

## READER

# INTRODUCTION

---

1	Challenging Environment.....	1
2	Needs of Women in Management Positions.....	9
3	Needs of Guidance Professionals.....	10
4	Approach of DIGIGEN .....	11
5	Outcomes of DIGIGEN .....	13
	References .....	14

---

## 1 CHALLENGING ENVIRONMENT

Digitalisation has become ubiquitous, and its significance has become impossible to overlook, especially since the onset of the COVID-19 pandemic. Similarly, the ongoing efforts to enhance the representation of women in leadership roles have gained prominence. Consequently, in early 2020, the European Commission introduced the Gender Equality Strategy 2020-2025, prioritising this issue at the heart of European policy. The strategy aims to enable women to attain their professional and social objectives on par with men while fully harnessing their potential. This encompasses achieving gender parity in employment across various sectors, ensuring equal opportunities for work-life balance, and promoting an equitable distribution of caregiving responsibilities (European Commission 2020; Herberger et al. 2023). This has a direct impact on working life and is also expressed in the umbrella term of New Work.

While there is a growing recognition of the importance of "digitalisation" and "digital transformation" in our current landscape, their use is often inflated and lacks a clear definition. This lack of standardised terminology hinders interdisciplinary understanding, leaving the relationships between these terms murky. What remains evident, however, is their significance. To clarify, "Digitalization" can be understood as adopting new solutions rooted in Information and Communication

Technologies (ICTs). On the other hand, "digital transformation" pertains to the changes and risks resulting from Digitalization's implementation compared to the initial state. These changes have far-reaching consequences for all stakeholders, extending beyond the mere act of implementation (Herberger et al. 2021, Herberger et al. 2023).

Digitalisation is the initial step in this context, signalling a shift from the current status quo. Following digitalisation is the process of digital transformation, which leads to fundamental changes, such as innovations, and can even exert spillover effects on societal systems. This transformation is closely tied to the fast-paced 21st-century economy, where ICTs play a central role. With the integration of ICTs comes a general imperative for individuals to enhance their knowledge and excel in the increasingly intricate and interactive work environment (Herberger et al. 2021, Herberger et al. 2023).

Critical core-digital skills for the 21st-century work-life environment are the following (van Laar et al., 2017):

- Information management: The skill to use ICT to efficiently search, select, or organise information and choose the most suitable source for a given task.
- Critical thinking: The skill to use ICT as a source for informed judgment and reflected reasoning.
- Creativity: The skill to create new ideas and content using ICT.
- Problem-solving: The skill to use ICT to process and understand a problem and find a solution cognitively.
- Collaboration: The skill to use ICT to interact with others effectively.
- Communication: The skill to transmit information and express effectively.
- Technical: The skill to use (mobile) devices and applications and orientate in online environments.

In addition to the core digital skills that are considered an essential prerequisite for successful work and a prosperous professional career in the 21st century, there are also so-called “context-related skills” that also need to be taken into account when it comes to work success as well as successful career (van Laar et al., 2017):

- **Self-direction:** The skill to set goals and manage the process of reaching those goals with ICTs.
- **Lifelong learning:** The skill to constantly improve knowledge and capabilities using ICTs.
- **Ethical awareness:** The skill to behave socially responsibly when using ICTs.
- **Cultural awareness:** The skill to show cultural understanding when using ICTs.
- **Flexibility:** skill to adapt one’s thinking or attitude to changing ICT environments.

“New work” is a term that refers to a contemporary approach to work and employment that has evolved in response to changing societal and economic dynamics. It emphasises flexibility, autonomy, collaboration, and innovation in the workplace and sheds light on leadership and leadership skills connected with digitalisation and digital transformation. New Work subsumes a multitude of different aspects of modern working life. It thus does not represent a holistic approach but rather a catch-all of parts of contemporary working life (Kaudela-Baum et al. 2022):

- **Flexibility:** New work strongly emphasises flexibility in terms of when, where, and how work is done. This flexibility acknowledges that not all tasks need to be completed within the confines of a traditional office and that employees may have different working preferences and needs. Digital tools play a significant role here, and intersections transform working life digitally.
- **Autonomy:** Employees in a new work environment are often given more autonomy and trust to manage their tasks and responsibilities. This can lead to increased job satisfaction and motivation.

- **Collaboration:** New work encourages collaboration among colleagues and teams. It recognises the importance of open communication, knowledge sharing, and interdisciplinary approaches to problem-solving. Digital Tools offer via platforms and cloud-based resources great opportunities to make working together more effective and efficient.
- **Innovation:** The modern working environment is marked by rapid technological advancements and changing market conditions. New work fosters a culture of innovation by allowing employees the space to experiment, take risks, and develop creative solutions.
- **Personal Development:** New work highly values personal development and continuous learning. Employees are encouraged to acquire new skills, adapt to changes, and take ownership of their career growth.
- **Work-Life Balance:** A healthy work-life balance is a central aspect of new work. It acknowledges that employees have lives outside of work and aims to accommodate those needs, reducing burnout and improving well-being.
- **Diversity and Inclusion:** New work often promotes diversity and inclusion in the workplace. It recognises that diverse teams are more innovative and better at problem-solving.
- **Technology Integration:** New work leverages technology to enable remote work, virtual collaboration, and data-driven decision-making. It adapts to the digital age and integrates technology seamlessly into daily operations.
- **Environmental Responsibility:** Many new work practices prioritise sustainability and environmental responsibility. This includes reducing unnecessary commutes, promoting remote work, and adopting eco-friendly practices in the workplace.
- **Adaptability:** In a fast-changing world, the relevance of new work lies in its adaptability. It allows organisations and employees to quickly respond to shifts in the business landscape, economic conditions, and societal trends.

In summary, new work is highly relevant in the modern working environment because it aligns with employees' changing needs and expectations, technological advancements (digitalisation and digital transformation), and the evolving dynamics of the global workforce. It enables organisations to remain competitive, fosters innovation, and promotes a healthier work-life balance for their employees. For supervisors in particular, however, this represents a unique challenge because employees enjoy high flexibility. This requires also modern leadership skills.

Although now, for many years, women have taken active participation in the active labour market, there is still a gap between men and women in general, specifically in management positions. The European Union and national governments have addressed the problem and designed regulations to improve the situation for women. In Germany, the Equal Participation Act of Women and Men in Leadership Positions in the Private and Public Sector (FüPoG) came into force in May 2015. The law aims to significantly increase the proportion of women in management positions in the private and public sectors. For the private sector, this means the introduction of a fixed quota of 30 per cent of the respective underrepresented gender on supervisory boards for listed companies and subject to parity-based co-determination. Companies that are either listed or subject to corporate co-determination and do not already have to meet the fixed quota must set their target values. In addition, the corresponding Equality Act of Women and Men in the Federal Administration was amended (BGleIG). For this purpose, the requirements for the equal opportunity plan were specified in more concrete terms and structured like the target size regulation in the private sector. Furthermore, the law obligates extensive reporting (annually) to inform the public about the development of the proportion of women and men in management positions. Since the law came into force in 2015, the proportion of women in leadership has increased. In conclusion, women in management positions are strongly supported by the German government to equal the existing gap between men and women. Unfortunately, although those laws and regulations have been in force since 2015, there has not been a vast improvement (Herberger et al. 2023).

Even though the proportion of women managers in Hungary (39%) is above the EU average of 34% (European Commission 2021), there is still room for development. Takács (2020) attempted to uncover why women still seem underrepresented in top management positions despite being increasingly qualified. She has found a strong correlation with rigid structures and traditions in many enterprises. Women struggle more than men to find a balance between private and working life, possibly facing a sexist work environment. Furthermore, women are exposed to the glass ceiling phenomenon in the workplace. Education is considered most important in these circumstances (Tatár-Kiss, 2021). The action plan (2021-2030) of the Hungarian government with the title “Consolidation of Women’s Role in the Family and the Society” forms several goals to promote women, especially in poorer regions and in minority communities (Magyarország Kormánya, 2020). Furthermore, the Hungarian Business Leaders Forum was founded in 2005 as a dedicated Forum for Women in Leading Positions to open a dialogue between female leaders and top managers in economic and political life in Hungary. Group members are women in executive positions. In addition, the Forum organises professional events in Hungary and abroad, offering a networking platform and trying to build out more female leaders with a mentor program.

In 2018, the Government of the Netherlands entered the Gender & LGBTI Equality Policy Plan of the Netherlands into force. This policy plan aims at enabling everyone’s chance to live the life they desire regarding the situation of “(i) the labour market, (ii) safety, security and acceptance, and (iii) gender diversity and equal treatment” (Government of the Netherlands 2018, p. 5). The main goal will be to increase awareness of the situation and find ways to improve the situation for women in the labour market. To achieve this goal, the Dutch Senate approved a bill to maintain a quota for women at the top of the business world in 2021. Starting on the 1st of January 2022, companies listed on the Dutch stock exchange must fulfil a quota for women in top management positions. “In time, the supervisory boards of these companies must be composed of at least one-third women and one-third men. Each new appointment to the board must help meet this target” (Government of the Netherlands 2022)

In conclusion, women in management positions are also supported by the Dutch government to equal the existing gap between the number of male and female leaders. However, the outcomes must be awaited since this regulation only started in 2022.

The individual challenges of digitalisation, digital transformation, New Work, and equality efforts must be considered against the background of the VUCA framework. VUCA is an acronym for Volatility, Uncertainty, Complexity, and Ambiguity. It originated in the military and has since become a widely used concept in business, leadership, and organisational studies. VUCA describes the characteristics of an environment or situation that is marked by rapid and unpredictable changes, making it challenging to plan and execute strategies effectively (Barber 1992):

- **Volatility:** Volatility refers to the rapid and often dramatic fluctuations in the external environment. In a VUCA world, conditions can change suddenly and unexpectedly. This might be due to economic shifts, technological advancements, natural disasters, political instability, or other factors. Volatility means that what worked yesterday may not work tomorrow, requiring organisations and leaders to be agile and responsive. For example, the COVID-19 pandemic demonstrated the extreme volatility of the global economy and healthcare systems, forcing businesses to adapt rapidly to survive.
- **Uncertainty:** Uncertainty refers to the lack of predictability in a VUCA environment. Decision-makers may struggle to anticipate and understand future events and their consequences. This uncertainty can arise from incomplete information, conflicting data, or the sheer complexity of the issues. Leaders in VUCA situations must make decisions without all the facts, which may involve significant risks. For instance, companies often face high uncertainty about consumer preferences, regulations, and competitive dynamics when entering new markets or industries.
- **Complexity:** Complexity reflects the intricate interconnections and multifaceted nature of problems and situations in a VUCA world. Complex issues have numerous variables, and

cause-and-effect relationships can be challenging to discern. This complexity can overwhelm decision-makers and lead to analysis paralysis. Organisations must develop the ability to see the bigger picture and understand the systemic relationships between elements. An example of complexity is the development of sustainable supply chains, which involve balancing economic, environmental, and social factors across a global network of suppliers and partners.

- **Ambiguity:** Ambiguity refers to the haziness or lack of clarity in understanding events or interpreting information. Determining what is happening or what it means in ambiguous situations is challenging. Ambiguity often results from conflicting or contradictory signals, making it hard to identify a clear path forward. Leaders and organisations must be comfortable with ambiguity and capable of making decisions in the absence of complete information. A typical example of ambiguity is the interpretation of market trends, where experts may disagree on the significance of certain data points, leading to divergent strategies.

However, this economic framework in the context of processes and the associated decision-making components, as well as the developments described above in digitalisation, digital transformation, New Work and efforts to achieve equality, are leading to disadvantages for women in management positions.

Thus, Gmyrek et al. (2023) show that the digital transformation based on AI-Tools (whether augmenting or automating) has potential employment effects that vary widely across country income groups due to different occupational structures. In low-income countries, only 0.4 % of total employment is potentially exposed to automation effects, whereas in high-income countries, the share rises to 5.5 %. The results are highly gendered, with more than double the percentage of women potentially affected by automation. Management jobs are often found in the higher wage segment, and the study shows that women are particularly affected by AI-induced changes. This underscores the need to make women in management positions even more familiar with the intersection of



digitalisation and digital transformation, digital competencies, new work, and efforts to achieve equal rights to social participation.

Furthermore, digital transformation can reinforce gender inequality in the labour market - due to the existing Gender Digital Gap. The Gender Digital Gap is an expression of the gender differences in the extent to which digital technologies and their development, used in the workplace, are made available as power resources. The three dimensions of the gender digital gap are power, gender stereotypes, and working time norms (Lott 2023).

## 2 NEEDS OF WOMEN IN MANAGEMENT POSITIONS

Herberger et al. (2023) show in their transnational analysis in Hungary, the Netherlands and Germany based on a survey about the needs of women in management positions in such a challenging environment that it is apparent that digitalisation and digital transformation bring both bright and dark sides. However, higher efficiency is also offset by a perceived higher level of complexity. Regarding women and men, the responses from women in management show that systemic thinking is functional when approaching challenges with digitalisation and digital transformation. This ability is probably more attributable to women's self-perception. It is noticeable that women in management positions have developed a strong awareness of digital communication technologies. It seems to see considerable potential in further developing these technologies, both in the present and future, which probably also necessitates additional training in this area. The results from the survey show that women in management positions do not see any difference between men and women in terms of digital knowledge and skills. However, women see men as having an advantage here, if at all, due to their affinity for digital tools. The results show that an essential aspect of digital competence is the standardised (probably routine) use of digital tools and the ability to achieve added value with these tools and skills. However, it is also evident that digital coordination and communication are essential for women in management positions. Therefore, it is also important to strengthen this through additional knowledge and skills acquisition. Digital skills and competencies will play a unique role in the future, and women in management positions see men more as

pioneers in trying out new technologies. According to Herberger et al. (2023), women in management prefer face-to-face interaction to learn new skills by applying via IT-supported platforms (e.g., Google Meet, MS Teams, Zoom).

Furthermore, Herberger et al. (2023) show that women in management seem aware of the legal framework linked to equality efforts (e.g. gender quotas) on a generic level. However, they are often unaware of them in a specific way (e.g., concrete legal norm), which is surprising given the sometimes controversial public debate. Interestingly, many women in management positions were also unaware of any specific support programs for their career development. This reinforces the impression that there is a lack of offers here and that the government measures are probably too abstract and do not generate any significant benefit. Nevertheless, the analysis shows that women in management know company-specific programs for women's career development programs.

Last but not least, what are the expectations from women in management positions for a successful non-company-specific career development program? According to Herberger et al. (2023), women in management want a personal coaching approach paired with a mentoring program where appropriate.

### **3 NEEDS OF GUIDANCE PROFESSIONALS**

According to Herberger et al. (2023), for HR practitioners and career counsellors based on expert interviews, the changes perceived with digitalisation and digital transformation tend to be viewed negatively, as increased complexity and higher requirements are expected. The positive aspects are associated with more efficiency but not necessarily more cost-effective. Differences between men and women do not exist in that area related to the expert interviews. Furthermore, the results show that an affinity for digital tools and an openness to using them is already significant today and will probably increase in the future, especially in coordination (of teams and themselves) and communication. It can be stated that there are no significant differences between men and women in this regard as well. However, women seem to prefer digitalisation's interactive elements (e.g.,

communication), while men are more willing to use new digital tools. When HR practitioners and counsellors are asked for specific training related to learning digital skills and qualifications, it is noticeable that personal interaction is required. Pure self-study, therefore, hardly meets the needs enough. However, whether this personal contact and exchange (also in the group) must occur virtually or in presence seems to be of secondary importance here.

According to Herberger et al. (2023), HR practitioners and career counsellors appear aware of numerous legal standards to enable women to participate equally in career development in managerial positions. However, at least a minority do not seem to be mindful of any measures that apply to them. Many HR practitioners and counsellors are unaware of specific programs for women in management positions to empower their career development. Instead, general references are made here to coaching and training offers. Most counselling programs mentioned more specifically seem to be initiated by female interest groups or companies.

In a nutshell, Herberger et al. (2023) show that a successful curriculum and counselling approach must focus primarily on developing and strengthening the individuals' personalities from HR practitioners' and career counsellors' perspectives. This is conclusive, as a personal approach is preferred in counselling. However, raising awareness also seems to be a fundamental approach to counselling.

## 4 APPROACH OF DIGIGEN

Based on the presentation of the challenging situation for women in management positions and the needs presented both on the side of counsellor (HR practitioners and career counsellors) and the side of the counselees (women in management positions), the curriculum is essentially based on three core elements. In a first step, women in leadership positions are to be further empowered, and an interface to digitalisation and digital transformation is to be explained. The specific female empowerment against the challenges above follows. The program will conclude with a presentation of concrete counselling approaches that combine digital leadership and female empowerment.

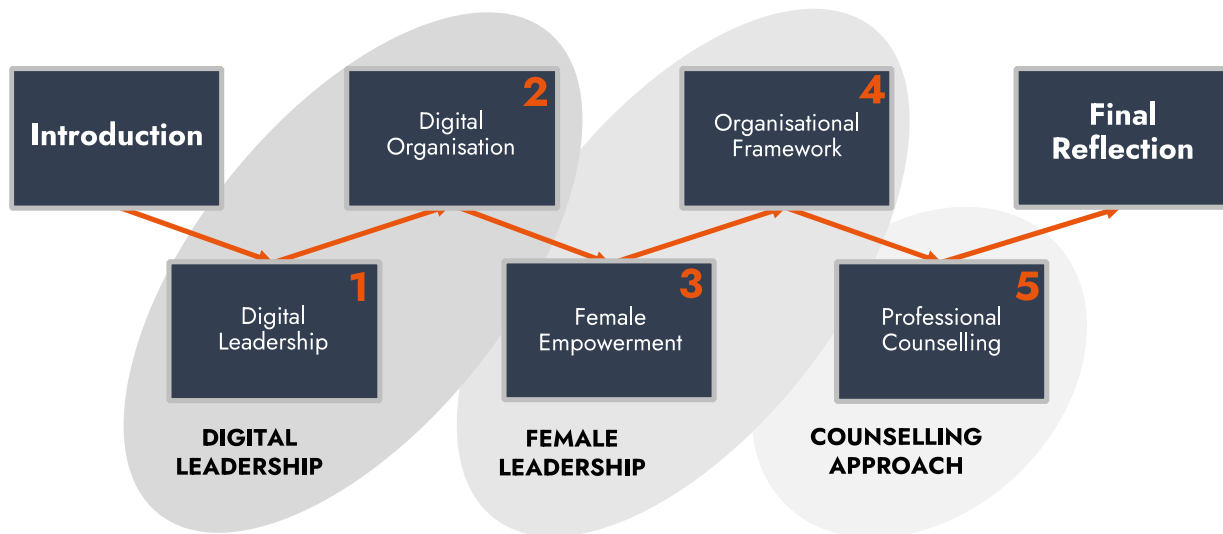


Figure 1: DIGIGEN Approach; Source: own illustration.

The specific female empowerment within the framework of our up-skilling Programme is designed so that it does not compete with the career success of other genders but should create added value for the national economy, specifically for the labour market. Furthermore, we know that gender diversity is only one of numerous manifestations of the complex concept of diversity. We are also fundamentally aware of a multi-layered diversity model with multiple interdependencies between the diversity factors. This also includes possible interactions between different diversity dimensions (see Figure 2), which can also be called layers. Nevertheless, this can hardly be operationalised holistically in an up-skilling programme.

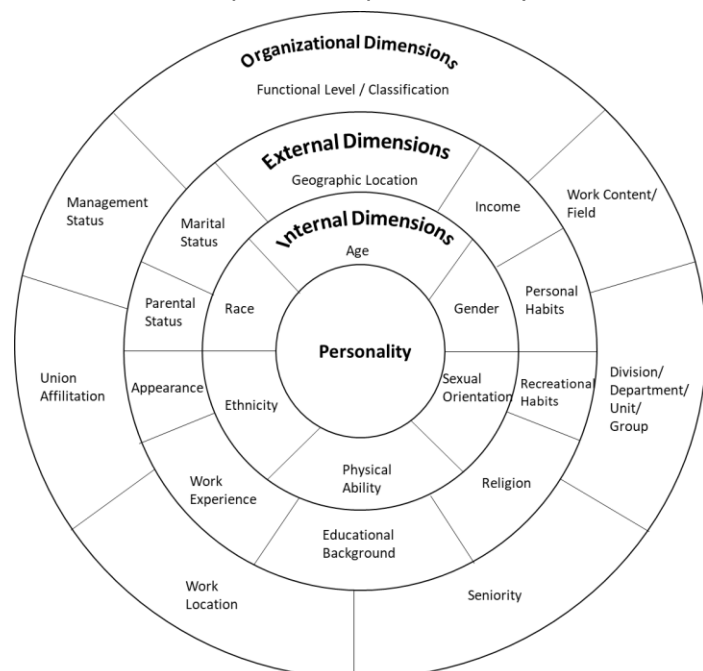


Figure 2: Diversity Dimensions; Source: Gardenswartz et al. (2003), p. 33.

## 5 OUTCOMES OF DIGIGEN

Our program aims to prepare women in management positions even better for the challenges of a rapidly changing work life. These changes are expressed concretely in digitalisation and transformation as New Work. Decisions must also be made by women against the background of an environment that is increasingly volatile, uncertain, complex, and characterised by ambiguity (VUCA-Framework). Our program will provide women with skills and competencies to help them avoid disadvantages (e.g. Gender Digital Gap) in their professional careers.

The program is aimed first and foremost at employees in HR departments, career advisors as intermediaries, and women in management positions directly. It is important to emphasise that the program is not about making up for a competitive disadvantage compared to men but about compensating for gender-specific disadvantages that result from the setting mentioned above for women in management positions. Instead, the program helps to leverage economic benefits by circumventing structural disadvantages for women in management positions. We are aware that gender equality efforts in the workplace are only one (however important) part of diversity efforts and are not equally addressed by our program. We are aware of the fact that diversity itself is a complex and multi-dimensional topic.

## REFERENCES

- Barber, H. (1992). Die Entwicklung strategischer Führung: The US Army War College Experience. *Journal of Management Development*, 11(6), 4-12. <https://doi.org/10.1108/02621719210018208>.
- Europäische Kommission (2020). Strategie zur Gleichstellung der Geschlechter 2020-2025. Online: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52020DC0152>, last checked on the 10/06/2023.
- Europäische Kommission (2021). Das Leben von Frauen und Männern in Europa 2021. Interaktive Ausgabe. Online: <https://doi.org/10.2785/976803>, last checked on the 10/08/2023.
- Gardenswartz, L., & Rowe, A. (2003). *Diverse Teams bei der Arbeit - Kapitalisierung der Macht der Vielfalt*, 2. ed., Alexandria.
- Gmyrek, P., Berg, J., Bescond, D. (2023). Generative KI und Arbeitsplätze: A global analysis of potential effects on job quantity and quality, ILO Working Paper 96 (Genf, ILO). <https://doi.org/10.54394/FHEM8239>, last checked on the 10/06/2023.
- Herberger, T., Dötsch, J. (2021). Der Mittelweg heiligt den Zweck? Digitalisierung und Nachhaltigkeit als gesellschaftliche Herausforderung. Ein Plädoyer für eine integrative Sichtweise. In Herberger, T.; Dötsch, J. (Ed.): *Digitalisierung, digitale Transformation und Nachhaltigkeit in der globalen Wirtschaft*. Cham, 1-8.
- Herberger, T., Ertelt, B.-J., Scharpf, M., Reuter, A., Somogyi, S., Cserkúti, Á., Broersen, W., Etter Martin, S. (2023). *Women, Leadership & Digitalization - Reports on Surveys in Germany, Hungary, and the Netherlands*. ERASMUS+ DIGIGEN Project Ref. No. 2021-1-DE02-KA220-VET-000025335.
- Kaudela-Baum, S., Meldau, S., Brassler, M. (Hrsg.) (2022): *Leadership und People Management - Führung und Kollaboration in Zeiten der Digitalisierung und Transformation*. Berlin: Verlag Springer Gabler.
- Lott, Y. (2023). Der Gender Digital Gap in der Transformation? Verwendung digitaler Technologien und Einschätzung der Berufschancen in einem digitalisierten Arbeitsmarkt. WSI-Report, No. 81.
- Magyarország Kormánya (2020): Az Európai Unió számára készített „A nők szerepének erősítése a családban és a társadalomban“ akcióterv (2021-2030). Budapest. Online: <https://cdn>.

kormany.hu/uploads/document/a/a4/a4d/a4dcd97363ec031dc896ff8d092c9dcc63e7c420.pdf, last checked on the 08/10/2023.

Regierung der Niederlande (2018): Gender & LGBTI Equality Policy Plan 2018-2021. Putting principles into practice. The Hague. Online: <https://www.government.nl/documents/leaflets/2018/06/01/lgbti-equality-in-the-netherlands>, last checked on the 10/08/2022.

Regierung der Niederlande (2022): Die Regierung der Niederlande. Gleichstellung der Geschlechter. Beteiligung von Frauen am Erwerbsleben. Online: <https://www.government.nl/topics/gender-equality/womens-labour-force-participation>, last checked on the 10/08/2023.

Takács, I. (2020): Akadályok a nők karrierjének útjában - a szervezetek útvesztői. *Metszetek*, 9(1), 65-83.

Tatár-Kiss, K. (2021): A nemzeti kultúra és a szervezeti kultúra egymáshoz való viszonyulása a nemek közti egyenlőség aspektusában: A női vezetők egyenlőségét vizsgáló 9 or-szágra kiterjedő összehasonlító tanulmány. *Prosperitas*, 2020/3, 21-47.

van Laar, E.; van Deursen, A. J.A.M.; van Dijk, J. A.G.M.; de Haan, Jos (2017): The relation between 21st-century skills and digital skills: A systematic literature re-view. In *Computers in Human Behavior* 72, 577-588.