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DIGITAL SEARCHLIGHT – A STUDY ON DIGITAL SKILLS BEING SOUGHT AMONGST LANGUAGE TEACHERS

Tord Talmo[1], Mikhail Fominykh[1], Antonio Giordano[2], Maria Victoria Soule[3]

[1]Norwegian University of Science and Technology, NTNU (Norway)
[2] Pixel (Italy)
[3]Cyprys University of Technology (Cyprus)

Abstract

Language proficiency is an essential 21st Century skills, acknowledged in all areas of society. The same can be said about digital literacy, and these two together are important in order to obtain other skills, like creativity, criticism and more. In the Erasmus+-project Digital Competences for Language Teachers (DC4LT) the focus is on the training needed for language teachers in order to utilise the full potential of new and innovative Educational Technology. The project is focused on needs identified by language teachers all over Europe in order to develop course materials, workshops and finally an open community platform to aid the need for this type of training and share best practices.

Language teachers are dependent on their employers in order to obtain these skills. In this study 854 European job announcements, 40 in Norway, have been analysed in order to answer the research question if employers are looking for digital skills when hiring language teachers today? Additionally, a narrow document analysis on international, national and institutional strategies for digitalisation within education has been conducted. The question is if there is a correlation between strategic demands and the job announcements at institutional level considering digital skills for language teachers?

This article will present the findings from the study with descriptive statistics, and analyse qualitatively the Norwegian strategies and job announcements in order to understand in a better way why there is a clear discrepancy between proposed strategies and the labour market demands. This will be further elaborated through recent research on digital skills and habits in Norwegian Higher Education.

The results show a discrepancy between the intended policies and the job announcements.

Keywords: Language learning, digital skills, CALL, labour market, strategical work.

1 INTRODUCTION

There has been a lot of discussions and research on which types of skills language teachers need in the 21st Century [1-3]. Seeing the rapid digitalization of society, and the change in the educational system towards new learning environments and requests for lifelong learning, this debate is highly interesting. Yet another interesting question is whether or not employers are aware of these skills needed, and how they address them in order to attract the right type of competence to their institutions? This article will present the results and findings from a study aiming at researching the correlation between national strategies and job announcements published to attract language teachers: To what extent can one find a relationship between strategic demands and the actual announcements at an institutional level considering digital skills for language teachers? Exploring different strategies, it is also interesting to see to what extent the proposed strategies are implemented on institutional levels, or in other words if it is possible to recognize the strategic demands in the actual announcements at institutional level considering digital skills for language teachers?

The study being presented in this article is a part of an Erasmus+ project, Digital Competences for Language Teachers (DC4LT), co-funded by the European Union. This project last from 2018-2021, and the responsible institution is Department of Education and Lifelong Learning, Norwegian University of Science and Technology (Norway). The other partners in the project is University of Macedonia (Greece), Cyprus University of Technology (Cyprus), Pixel (Italy) and ITMO University (Russia).

DC4LT aims at improving digital literacy and empowering language teachers of all levels to use ICT instruments in their practice. To achieve this goal, the project will explore how teachers are prepared to the integration of information technologies in their pedagogical work, what skills they need in order to better support their courses, and in what ways they can help their students in the language learning

process. Based on the collected primary data, the consortium will develop a self-sustained Open Internet Community of Practice for language teachers/online tutors. Large numbers of language teachers will be invited to participate in the DC4LT training workshops and provided with an opportunity to collaborate with peers in an interactive educational participation in the DC4LT training workshops and provided with an opportunity to collaborate with peers in an interactive educational process, spreading the excellence.

This article presents one small study within DC4LT. It will focus solemnly on the policies and strategies implemented in Norway and use other results and findings only to exemplify and elaborate the Norwegian results.

1.1 Background

Today, students and teachers may integrate digital technology and learning methods relying on digitalization both inside and outside of the classroom. Digitalization is indeed dramatically shaping the nature of teaching, learning and social interaction. ICT-tools and new learning methods allows students and teachers to attend and explore lectures and other learning scenarios in new ways, and the digitalization provides new opportunities for sharing, searching materials, collaborating and storing information.

When it comes to language teaching, innovations in technology have not yet been properly researched and taken into account, although the use of multimedia computing, the Internet, language laboratories and other technology has become common in classrooms all over the world. This is mainly due to the assumption that new possibilities of language learning by Internet and other computer interfaces are just a new form for already established approaches and methods. It was widely accepted that traditional exercises and activities (albeit communicative, grammar-based, etc.) have just been copy/pasted to the digital form, with the advantage of distance learning, faster distributing of materials to the students and much lesser time for students to finish them. But this view on digitalization has changed the latter years. Digital tools and skills can change the concept of time, place and collaboration providing so called on-the-fly learning and ownership of the learning process as well as improving motivation and interest [4]. Thus, it seems as if the 21st Century requires more and other types of digital skills for all teachers, something that is recognized in strategies and policies both at international and national levels. Which types of skills will be further examined in this article.

It still seems to be a discrepancy between the need for digitalization of language training and the strategies being introduced. The reality for language education at this time, also consistent with what is currently happening in the education and labor world, can be taken to extremes as follows:

- pervasive (sometimes dangerous) presence of ICT in all the aspects of our life, including education;
- impossibility to find a job if not in possession of the relevant digital skills;
- advantage of incorporating digital tools in education;
- emerging need for students to learn digital skills and for learners to upgrade their stock of technical knowledge on ICT;
- more fluid definition of the teacher role;
- dual purpose of language teachers, whose function necessarily demands for digital skills for both educative and communicative reasons (ICT as the main vector of a fast-changing language).

Modern technology provides new opportunities, like active collaborative learning approaches, fast access to learning materials, possibilities to investigate grammatical challenges in a new way and access to an increasing amount of external sources. This allows the students to participate in setting the terms for communication and interaction in the classroom in order to get a clearer view of their instant knowledge and perception. On the other hand, it also creates new problems related to, for example, fake news and awareness of sources used. The teacher therefore needs to be digitally competent in order to address problems and aid students in utilizing their new opportunities.

Digitalization of education is nothing new though. As an example we can use student response systems. Commercial and proprietary student response system solutions have been available since the 80ties [5-7]. Since the beginning of the new millennium, more and more response systems have been made available and designed for classroom usage. Still there are few teachers in Norway applying this technology in their lectures. In 2018 only 29% of the respondents in Norwegian Agency

for International Cooperation and Quality Enhancement in Higher Educations (DIKU) report "Digital tilstand" (Digital Conditions, *our translation*) answered that they were using student response systems at all [8, p. 28]. This is despite of the fact that today, with online solutions provided through web-platforms, the cost of commercial SRS digital solutions should no longer be a hinderance neither for the institution nor the students as it was earlier [9]. Considering the new generation of learners being digital native and used to Bringing Your Own Device (BYOD), the teachers always have easy access to the systems in class. It even seems that more and more students are getting their own devices. According to a survey done in 2011 at Sør-Trøndelag University College, Norway, 81% of the students attending classes claimed to have an own device suitable for using state of the art technological solutions [10]. This number is assumed to be higher today, also in the rest of the world. And this is only one example of how the available technology do not get integrated in the modern classroom.

It is therefore necessary to investigate if there is anything in the policies in Norway that hinders the implementation of good digital skills in the classroom. Or more precisely if employers are looking for digital skills when they hire language teachers today?

2 STRATEGIC POLICIES

The European Union has been concerned about allowing people the opportunity to learn languages for a decade. Due to several reasons, the European Commission has been supporting language diversity, international cooperation and the professionalism of language training through their Erasmus+ programmes, and are still including languages and language learning as one of the cornerstones in EU projects [11].

Accordingly, the European Commission focuses on digitalization:

> 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. [12]

Lately there has been a growing number of online educational courses, like MOOCs, as well as other initiatives based on digital skills and tools in order to utilize ICT in a lifelong learning format. Also language learning is included in these digital initiatives, but this is just a small amount of the total training being delivered. This means that one should also see initiatives towards digitalization of language learning in other areas of the society. Especially the needs for teachers to have updated digital skills would be expected to be found in documents also on a national level.

Considering the fact that language literacy and digital skills are essential life skills for the 21st Century, it is interesting to see how well digitalization is implemented in policies and strategies for increasing language teachers digital skills in Norway.

2.1 Norwegian conditions

Norwegian higher education is administered by the government. This also means that it is the governmental policies that affects the institutions the most. In 2017 the Norwegian government issued a new strategy for digitalization of Higher Education (HE) in Norway [13]. Even though a survey from 2014 [14] shows that there have been several initiatives that has improved the digital conditions in the sector, especially considering digital exams and digital assessments methods, 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 stated that new teachers have not been provided sufficient training to improve their digital skills [13, p. 6].

The strategy for digitalization in Norway takes into accountant all aspects of the HE-system. The first paragraph listing aims for the strategy deals with research and education. As main aims the strategy lists both "High quality in research and education"[1] and "Good access to education" [13, p. 9]. This is directly connected to digitalization, which means that we can read initiatives both for blended and online learning to grant access to many, as well as differentiated learning methods including digital skills at use in the classroom. This is further elaborated in paragraphs 3.21 Future visions for the

[1] All translations of the Norwegian quotes are done by the authors in this article.

student and 3.2.2 Future visions for the teacher [13, p. 10]. Underneath is the main points translated from these paragraphs:

> 3.2.1 Future visions for the student
>
> − The student meets an academic fellowship of staff and students where digital opportunities is being exploited in activating and varied learning- and assessment methods that creates the best possible learning outcome, and gives curricular and digital skills intended that the students are to learn in every subject The student are 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 for individual learning experiences, efficiency, collaboration and flexibility in the studies.
>
> 3.2.2 Future visions for the teacher
>
> − The teacher has good digital and pedagogical competence (knowledge on how to use digital tools to increase learning in there subject), incentives for curricular/pedagogical development of their own teaching and access to collegial strongholds and support services for development of study programs and sharing of digital resources for learning.
>
> – The teacher has a broad offer of applications and digital tools and services that aids the implementation of the education, from planning via implementation of teaching and collaboration with students and colleagues, internally and externally, to follow-up and assessing students individually and in groups.

Later in the strategy there are means presented to achieve the aims for the future, several of them connected to the basic competences for the teachers, mainly in order to be better equipped to manage new methods of teaching and to adapt to new demands for digital skills:

> 5.2.3 Higher Education institutions defines goals and concrete measures connected to digitalization of learning processes and use of new learning methods in order to increase the quality in higher education. The demand from Kvalitetsmeldingen (*a governmental proposition on quality in higher education, our note*) is that all students are to meet learning methods where digital opportunities are explored, and the government expects that the institutions raises development of digital tools to a strategic level and defines goals and committing measures connected to digitalizing learning processes.
>
> 5.2.4 A demand for 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. Today's demands concerning competence when hiring in combined research- and teaching positions does not provide incentives to develop teaching competence beyond beginner levels, or to acquire competence to start using new methods and tools in the lectures.
>
> 5.2.5 Demand for a recognition system for educational competence and pedagogical development and 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 within two years establishes recognition systems for educational competence and pedagogical development.
>
> 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 would want that all students have access to a modern, personalized learning environment with the opportunity of 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.
>
> 5.5.1 Strengthening the teachers digital competence in order to implement restructuring and development of learning processes based on the new opportunities provided through digitalization. A prerequisite in order to follow up the governments expectation that the institutions exploits the opportunities provided by digital learning resources is that the teachers inherit a broad competence of pedagogical, technological and administrative character. Qualitative good ICT-supported education also demands clear leadership and good knowledge on how digitalization is included in a holistic program design and in forms of assessment, and is anchored in the learning outcomes. It is the responsibility of the institutions to prioritize resources to develop the staff's competence in varied use of ICT to enhance students learning, see 3.2. [13, pp. 15 - 23]

As we can see, the responsibility is 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 needs to implement the new demands in their plans for the future, allocate resources and create incentives for actual development in the scientific staff, as seen in for example point 5.2.5.

According to Digital Tilstand 2018 [8] we can find some indications why the strategies do not reflect severely into the everyday practice of Norwegian teachers. Even though a total of 77% of the respondents agree fully or partially in the question Higher education has a responsibility that the students develop digital competence relevant for industry and the labor market in general (*our translation*)" [8, p. 21], we can see that the employees knowledge about the strategies are rather low. When asked if one should use more digital technology because "in the governmental strategy nr 16 "Kultur for kvalitet i høyere utdanning" digital competence is a independent aim for competence" [8, p. 23] only 33% agree totally or partially, 21% does neither agree or disagree and 35% answers that they do not know [8, p. 22-23].

Digital Tilstand 2018 [8] also ask to what extent teachers use digital technology when they teach. Even though there are an extensive use of technology amongst Norwegian teachers, it is interesting to see what it is being used for. Communication with students (78%), when teaching at campus (74%) and/or online (53%) and to produce digital learning content are all popular activities (49%), being used by almost half of the respondents daily or weekly [8, p.26]. Still, a lot of the literature point at student activity as the essence of digitalization, or student centered learning as Einum (2019) describes it [15, pp. 37-41], and it is therefore interesting to see that only 39% facilitate for these types of learning scenarios using digital technology on a daily/weekly basis. Accordingly, only 21% of the respondents document and/or assess their own teaching practices digitally on daily/weekly basis [8, p. 26].

Considering the elaborated focus on digitalization in the governmental strategies, it is expected that digitalization would be a key area in the strategies at institutional levels. When asked this in Digital Tilstand 2018, 66% of the informants confirmed that this is the case. Still there were also 29% answering they didn't know, making it a question if the strategies are implemented in the daily work as well as anchored in the staff at HEI [8, p. 48]. This strongly indicates that half of the teachers in Norway do not know about the strategies on digitalization implemented at higher levels.

As an example we will use the strategy of the largest University in Norway, Norwegian University of Science and Technology (NTNU) [16]. All governmental strategies needs to affect the institutional strategies to be effective. It is expected to make the institutions more effective and economic, but more important digital tools should be accessible and increase the pedagogical quality [17, pp. 14-18]. NTNU, as the largest University in Norway, should therefore have a strategy to implement digitalization in their organization connected to the European and national policies.

NTNU is a large University and has many areas of focus in their strategy. There are few places where digitalization is mentioned in the strategy, but we can find it some places. Concerning Education and learning environments it is stated: "Students are involved in developing content and learning processes in a tailored learning environment. New technology enables stimulating and varied approaches to learning and assessment, and facilitates access to lifelong education." [16, p. 19]. New technologies are also explicitly mentioned concerning campus development: "Develop sustainable technological solutions" [16, p. 34]. Other than these two quotations, it is more focused on other development than ICT competence, and there are no places where the strategy discusses/mentions skill sets or training connected to ICT-competence.

Still NTNU is aware of the new demands in the 21st Century. To achieve the visions for the future, NTNU points at digitalization as the most important point concerning the development of the whole institution:

> NTNU'S CAPACITY FOR DEVELOPMENT
>
> NTNU sets priorities for resources to ensure high quality in our core activities, and develops a leading position in our disciplines so that we can meet society's changes, needs and expectations. NTNU has user-friendly and effective support systems. Future-oriented digital services focused on user needs are available to students and staff. NTNU has robust systems to meet the need for information security, emergency response capacity and protection of privacy.
>
> DEVELOPMENT GOALS
>
> NTNU will: Have resource management that contributes to increased productivity and creates room for manoeuvre in terms of strategic priorities and renewal at all levels Launch digitalization initiatives and improvements that support integrated, standardized procedures and work processes. [16, p. 35]

It is paradoxal to see how much emphasize is put on the central role of digitalization to achieve the aims ("Future-oriented digital services focused on user needs are available to students and staff. NTNU has robust systems to meet the need for information security, emergency response capacity and protection of privacy."), and still there are few places where digital competence and how to enhance the staffs capacity is mentioned throughout the rest of the document.

Even if this is just one example of one institution, the results from the study presented in this paper indicates the same types of difficulties; how to ensure that the political requirements are implemented at the institutional level?

3 MARKET STUDY

In order to see if the institutions, in this study named the market, are searching for the correct type of skill sets in their new employees, we decided to analyse job announcements. We collected job announcements from a total of 11 European countries. In total we looked at 854 job announcements, whereas 40 from Norway. The data collection was done by a different researcher (or a group of researchers) in each country. One or multiple online job platforms were selected to provide 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, policy-makers, administrators, etc. 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.

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 analysed, 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 and included one time. 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.

When analysed the types of skills were placed in three different categories, defined by the research group. The three groups were as follows:

Generic digital skills

Some digital skills are required, without specifying which exact skills.

Old fashioned digital skills

This category includes job announcements that require an ability to operate a computer and use basic office software.

Specific digital skills

These are skills that describes abilitiy to use specific tools, platforms or methods related to ICT.

4 RESULTS

Considering the results from the study, there are some obvious results. On a global scale[2], the number of no-mentions is high (see table 1).

Table 1: Total number of announcements where digital skills is mentioned 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	**854**	**128**	**15.0%**

Only 15% of the announcements are actually mentioning digital skills at all, and even if Norway looks like being at the better end of the scale, it is still interesting to see which skills are being asked for.

Of the 40 announcements found and analysed in Norway, only 30% mention digital skills at all. It is obvious that most of the announcements are standardized, thus 25% asks for generic digital skills. Most of these announcements includes variations of the formulation: “Has experience with and is positive towards the use of digital tools”. Even though it is positive to see the inclusion of digital skills when searching for language teachers, these types of formulation do not say a lot about the strategic importance of ICT at the institution.

The positive thing is that there is only one announcement that request what we have called old-fashioned skills, but the same goes for the specific skills (see fig. 1).

[2] The results are available on the DC4LT homepage [18], and also explored further in an article to be published in July [19].

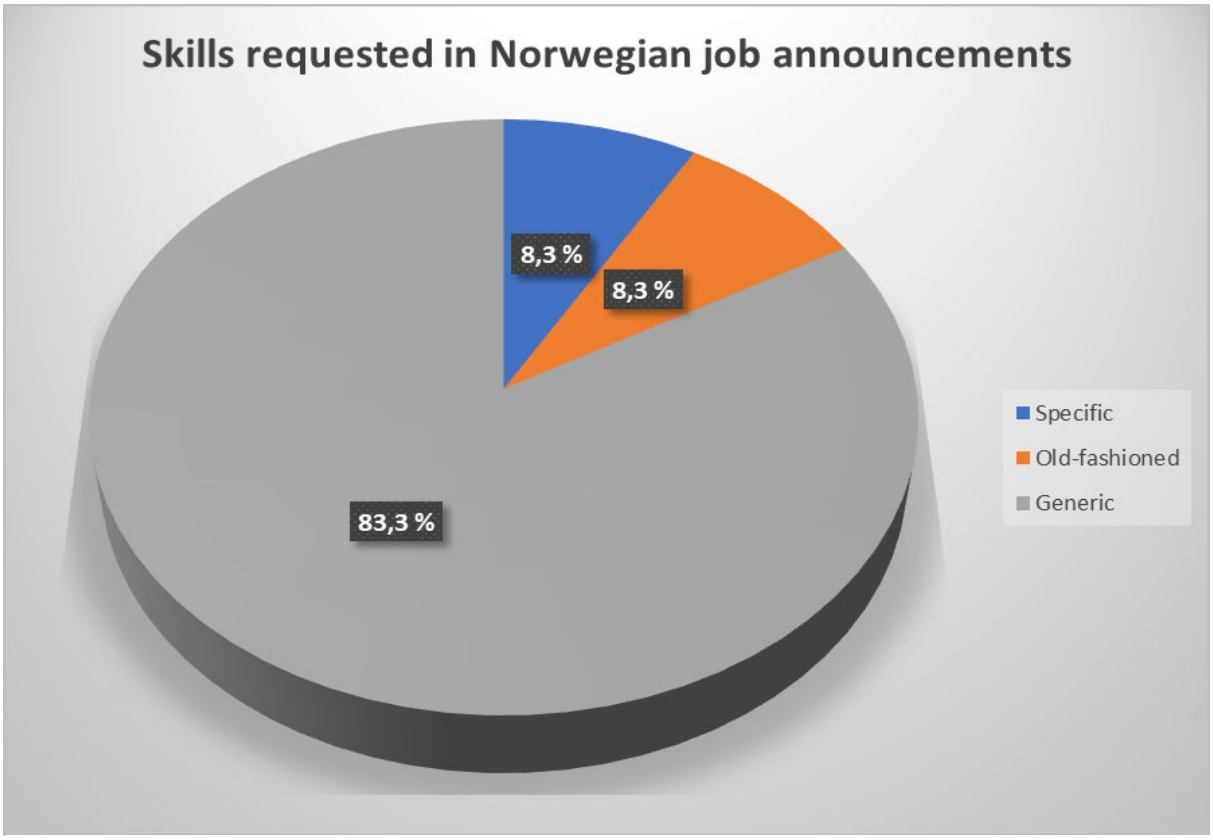

Fig. 1: Type of skills requested in Norwegian job announcements for language teachers when mentioned at all

Of the 12 announcements mentioning digital skills at all, only one puts emphasis on specific skills. The announcement asks for the following: "Good basic data/computer knowledge, office. Knowledge of computer games and positive towards using them in teaching". This announcement was for a private school working with drop-outs from the ordinary educational system. In this case it obvious that the institution has a plan, and are using their digital searchlight to find the right candidate.

There are several possible limitations in the data material. The obvious one is the number of announcements that has been researched in Norway (n=40). This is due to the time of year of the collection (not too many announcements found) and the strict rules for relevant data sat by the researchers. Still, in comparison with the total number on a European scale, it is possible to see trends.

It could also have been interesting to divide the announcements between private and public institutions, VET, high school and HE or even on basis of pedagogical approaches. This could have given clearer answers.

Considering the strategies, it is necessary to mention that digitalization affects all areas of the institution, and announcements do not give clear answers by themselves.

5 CONCLUSIONS

Even though the data from Norwegian announcement cannot be deemed significant, the trend is the same as the results in the total amount of data collected on a European scale. As the results show there is a long way from strategic policies and institutional will to actual implementation in the education in Norway. Even though there are improvements being shown all the time, it seems like the strategies are either to brave or the digitalization processes are to fast for the institutions to coop.

Off course the strategies, as shown at NTNU, are being effectuated at different levels, not solemnly via job announcements, it is still interesting to see how much work is left to be done to ensure students language teachers that are able to utilize the tools provided in the 21st Century. It will be exiting to follow the strategic work, and also see if the strategies are being implemented through new employments in the future.

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