Digital Competences for Language Teachers: Do Employers Seek the Skills Needed from Language Teachers Today?

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Abstract

Language proficiency is essential for 21st Century skills, and for the ability to obtain and utilize new competencies in the future. Digitalization is greatly affecting the language learning settings, and more digital skills are needed amongst teachers. Thus, it is interesting to see what kind of demands the new working life puts on the future language teachers in all areas of the sector. To better understand the role of national policies on digital competence and their impact on language teacher's recruitment, this study investigates existing strategies for digital competence for language teachers in 11 countries, and their representation in job announcements. The study uses qualitative content analysis as well as quantitative analysis represented by descriptive statistics. The former includes document analysis of strategies on different levels and gives an overview of existing trends and new tendencies considering digital skills for language teachers. The latter comprises a search and classification of 854 job announcements throughout Europe according to three levels of digital competences to see which skills are being asked for when hiring language teachers. The results indicate that there are discrepancies between strategies being implemented at overarching levels and the institutional practices. We also demonstrate discrepancies between the needs described and felt in the 21st Century and the defined skills in the job announcements. Among other results, the study highlights the need for more targeted job announcements to attract teachers with the desired digital skills.

1　Introduction

It is widely acknowledged that language proficiency is key for a common understanding between the EU citizens and for the practice of shared cultural values. However, recent studies demonstrate that we still have a long way to go until Information and Communication Technologies (ICT) get truly integrated into the work of the European foreign language teachers. According to surveys, the availability of ICT facilities in the foreign language classrooms of European schools is low: "In almost all countries, students have experienced small decreases in the availability of desktop computers and tablets for use in their reading, math and science lessons, as well as less desktop computers available in school" [1]. But even a greater barrier to spreading the best practices in Computer Assisted Language Learning (CALL) is the level of teachers' digital literacy, which is a challenge for Higher Education: "[...] between 45% (ISCED 1) to 52% (ISCED 2 and 3) of European teachers can be defined as being less digitally active, confident and supported" [2]. In order to improve the uptake of ICT tools in foreign language teaching, the educators' digital skills need to be regularly upgraded. Moreover, there needs to be a clear distinction between the ICT skills that teachers use in regular classrooms and those that are required for teaching languages online, as online tutoring becomes increasingly popular. This new educational reality requires novel pedagogies, open learning environments, open educational resources, and open adult training environments.

Digital skills are vital 21st-century skills and are much appreciated in the educational sector. Worldwide demand for higher education is expected to grow exponentially from 100 million students currently to 250+ million by 2025 [3]. This raises the question of how Higher Education Institutions (HEIs) and other institutions providing education will be able to sustain and improve the quality of the learning experience in the face of continuing growth and diversity in the student population. According to Scott, it is largely acknowledged that the pedagogical approaches need to be transformed in order to support the acquisition of these skills, but there has been little focus on how to teach these 21st-century skills; including elements like critical thinking, communicative skills, innovation, problem solving and collaboration [4].

In her report to UNESCO, Scott emphasizes the role of Educational Technology (EdTech) in this transformation: "Promoting learner autonomy and creativity is part of the solution. Technologies can be used to support efforts to transform pedagogy, but it is essential to recognize that twenty-first century learning experiences must incorporate more than just technology" [4]. Scott emphasizes the need for technologies as a part of both the new pedagogy in general, but also as a variation to more conservative learning methods to redevelop these into enquiry and problem-based approaches. New innovative technologies can enhance the teacher's ability to use strategic questioning, capitalize on learners' interest in mobile technologies, utilize social media, design relevant and real-world learning activities in order to teach metacognitive skills and build the right relationships for learning. Accordingly, technologies include learners more actively in learning, they emphasize learner centered models and EdTech promotes learning without borders like time, place and age.

In this context, the objective of the study presented in this paper was to analyze the needs of the education market and evaluate if digital skills and methodological approaches are required from language teachers. This study presents findings from the Erasmus+ project Digital Competences for Language Teachers. We analyzed job announcements for language teachers in several countries to understand whether digital skills are mentioned as requirements and if yes, how they are formulated. We discuss the results in the context of relevant European and national strategies and policies. In the conclusions, we highlight the discrepancies between the strategies and their practical implementation.

2 Literature Review

In all countries, there are governing policies for the education system. In addition, most of the countries researched in this study are partially obliged to follow international policies, or at least relate to these, more specifically, policies and strategies from the European Commission. We identified and investigated policies in different European countries in order to find guidelines that could be recognized in the study. As a base for the national and institutional strategies, EU's policies were included.

In order to have a better reasoning and background for the job market study, we focused on strategies at three different levels: 1) Macro; international and national policies, 2) meso; strategic work being done at the institution and 3) micro; the performative level between educator and student [5]. This was done to obtain more knowledge about what is demanded politically to be a language teacher in Europe today. A question is, of course, if there are any correlations between the demands at a political level and the actual skills being asked for in the announcements from the institutions. This functions as a backdrop for the discussion and conclusions in this article.

In the following, important findings in EU policies as well as two of the involved countries will be presented. The main reason for focusing on two countries is to be able to analyze the findings more thoroughly, and also because the policies are quite similar in all countries analyzed. Considering the research questions for this study, the article will not emphasize findings at the performative level.

The results will be presented briefly and will be used later for a broader discussion combined with the results of the market study.

2.1 Policies Concerning Digital Skills Europe

The study aims at identifying whether job announcements looking for language teachers mention digital skills, and if there is a relationship between strategic demands and the actual announcements at institutional level considering digital skills for language teachers. In order to do this, it is vital to acknowledge that the digital technologies do not exist in a vacuum, there are different actors and policies that affect the realization and development of these skills. Educational specialists concerned about education and digitalization often refer to the three different levels of the educational system that affect the quality of digitalization, called macro, meso and micro level [5]. It is therefore

obvious that one needs to consider all levels in order to understand which digital competencies language teachers need to inherit or develop in order to improve their skills. It is also interesting to analyze how the three levels influence each other, for example, through job announcements. In the following, we will analyze how the policies and strategies at the first two levels affect the job announcement being published. The analysis will be exemplified with updated strategies from Norway and Cyprus.

As literature shows (see introduction), EdTech is essential to everyone in order to cope with the demands of the contemporary societies and their working life. This should also have an important impact on the educational institutions worldwide and across Europe. Therefore, The European Union has decided to take important actions in this direction.

More concretely, the European Framework for Digitally Competent Educational Organizations is one of the key elements in the Europe 2020 strategy, which thus acknowledges and emphasizes the need for a digital boost in the following years:

Digital technologies are enablers of a step change in learning and teaching practices; however, they do not guarantee it. To consolidate progress and to ensure scale and sustainability, education institutions need to review their organisational strategies, in order to enhance their capacity for innovation and to exploit the full potential of digital technologies and content [6].

This is further underlined seeing that digitalization on all areas is one of the ten priorities that the European Commission has emphasized in the period 2015-2019. The importance is stated already in the first paragraph: "The internet and digital technologies are transforming our world. Barriers online can deny people the full benefits that digital developments can offer" [7]. Through this work, the EU shows the importance of reevaluating and increasing the knowledge of digital skills in all sectors.

This includes, of course, the educational sector, and the Commission is developing initiatives towards a European Education Area. They have already worked on several initiatives that impact the digitalization of the educational system in Europe. One example is how they have developed a new way to distribute digitally-signed qualifications through the Europass platform. This will further enhance the work with strengthening the digital competence of both employers and employees in the future, but it also raises new challenges, like diversity on learning processes, ways of validating the qualifications and ability to provide the certificates in a safe electronic format [8].

Technology is nothing without methodology, though. It can be suggested that "Pedagogy and technology are intertwined in a dance: the technology sets the beat and creates the music, while the pedagogy defines the move" [9]. This is recognized at all levels. Strategies and visions for the future are therefore essential in order to succeed: "Each nation must examine new ideas put forward by its citizens and increase the collective impact of resulting innovation by tackling these challenges through regional partnerships and coalitions that accommodate local needs and contexts." [7]. Thus, institutions and learning providers also need to implement technology that transforms and changes the pedagogical model that we find being dominant today. Digital tools are a fundamental instrument in this change, but it is just as important who, why and how the tools and skills should be developed and implemented. Each country and each

institution have their own ways of dealing with the digital era to prepare students and other learners for the 21st Century skills.

2.2 National Policies: Norway and Cyprus

The Norwegian government issued in 2017 a new strategy for digitalization of Higher Education in Norway [10]. Even though a survey from 2014 shows that there have been several initiatives that have improved the digital conditions in the sector, especially considering digital exams and digital assessments methods [11], it is obvious that in Norway the digitalization strategy has been connected to single persons initiatives and anchored solemnly in the management. It is also interesting that new teachers have not been provided sufficient training in developing their digital skills [10]. As it is shown in the latest report from the Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (DIKU) [12], promoting the use of digital skills in workplace is one of the priorities that has been successfully introduced in Norway's tertiary education and this is a positive step towards its digitalization. In fact, 7 out of 10 respondents have confirmed this interesting finding [12].

Even though other findings in the same report show positive trends towards the heightening of digital skills amongst Norwegian HEI teachers, there are still areas that needs to be worked with. When employees are asked questions on how well issues concerning digitalization and digital skills are anchored in strategies in the institutions, too many are answering "neither good or bad" or "don't know". The report concludes that this might indicate that the strategies need to be presented better for the employees [12]. Considering the governmental policy, the focus on digitalization in the institutions should be high.

The first paragraph in the strategy for digitalization of Higher Education in Norway [10] lists aims that concern research and education. The main aims of this strategy include both "Høy kvalitet i utdanning og forskning" ("High quality in research and education") and "God tilgang til utdanning" ("Good access to education") [10]. Those are directly connected to digitalization and to specific initiatives which promote not only the idea of accessible blended and online learning to everyone, but also other differentiated learning methods which support the use of ICT in the classroom. This is further elaborated in paragraphs 3.21 Målbilde for studenten (Future visions for the student) and 3.2.2 Målbilde for læreren (Future visions for the teacher) [10].

In the following paragraphs, are presented the main points of the strategy for digitalization of Higher Education in Norway (English translation is made by the authors):

3.2.1 Future visions for the student

− The student meets an academic fellowship of staff and students where digital opportunities are being exploited in active and varied learning- and assessment methods that create the best possible learning outcome, and give curricular and digital skills intended that the students are to learn in every subject. The student is allowed to develop his/her digital competence, receives training in technologies that increases learning and generic skill sets, and is becoming aware of ethical, legal and safety issues concerning the use of data and digital technologies.

– The student has access to a modern, personalized learning environment that facilitates individual learning experiences, efficiency, collaboration and flexibility in the studies.

3.2.2 Future visions for the teacher

– The teachers have good digital and pedagogical competence (knowledge on how to use digital tools to increase learning in their subject), incentives for curricular/pedagogical development of their own teaching and access to collegial strongholds and support services for development of study programmes and sharing of digital resources for learning.

– The teacher has a broad offer of applications and digital tools and services that support the implementation of the educational process; i.e. from teaching planning and its implementation with the support and collaboration of students and colleagues, either internally or externally, to the follow-up process of individual and/or group assessment. [10]

In the following sections of the report on Norway's strategy for digitalization of Higher Education, several means are presented that are supposed to lead to the achievement of its future promising goals. These are mainly connected to the development of teachers' basic competences, so that they will be better equipped to cope with new methods of teaching and to adapt to new demands for digital skills. The aims include the demand that all students should be exposed to methods of teaching where digital opportunities are explored and the demand for basic pedagogical competence and experience in teaching when hiring in all professional positions (in order to provide incentives for developing teaching skills). It also suggests a recognition system for educational competence and pedagogical development at all higher education institutions as well as strengthening of the teachers' digital competence in order to implement restructuring and development of learning processes based on the new opportunities provided through digitalization. One of the aims shows a high ambition from the government in Norway towards the digitalization of Education (English translation is made by the authors):

5.4.5 Solutions for study administration, digital Learning Management Systems and processes are organized for personal learning environments and mobile and dynamic studies, and are adapted to more flexible arrangements for going through the studies. The learning processes are changing with increased pressure on active learning methods and a greater specter of learning resources. One desire to achieve is that all students have access to a modern, personalized learning environment with the opportunity of an individual learning environment that facilitates for flexible and efficient studies and collaboration in close relation with peers and scientific staff. It is important that the development of digital platforms in this area secures a fellowship necessary to achieve a consolidated functionality across institutions, which will make it possible to do studies at several institutions, and to share and exploit solutions across institutions. [10]

It is also notable that this corresponds well with the policies and statements provided by the European Commission, showing that there is a common understanding for, and awareness of the importance of ICT skills at the macro-level.

It is nevertheless important to recognize in the Norwegian strategy that the responsibility for implementation and ensuring that the policies are conducted is often shared between the governmental instructions/strategies and the institutions themselves. Even though the government designs strategies and puts power behind the words, it is the institutions that need to implement the new demands in their plans for the future, allocate resources and create incentives for actual development in the scientific staff, as it is seen for example at the point 5.2.5 (English translation is made by the authors):

A demand for a recognition system for educational competence and pedagogical development at all institutions: In order to stimulate increased efforts towards teaching and enhanced development, and to ensure that teaching practices are valued more, the government demands that all institutions establish recognition systems for educational competence and pedagogical development within two years. [10]

Of high interest for this study is the point 5.2.4, where the government demands "pedagogical base competence and experience in teaching when hiring in all professional positions, and successively higher demands concerning teaching competence for employment in positions at higher levels" for scientific staff at higher education institutions in order to get the position [10]. This means that one assumes that being pedagogically competent, i.e. having done training, taught at lower levels or taken external courses, makes scientific staff more capable of adjusting to new demands concerning ICT. This is something that should be reflected also in the job announcements, which are written and published at the institutional level.

In Cyprus, the policies are implemented in a different way, but still show some of the same tendencies. Europe's Digital Progress Report (EDPR) tracks the progress made by Member States in terms of their digitalization. As for Cyprus, the EDPR showed that the country ranks 22nd out of the 28 EU Member States [13]. Overall, Cyprus progresses slowly. Nevertheless, it showed significant progress in connectivity compared to previous years. However, despite the fact that Internet users engage in a wide variety of online activities, low level of digital skills risk acting as a brake to the further development of its digital economy and society. In Human Capital, Cyprus's performance is below the EU average. According to the Education and Training Monitor Report in 2016 only 43% of the Cypriot population possessed at least basic levels of digital skills [14]. Nowadays, digital skills and competences are needed for nearly all jobs where digital technology complements existing tasks, and shortages can be an important barrier to the country's economic development. As a result, awareness actions were planned in 2017, such as role model visits to schools and universities, by important ICT industry figures to explain the importance of ICT professionals in the future. Another action that illustrates this process was the introduction of the European Computer Driving Licence (ECDL) Certification in 2017 for secondary students in public and private schools. It is worth mentioning that this was the first time that public schools were provided vocational ICT certification. This is considered to be a breakthrough for the Cypriot education system.

In terms of teachers' continuing professional development (CPD) in the area of digital education, the EURODYCE Digital Education at School in Europe Report from 2019 highlights that Cyprus has adopted the European self-assessment tool (TET-SAT) to help teachers evaluate their level of digital competence and define their development

needs [15]. Moreover, according to this report, the Cypriot authorities support teachers' professional development by combining three different approaches: CPD activities, teacher networks and the aforementioned self-assessment tool. CPD activities are offered by training agencies and educational centers. An example of the latter can be found in the continuous teacher training programs offered by the Cyprus University of Technology, particularly in the fields of EdTech, teacher professional development, and CALL.

As mentioned earlier, the same tendencies can be seen in all countries researched for this study. The aims are relatively high, and the need for heightened digital skills in all levels of the educational system is recognized. There are still few examples on how to do it, and exactly what is needed. Thus, it is often left to the institutions themselves to define and implement their strategies.

3　Study Objectives and Methodology

3.1　Objectives

Initially, the aim of this study was to explore what digital competences and skills of language teachers are sought for on the job market. The results of the study should have provided an update on the value of digital competences and skills of language teachers for the employers - all types of educational organizations, involved in language teaching. The results should have informed the policymakers about an important aspect of improving the digital competences and skills of teachers and overall the digitalization process. Furthermore, the study aimed to examine whether there is a relationship between strategic demands and the actual job announcements at an institutional level considering digital competence for language teachers.

However, the analysis of the job announcements for language teachers revealed that very few job descriptions mentioned digital skills as requirements or even desired. Therefore, we did not have enough data to study what kind of skills are sought by employers. As a result, after the first data collection phase, an additional objective emerged: to find the share of job announcements for language teachers that require digital skills. Thus, the study aims to answer the following research questions:

1. To what degree do job announcements looking for language teachers mention digital skills?
2. Is there a relationship between strategic demands and the actual announcements at an institutional level considering digital skills for language teachers?

We adopted the methodology of a market study, a process of determining the viability of new services and products through research conducted directly with potential customers. Market study allows to discover the target market and get opinions and other feedback from both education providers about the needs required by the market and consumers about their familiarity with the defined skills and competences.

3.2 Data Collection

The present paper draws on a qualitative and quantitative analysis of qualitative data, namely, job advertisements. Therefore, the sampling unit is a job advertisement offering employment for language teachers. The sampling strategy employed in collecting the data were non-probability convenience sampling as the team of researchers in each country applied certain criteria for data collection. The final sample consists of 854 such job advertisements.

When it comes to the design of the present study, it was conducted in three stages. In the first stage, the researchers collected relevant job advertisements. In the second stage, a qualitative and quantitative analysis was performed and the results were compared. In the third stage, the report was written up.

According to Bryman [16], to ensure high quality of research, such quality criteria as reliability, replication, and validity should be applied. In terms of reliability and replicability, the present study ensures them by describing and explaining the measures and methods used in a transparent manner. Bryman notes that probably the most important quality criteria are validity, which can be classified into measurement, internal, external, and ecological validity [16]. It should be noted that because of the design of the present study, only external validity is relevant. In this case, it means that the results presented in this paper can be generalized to other contexts as well.

Furthermore, according to Yin [17], triangulation is one of the criteria to ensure robust and high-quality research. The present study draws on data and investigator triangulation. More precisely, data are collected in a variety of contexts. Moreover, they are collected and analyzed by a number of researchers.

The data collection was done country by country because the majority of online platforms list job announcements by country. The search in each country was done by a different researcher (or a group of researchers). In each country, one or multiple online job platforms were selected to provide a higher number of relevant results.

We used the country-specific keywords to match the name of the job "language teacher" or "English teacher" or "Norwegian teacher" or similar equivalents. The keywords were used both in English and in local languages. Multiple searches were performed either on different dates, on different job portals or with different keywords to be able to collect 100 relevant job announcements (or as many as possible if 100 could not have been reached). A job announcement was considered relevant if it offers a job for a language teacher in any organization or any other profession that focuses primarily on language learning or teaching, including researchers, managers, policymakers, and administrators. For example, an administrator's position in a language school is relevant, while an administrator's position in a regular school that also teaches languages is irrelevant. For each search, the following information was collected:

- Date
- Name of the job portal
- Keyword(s) used
- The total number of results returned by the search on the given portal and keyword.

3.3 Analysis of the relevant job announcements

Each relevant job announcement was opened and read to find if the description mentioned digital competences or skills. Most job announcements contain a list of required qualifications or skills or sometimes have such requirements mentioned in the description of the work tasks or elsewhere. Any mention of the digital competences and skills was noted.

For each relevant job announcement, we noted if it contained any mentions of the digital competences or skills. For those job announcements that mentioned digital competences or skills, the following information was collected:

- in which search the job announcement was found
- the exact formulation of the digital competences or skills (later translated to English)
- job title
- name of the hiring organization
- type of the hiring organization (university, school, company, etc.)
- link to the announcement

In addition, all data were analyzed, and information that could be biased or irrelevant was rejected from the material. As an example, the analysis showed that some job announcements in some countries were published at different platforms, or on different dates. Such announcements were considered duplicates, thus were included only once. Very similar job announcements by the same organization with only small differences (e.g., different languages, but the rest of the announcement texts are the same) were also considered duplicates. The same applies when the same job description was announced at different dates. Job announcements that were unclear about the main tasks of the prospective employees were not included either.

4 Results

In this study, we identified a total of 854 job announcements in 11 countries. For the analysis, we selected 128 announcements – only those that mention ICT skills. The breakdown by country is presented below (Table 1).

Table 1. Total number of mentions of digital skills in all countries analyzed

Country	#of search results	# mentions	% mentions
Estonia	42	15	35.7%
Norway	40	12	30.0%
Lithuania	109	28	25.7%
Turkey	88	22	25.0%
Italy	40	9	22.5%
France	30	5	16.7%

Spain	30	5	16.7%
Cyprus	33	5	15.2%
Russia	132	13	9.8%
Germany	106	9	8.5%
Greece	204	5	2.5%
Total/average	854	128	15.0%

As we can see, there are very few announcements that mention digital skills at all. It is important to keep in mind that the total number of search results in different countries might have been affected by several factors (such as season, choice of keywords, and choice of job platforms). However, the total rate of job announcements that mention any digital skills required for language teachers (15%) is an important indicator for our research.

We found 128 announcements mentioning digital skills. It is necessary to implement a distinction between the typologies of the required digital skills in order to identify and analyze the needs of the market. One example can be the excessive requirement of proficiency in PC usage or expertise in MS Office, which could have been an essential digital skill 10 years ago. The vast and varied pedagogical opportunities offered by modern ICT (blended learning, distance learning, game-based learning, etc.) require updated digital skills rather than simply "typing speed" or "general PC literacy". Normally it should be considered that teaching languages does not necessarily require sophisticated digital skills. One can get by even today without using all the innovative and modern digital tools. However, seeing the strategies implemented in different countries as well as remembering the need for languages in order to obtain the 21st Century skills, it is reasonable to believe that digitalization should be vital also in the future language classrooms at HEI.

The 128 job announcements identified can be listed and classified on the basis of how digital skills by language teachers are described and required: Generic digital skills, old fashioned digital skills or specific digital skills.

In the category *Generic digital skills*, we classified job announcements that simply stated the fact that some digital skills are required, without specifying which exact skills, for example:

- good ICT competences
- good IT skills
- confident user of modern technologies and business software
- skilled user of PC, webcam and internet
- familiarity with new technologies

The *Old-fashioned digital skills* category includes job announcements that require an ability to operate a computer and use basic office software, for example:

- knowledge of MS Office

- demonstrated experience using a personal computer, Office software such as MS Office
- typing speed and general PC literacy
- strong skills in Power Point
- MS Office proficiency
- proficient PC user
- expert in MS Office

The third category *Specific digital skills* includes skills that describe abilities to use specific tools, platforms or methods, for example:

- knowledge of blended programs and new technologies in the training sector (preferential requirement)
- experience working with online educational platforms / research in the online educational
- platforms' domain
- new interactive teaching methods
- desirable expertise in online teaching

The categorization in old-fashioned, generic and specific skills is defined by the researchers in this study. The figure below shows how often the skills of these categories appeared in job announcements for language teachers in 11 countries (Fig. 1).
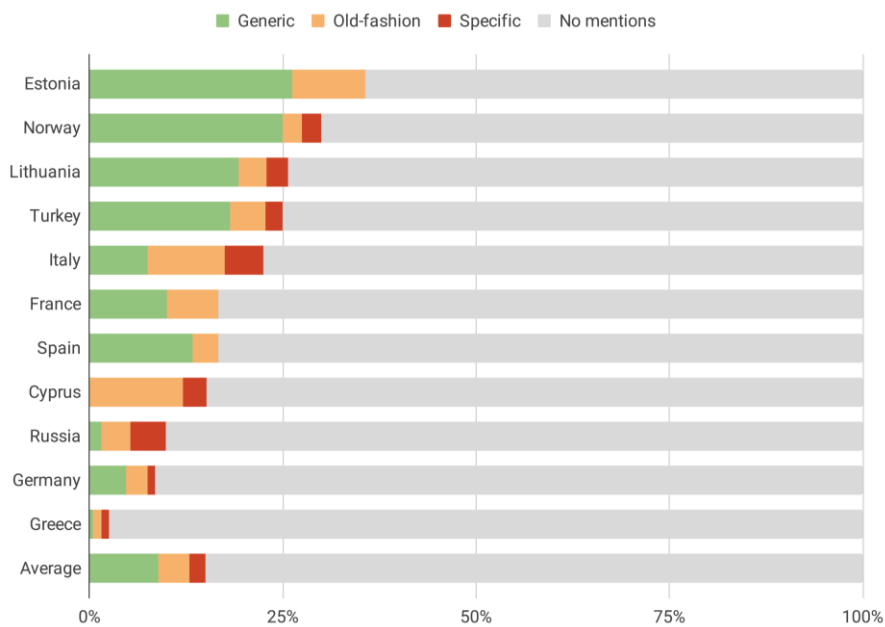

Fig. 1. Types of skills mentioned in job announcements seeking language teachers

The overview figure above can be used to compare the proportion of the announcements that mention digital skills (green, yellow and red on Fig. 1) and those that do not mention them (grey on Fig 1).

Figure 1 can be supplemented by comparing the job announcements that mention digital skills of different categories, excluding announcements that do not mention digital skills. It can help to understand the needs and the requirements of the market. The percentage in which those required digital skills are recurring in the job announcements can help defining a more organic state of the art:

- Generic digital skills: 22%
- Old fashioned digital skills: 57%
- Specific and updated digital skills: 12%

As mentioned, most job announcements analyzed did not include any reference to digital skills. These are also included in the results of the survey (see figure 1).

The results are quite clear. Only 15 % of the announcements analyzed mentions digital skills at all. When digital skills are mentioned, most of the job announcements for language teachers require generic digital skills (60%), i.e. being confident about ICT in general. There are only 18 out of 854 announcements that asks for specific digital skills (2%), and when specific digital skills are required, they are not mandatory, but rather "preferential" and/or "desirable" are quite recurrent in the announcements.

5 Conclusions and Further Research

Based on the findings in the market study and comparing them to the strategies on macro and meso-levels, it is obvious that there is a need for language teachers to utilize the possibilities within digital technologies further. The policymakers and the institutions on the micro-level implementing the ideas (in this case, searching for new employees) do not speak the same language and do not seem to have a common understanding of what digital skills really are in the 21st century.

The review of the strategies throughout the countries involved in the study shows some similarities that are interesting considering the results from the job market study. The most obvious result is that all 11 countries are concerned about digitalization at a macro level, implementing large governmental strategies to increase the inherit skills. This is also necessary considering the demands at the EU-level. Although the strategies, both EU and national, are very general, one can find some initiatives pointing directly at increasing infrastructure in educational centers. This includes varied learning environments, access to digital tools and internet and development of (open) online courses. On the other hand, there is a lack of methodological approach to assist the technological enhancement, leaving this important aspect to the institutions themselves.

This should make it even more important to include digital skills needed in almost every aspect when it comes to language training in the job announcements, to ensure digital competence at the micro-level. It should also be apparent in the responsibility for implementing digital skills at all levels.

Another interesting finding in the strategies is that at a meso level the responsibility for implementing the actions are very differentiated. The responsibility is separated on different providers, including private and public sector, Non-Governmental Organizations and even industry. This means that there are several different ways and methods for implementing the strategies, allowing for considerable autonomy at a single institution and the micro level, i.e. the individual teacher.

Even though there are several actions implemented at the macro level, for example, national actions in all involved countries, it appears that few of these actions are directed towards methodological use of digital tools and/or skills defined at the macro level to ensure a common understanding of digitalization. Thus, this is left to the institutions themselves, or even the individual teacher. This can be part of the reason why we seldom find these skills defined in the job announcement.

Still, it is disturbing to see the number of job announcements not mentioning the need for digital skills at all. One could, of course, discuss the necessity for what we have defined as old-fashioned skills, but at least these announcements relate to the strategies at some level.

It is also worth mentioning that the number of announcements analyzed is not significant per country, even if the total number of 854 is enough to show a tendency. There are also some countries where more announcements have been analyzed than others, which can also provide some bias in the results. We have also included both private and governmental institutions in the research, without dividing these in the final results presented in this paper. It could be interesting to look further into this difference, and to analyze qualitatively the process for developing and writing job announcements for teachers of languages and other subjects.

References

1. Vincent-Lancrin, S., Urgel, J., Kar, S., & Jacotin, G. (2019). Measuring Innovation in Education 2019. Paris: OECD Publishing.
2. Deloitte, & Mori, I. (2019) '2nd Survey of Schools: ICT in Education. Objective 1: Benchmark progress in ICT in schools'. European Comission. Available at: https://ec.europa.eu/digital-single-market/en/news/2nd-survey-schools-ict-education.
3. European Commission (2014) 'High level group on the modernisation of higher education: report to the European Commission on new modes of learning and teaching in higher education'. Luxembourg.
4. Scott, C. L. (2015). The Futures of Learning 3: what kind of pedagogies for the 21st century? UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000243126.
5. Fossland, T. (2015). Digitale læringsformer i høyere utdanning. Oslo: Universitetsforlaget.

6. EU Science Hub (2019) 'European Framework for Digitally Competent Educational Organisations'. Available at: https://ec.europa.eu/jrc/en/digcomporg.

7. European commission (2019) 'Priorities, Digital Single Market'. Available at: https://ec.europa.eu/commission/priorities/digital-single-market_en.

8. European Commission (2019) 'Digital Education Action Plan - Action 3 Digitally-Signed Qualifications'. Available at: https://ec.europa.eu/education/education-in-the-eu/european-education-area/digital-education-action-plan-action-3-digitally-signed-qualifications_en.

9. Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *The International Review of Research in Open and Distributed Learning*, 12(3), 80–97. doi:10.19173/irrodl.v12i3.890.

10. Kunnskapsdepartementet (2017) 'Digitaliseringsstrategi for universitets- og høyskolesektoren 2017-2021'. Available at: https://www.regjeringen.no/contentassets/779c0783ffee461b88451b9ab71d5f51/no/pdfs/digitaliseringsstrategi-for-universitets--og-hoysk.pdf.

11. Norgesuniversitetet (2015) 'Digital tilstand 2014' *Norgesuniversitetets skriftserie*. Available at: https://diku.no/rapporter/digital-tilstand-2014.

12. DIKU (2019) 'Digital tilstand 2018: Perspektiver på digitalisering for læring i høyere utdanning' *Rapportserie*. Available at: https://diku.no/rapporter/digital-tilstand-2018-perspektiver-paa-digitalisering-for-laering-i-hoeyere-utdanning.

13. European Commission (2017) 'Europe's Digital Progress Report (EDPR) Country Profile Cyprus'. Luxembourg: Publications Office of the European Union. Available at: http://ec.europa.eu/newsroom/document.cfm?doc_id=44294.

14. European Commission (2018) 'Education and Training Monitor Report'. Luxembourg: Publications Office of the European Union. Available at: https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2018-cyprus_en.pdf.

15. European Commission, EACEA, & Eurydice (2019) 'Digital Education at School in Europe. Eurydice Report'. Luxembourg: Publications Office of the European Union. Available at: https://eacea.ec.europa.eu/national-policies/eurydice/content/digital-education-school-europe_en.

16. Bryman, A. (2012). Social research methods. Oxford, UK: Oxford university press.

17. Yin, R. K. (2003). Case study research: design and methods. Thousand Oaks, CA, USA: SAGE publications.