi: 10.1177/1080569912460400.

[21] Robota.ua. (n.d.). Retrieved from https://robota.ua/.

[22] Rogo, V., Rarasati, A.D., & Gumuruh, H. (2020). The influence of transformational leadership and soft skills on project manager for project success factors. *IOP Conference Series: Materials Science and Engineering*, 830(2), article number 022057. doi: 10.1088/1757-899X/830/2/022057

[23] Santos, G., Sá, J.C., Félix, M.J., Barreto, L., Carvalho, F., Doiro, M., Zgodavova, K., & Stefanovic, M. (2021). New needed quality management skills for quality managers 4.0. *Sustainability*, 13(11), article number 6149. doi: 10.3390/su13116149.

[24] Shah, N., Bano, S., Saraih, U.N., Abdelwahed, N.A.A., & Soomro, B.A. (2023). Leading towards the students' career development and career intentions through using multidimensional soft skills in the digital age. *Education + Training*, 65(6/7), 848-870. doi: 10.1108/ET-12-2022-0470.

[25] Sopa, A., Asbari, M., Purwanto, A., Santoso, P.B., Mustofa, M., Hutagalung, D., Maesaroh, S., Ramdan, M., & Primahendra, R. (2020). Hard skills versus soft skills: Which are more important for Indonesian employees innovation capability. *International Journal of Control and Automation*, 13(2), 156-175.

[26] Sumchenko, S. (2022). XXI century skills in the conditions of the COVID-19 pandemic. *Bulletin of Science and Education*, 5(5), 437-450. doi: 10.52058/2786-6165-2022-5(5)-437-450.

[27] The Ministry of Digital Transformation publishes the digital competence framework for citizens. (2021). Retrieved from https://thedigital.gov.ua/news/mintsifra-oprilyudnyue-ramku-tsifrovoi-kompetentnosti-dlya-gromadyan.

[28] Tsyfra, T., Moholivets, A., & Vershigora, D. (2022). Digital-skills of construction economists in the era of VUCA and BANI-world. *Ways to Improve Construction Efficiency*, 1(49), 192-205. doi: 10.32347/2707-501x.2022.49(1).192-205.

[29] What about skills in the digital age? (n.d.). Retrieved from https://www.eurofound.europa.eu/en/what-about-skills-digital-age.

[30] What are digital skills? (2022). Retrieved from https://digitalskills.unlv.edu/digital-marketing/what-are-digital-skills.

[31] What are hard skills and soft skills: How the employer evaluates us. (n.d.). Retrieved from https://eduhub.in.ua/news/shcho-take-hard-skills-i-soft-skills-yak-nas-ocinyuye-robotodavec.

[32] Yampol, Y., Polishchuk, S., & Namestyuk, I. (2023). Developing soft skills in education managers to enhance the quality of educational institutions. *Academic Visions*, 22. doi: 10.5281/zenodo.8287437.

Soft, hard та digital skills для менеджерів у цифрову епоху: запити бізнесу та необхідність їх опанування

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Анотація. Цифровізація в Україні та світі змінює продукцію, послуги та бізнес-процеси, впливає на кількість і якість робочих місць через потребу у володінні необхідними цифровими навичками. Роботодавці в робочих профілях для чинних посад менеджерів вимагають від кандидатів нових навичок. Метою даного дослідження було дослідити вплив soft skills, hard skills, digital skills на менеджерів в епоху цифровізації на основі аналізу запитів бізнесу. При проведенні дослідження були використані методи: теоретичного узагальнення й порівняння (розкриття змісту кожної групи skills), аналізу (skills, найчастіших і найзатребуваніших роботодавцями), статистичний метод (зведення та групування даних зібраних з порталу пошуку роботи), синтезу (поєднання різних типів інформації), конкретизації (виявлення проблем у законодавчо-нормативній базі України). У результаті дослідження встановлено співвідношення груп skills в аналізованих посадах: менеджер з продажу, HR менеджер та менеджер з логістики переважно потребують такі групи skills: soft та hard, але в різній мірі. Для посади менеджер з продажу та HR менеджер суттєвими є soft skills, для посади менеджер з логістики переважають hard skills. І тільки project manager потребує hard skills та digital skills через свою специфіку. Для забезпечення кращого розуміння та візуалізації складної інформації про компетенції чи рівні навичок, у дослідженні авторами вперше запроваджено «тризонний світлофор компетенцій» та кольорова матриця результату потреб роботодавців soft, hard та digital skills за посадами. Три групи skills запропоновано зображувати різними кольорами: помаранчевим (soft), рожевий (hard), зелений (digital), що надасть змогу бізнесу за допомогою такої візуалізації побачити зони, яким відповідає їх вакансія, і зрозуміти, які skills вони вимагатимуть від кандидатів на відповідну посаду, в якій мірі. Практичною цінністю дослідження є можливість використання його результатів при розробці освітніх програм для планування опанування необхідних дисциплін

Ключові слова: професійні компетентності; менеджер з логістики; менеджер з продажу; HR менеджер; project manager; оголошення про вакансії; співвідношення навичок