Digital Duty Manager Competences Intellectual output O1

Digital Duty Manager Competences

Contents

01 Introduction

In consideration of the findings of the national desk research and the survey related to the questionnaires for non-teaching staff and teaching staff, we have been able to enclose the competences of the Digital Duty Manager in an innovative role within the school structure. A profile that will be a balance between managerial activity and daily operations. The Digital Duty Manager will have not only technical skills but also educational and pedagogical skills.

The figure will report directly to the Headmaster, from whom will receive indications and suggestions so that the figure becomes a real point of reference for technical/pedagogical digital teaching.

A survey was conducted in four schools (Istituto d'Istruzione Superiore "A. Volta" Pescara from Italy, Agrupamento de escolas de Pinheiro from Portugal, SOU "Jane Sandanski" Strumica from Republic of North Macedonia, Liceul Teoretic Grigore Moisil Timisoara from Romania) among >50% of teaching staff and >40% of non teaching staff. The findings of all four schools were quite similar.

The two surveys highlight not only the level of digital skills but allow a comparison between what the teachers and the technical administrative staff think.

The COVID crisis and schools lockdown increased the need for distance learning solutions at primary and secondary levels. Schools need to get better prepared in case of new similar situations.

According to the latest TALIS report[1], little more than half of teachers across the participating OECD countries and economies received training in the use of technology for teaching, and less than half feel well prepared when they join the profession.

However, there is a lack of teachers' competences in digital skills, as evidenced in Education and Training Monitor 2019: "Teachers need new skills [...], including [...] teaching in a technology-rich environment, and adopting collaborative teaching practices." While most novice teachers are now trained in digital skills during their initial education, 16% report a further need for training on the use of ICT.

The previous issue can be linked to a demographic problem[2]: if junior teachers were mostly trained, senior teachers need continuous training to get knowledge about the newest trends. This

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[1] TALIS report (Teachers and School leaders as Lifelong learners)

[2] Education and Training Monitor 2019

issue is important in many EU countries where the age of teachers' workforce is advanced (i.e. Italy with over 50% of teachers aged 50+)

Finally, due to COVID, in some countries, teachers were asked to teach to the same class and students as the previous year, but they are not always prepared technologically to teach higher levels.

As the teaching professions face rapidly changing demands, the competence needed have become more sophisticated than before. Following the educational trend, the European Commission launched in 2018 the Digital Competence Framework for Educators (DigiCompEdu), which is a scientifically sound framework describing what it means for educators to be digitally competent.

Here is an infographic chart presenting this framework[3].
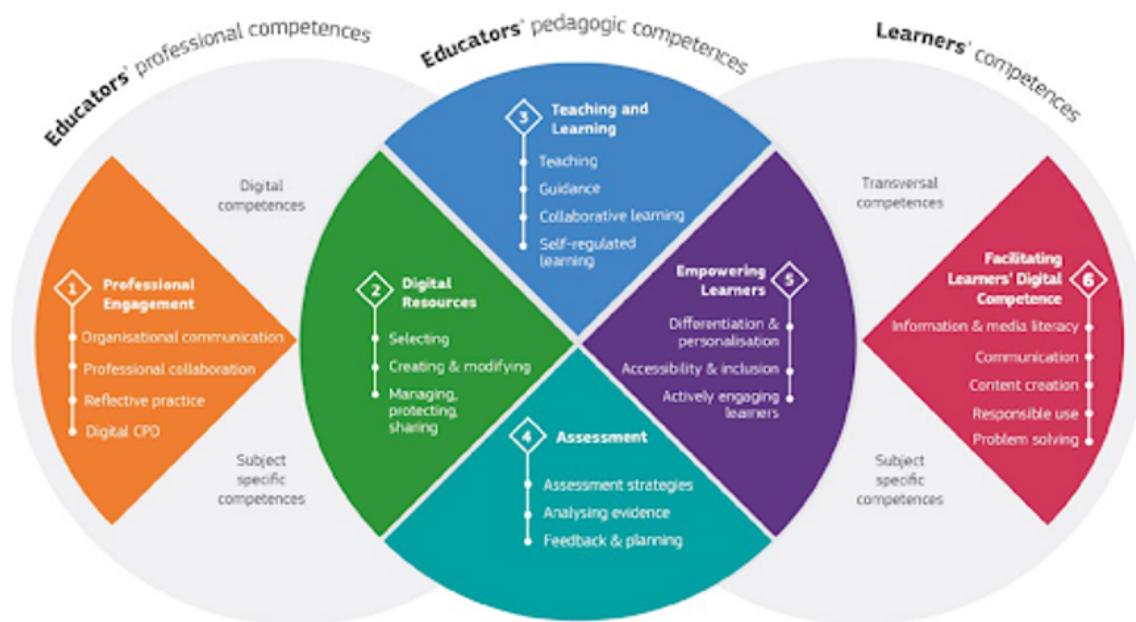
Following this framework, the EC also launched the digital Education Action Plan 2021-2027[4], which is an initiative that supports the sustainable and effective adaptation of the education and training systems of EU member states to the digital age. This plan was adopted just after the COVID-19 pandemic to answer the new challenges and opportunities linked to the increased need in digital education. It addresses two main priorities:

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[3] https://ec.europa.eu/jrc/en/digcompedu
[4] https://education.ec.europa.eu/focus-topics/digital/education-action-plan

- Fostering the development of a high performing digital education ecosystem, with high level of infrastructures and equipment, as well as competent teaching staff;

- Enhancing digital skills and competences for the digital transformation, addressing the basic digital literacy from an early age.

The following desk research report is made in the frame of the HiClass project, aimed at supporting teachers in the use of digital technologies in the classroom, with the development of a digital duty manager profile, which would help them in implementing the technologies for an appropriate educational impact.

Prior to the development of the competence profile of this Digital Duty manager figure, partners from the HiClass project have performed a national desk research that will enable the consortium to better define the current picture of digital performance of teachers in their respective countries, thus putting an emphasis on the current needs.

02 Desk Research main findings in the partnership countries

2.1 What is the average level of education of teachers in the field of digital competences observed in your country?

ITALY

Italy has the oldest teaching workforce in the EU. As a high share of teachers in Italy are approaching retirement age, renewing the teaching body is a major challenge. In 2017, more than half (58%) of primary and secondary teachers (ISCED 1-3) were over 50 years old (against 37% in the EU), and 17% were over 60 (EU: 9%)[5] This means that, on average, 3.8% could retire each year for the next 15 years. Italy also has one of the largest proportions of female teachers, though (like in other countries) it decreases with educational level taught: in 2016 it ranged from 99% in pre-primary school to 63% in upper secondary education and 37% in universities.

Procedures for selecting and hiring teachers were repeatedly modified over the last decade, but so far have not succeeded in ensuring a reliable supply of qualified teachers. The massive wave of recruitments in recent years (over 150 000 since 2015) has had little or no impact on teachers' average age, and did not reduce the problem of teachers' allocation in secondary schools due to a lack of candidates with relevant qualifications (most acute in the sciences)[6]. The 2015 school reform introduced a strong initial education and training component (percorso FIT) and clear employment prospects, with the aim of cutting long waiting lists and meeting future teacher requirements through forward planning, but the reform was not fully implemented. The 2019 budget law abolished the FIT system and reinstated centrally-administered public competitions open to all graduates[7], reducing the training component to a one-year induction period giving access to tenure. The competition will be organised at regional level, and those selected will be required to spend at least three years in the region of appointment to reduce teacher turnover. Its effectiveness in ensuring an adequate supply of teachers will depend on the ability of the Ministry

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[5] Source: Eurostat (UOE) 2017. Online data code: educ_uoe_perp01. Unknown age category not included in the calculation.

[6] The majority of appointments (over 85 000) were to regularise long-term temporary teachers, following a ruling by the Court of Justice of the European Union (Judgment in Joined Cases C-22/13, C-61/13, C-62/13, C-63/13, C-418/13 Raffaella Mascolo and Others v Ministero dell'Istruzione, dell'Università e della Ricerca). https://gredos.usal.es/bitstream/handle/10366/143691/TFM_Vill%C3%A9nS%C3%A1nchezC_Profesoradoytecnolog%C3%ADas.pdf?sequence=1&isAllowed=y

[7] With a master's degree and 24 credits in pedagogical subjects.

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of education, university and research (MIUR) capacity to organise the competitions as planned, every two years.

Limited career prospects, coupled with relatively low salaries compared to those of other highly qualified professions, make it difficult to attract the best-qualified graduates. The teaching career system offers only a single career pathway with fixed salary increases based solely on seniority. In the absence of performance-related incentives, mobility across schools remains the only possibility to improve working conditions. As a result, schools in disadvantaged areas tend to be deprived of the best teachers and staffed with young, inexperienced teachers on temporary contracts. Teachers' statutory salaries are lower than the OECD average at every career stage. The seniority-based career system means that teachers can only reach the maximum salary after 35 years of service; the OECD average is 25 years. Teachers' salaries are also lower than the earnings of other workers with a tertiary education. The wage freeze for public-sector employees, still in place since 2010, continues to have a detrimental impact on teachers' purchasing power. The salaries of teachers entering the profession in 2016/17, in real terms, were around 94% of the salaries in 2009/10 (European Commission/EACEA/Eurydice 2018b). Nevertheless, according to the OECD Teaching and Learning International Survey (TALIS) 2018[8], the proportion of teachers satisfied with their job is the second highest in the EU, at 96% v 89.5%. Overall, 87% of teachers say that if they could decide again, they would still choose to become a teacher (compared with an EU average of 77.6%), but only 12% believe that teaching is a valued profession in society (OECD 2019). This apparent contradiction can be explained by the attractiveness of the profession in terms of scope to reconcile private and professional life[9], which makes teaching attractive especially to women (Argentin 2018).

There are teacher shortages in some subjects and regions and oversupply in others. Teacher shortages are most acute in disciplines like science and maths, foreign languages and learning support, and in the north of the country. While most teachers (80%) are from the south, most teaching posts are available in schools in the north, and cannot be filled on a permanent basis due to excessive teacher turnover. The government has announced new measures to curb teacher transfers from the next school year. Indirect evidence of persistent teacher shortages is the share of teachers on temporary contracts. In the 2018/19 school year, they numbered 164 000, or 18.5% of the total, up from 135 000 the previous year[10]. As the vast majority of temporary teachers have no automatic right to fill the same post the following school year, this corresponds to an expected turnover rate exceeding 20%, factoring in expected retirements[11].

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[8] In 2018, 23 Member States participated in TALIS: Austria, Belgium fr, Belgium nl, Bulgaria, Croatia, Cyprus, Czechia, Denmark, England (UK), Estonia, Finland, France, Hungary, Italy, Latvia, Lithuania, Malta, the Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden. TALIS 2018 covers lower secondary teachers and school leaders in mainstream public and private schools.

[9] Italian teachers report that they spend on average 17 hours per week teaching and 5 hours preparing lessons (TALIS). There are no statutory hours to be spent in school beyond teaching hours.

[10] Source: MIUR statistical office.

[11] See Eugenio Bruno e Claudio Tucci, Quota 100, fuga dalla scuola: a settembre serviranno 140mila docenti, Il Sole 24 Ore, 7 March 2019.

Continuing professional development is defined by law as a 'professional duty' of teachers, but there is no minimum number of compulsory hours. The 2015 school reform introduced the principle of compulsory continuing professional development, allocating earmarked funds to access additional educational resources (books, theatre, exhibitions, ICT, courses etc.). The reform also introduced in-service teacher appraisals, with a view to awarding bonuses worthy teachers in every school type and level (European Commission 2018 ETM). School leaders receive funding of an average of EUR 200 per teacher per year, depending on the type of school and area, with ex-ante criteria covering the award and amount of the bonus. After three years of trialling this initiative, the government is expected to enact formal criteria for awarding the bonus and to make permanent provision to fund the initiative. Only teachers on permanent contracts are subject to (bonus-related) appraisals; teachers on temporary contracts are not evaluated. There are no measures to address insufficient performance.

Italy's investment in education is low and unevenly spread across education levels. General government expenditure on education, both as a proportion of GDP (3.8%) and as a proportion of total general government expenditure (7.9%), was among the lowest in the EU in 2017[12]. The share of GDP allocated to pre-primary, primary and secondary education (ISCED levels 0-3) is broadly in line with EU standards, expenditure on tertiary education is the lowest in the EU, at just 0.3% of GDP in 2017, well below the EU average of 0.7%. The Council of the European Union adopted a country-specific recommendation for Italy under the 2019 European Semester to 'improve educational outcomes, also through adequate and targeted investment, and foster upskilling, including by strengthening digital skills.' (Council of the European Union, 2019). At 77%, the share of government education expenditure for the compensation of employees is among the highest in the EU.

The government continues to revise the measures introduced by the 2015 Education Act (la Buona Scuola). It put in place a revised system of teacher recruitment (see Section 3), reduced work-based learning to sharpen its focus on the competences required by the labour market, and postponed by one year the planned introduction of a final competence test at the completion of grade 13, with participation to remain voluntary (making it unrepresentative and therefore unusable for evaluation purposes). The content of teaching has been enriched by hiring extra music and gym teachers, with the stated aim of reducing early school leaving. More resources (EUR 35 million) have been invested in implementing the National Plan for Digital Schools, to create new digital learning environments (EUR 22 million), additional teacher training (EUR 7.5 million), and funding for problematic areas (EUR 2 million for 60 schools in the most deprived areas). Further measures target the two national agencies for evaluating the school system (Invalsi) and higher education and research (ANVUR), which will be integrated into the MIUR in a move which, by curtailing their independence, risks jeopardising all previous efforts to create an evaluation culture in the education system. Furthermore, the potential of digital technologies in improving educational practices is being held up by challenges that education systems still face. To

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[12] Source: Eurostat, General government expenditure by function (COFOG).

successfully undergo digital transformation, schools need to support teachers' digital competence for pedagogical use, design innovative pedagogical approaches, and provide digital equipment as well as better connectivity. Capacity building for digital assessment needs to be implemented for learners, teachers, schools and education systems.

Schools are digitally equipped in line with other EU countries, but the level and speed of connectivity lags behind. While virtually all schools have an internet connection (95,4%, MIUR), only 26.9% have a high speed connection, well below the EU average of 47%. Insufficient internet access is reported by 43% of school leaders (OECD, TALIS 2019) (EU-22 23.8%). Students' confidence in their digital competence is comparable to the EU average, as is the share of students who use a computer at school on a weekly basis. By contrast, the proportion of teachers who feel well or very well prepared to use ICT for teaching is lower than the EU-22 average (35.6% v 37.5%) [13]. The COVID-19 crisis has led the government to step up investment in the digitalisation of schools.

An ageing teaching workforce with insufficient ICT skills contributes to the slow progress of digital innovation in teaching. In 2018, 68% of teachers reported having participated in in-service training in ICT for teaching in that year, a marked increase over 2013 (15 pps), and only 16.6% felt a strong need for ICT training, below the EU-22 average of 18% (OECD, 2019). However, while the share of teachers who frequently or always let students use ICT for projects and class work grew from 30% in 2013 to 46.6% in 2018, only 35% of teachers reported using ICT when teaching in most or every lesson in 2018, compared to 72% in Finland and 49% in Portugal. In addition, teachers tend to use ICT mainly to consult information sources (33%) and content linked to textbooks (34%), in line with a frontal teaching approach, while only a minority uses interactive learning resources, practice programmes or learning games. The lack of familiarity with more innovative digital technologies for teaching may reflect the age composition of the teaching workforce, and the need to strengthen in-service training in ICT for senior teachers (1. Key indicators).

MACEDONIA

According to the Concept for development of distant learning strategies in the primary and secondary schools in Republic of North Macedonia (Ministry of Education of Republic of North Macedonia, 2020), the digital competencies of teachers and others involved in the process of education in North Macedonia is below average. There is a lack of strategic and normative documents that would provide a standardised approach towards distant learning and the use of ICT in the educational process. The level of knowledge about ICT of teachers, principals, inspectors etc. is unsatisfactory. This is also true about parents and partly true about students. The ICT infrastructure is poor, as well as the access to the Internet in some parts of the country.

However, with the outbreak of the COVID pandemics, the circumstances described above have started to change rapidly. A National platform for distant learning was established and all teachers

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[13] https://op.europa.eu/webpub/eac/education-and-training-monitor-2020/countries/italy.html

received basic training in the use of this platform and other tools necessary in the distant learning process. The schools reallocated some of the finances to buy smart boards, tablets, computers and other ICT equipment. All this resulted in a relatively effective distant learning process and led to a change in the mindset of some of the biggest opponents of digital technology[14].

PORTUGAL

According to Portugal INCoDe.2030 (National digital Competences Initiative e.2030), Portugal needs to promote a new set of digital competences with a view to making the most of the opportunities the future will bring, and generating renewed confidence in the new generations. At the same time, the country itself must be an active agent in the global effort to produce new scientific computing knowledge and develop the capacity to manage and use large amounts of information. This will help to ensure a better position in Europe and the world. We cannot wait to find out what the new technologies will be; we have to create them and work with them. Portugal needs to promote a new set of digital competences with a view to making the most of the opportunities the future will bring, and generating renewed confidence in the new generations.

These competences, which have been planned up to 2030, are part of exercising full citizenship. A country with digitally proficient citizens is also a country where more people are included, involved, and able to deal with the society they are part of.

ROMANIA

Romanian teachers feel confident about certain aspects of their digital skills, in particular about communication and collaboration, but less so when it comes to digital content creation, information and data literacy (European Commission, 2019). Similarly, the OECD's 2018 Teaching and Learning International Survey (OECD, 2019a) showed that almost 70% of lower secondary teachers believe they are well or very well prepared for the use of digital methods in teaching, while 21% reported a high need for professional development in ICT skills (EU average: 18%). Despite a large number of training courses being available for digital skills, their quality, coverage and relevance are lower than expected (ISE, 2018). At the same time, teachers often feel exposed and do not know how to react to the expectations and demands of their students related to the use of technologies for learning. In addition, more than half of the teachers surveyed had insufficiently developed competences for the effective use of online learning platforms. The CRED project (Relevant Curriculum, Open Education for all), co-financed by the European Social Fund, has been supporting the development of teacher competences, including during the COVID-19 school closure[15].

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[14] *Link to the Concept for development of distant learning in the primary and secondary schools in Republic of North Macedonia: https://mon.gov.mk/stored/document/Koncept%20za%20dalecinsko%20obrazovanie-design-MK-with%20logos.pdf*
[15]https://op.europa.eu/en/publication-detail/-/publication/8d1829d7-2495-11eb-9d7e-01aa75ed71a1/language-en/format-PDF/source-171316001

2.2 What kind of education is delivered to teachers in the digital field?

ITALY

Teachers' formation needs are often determined by the competent Minister or by schools themselves. Schools start from the single teacher's perceived needs and then decide to turn to one of the various Italian institutions which run refresher courses for teachers, such as Universities, training agencies or organisations approved by Ministero dell'Istruzione, dell'Università e della Ricerca (Minister of Education, University and Research, MIUR). The main strategy for enhancing students' digital skills is the National Digital School Plan (PNSD) nel 2015. The Plan is made up of 35 actions divided into three areas of intervention:

1. tools: actions aimed at equipping schools with new learning environments based on new digital technologies, where innovative teaching methods can be tested and implemented;

2. skills and content: actions aimed at promoting and enhancing students' digital skills and fostering the development of quality content for digital education;

3. training: actions designed to support learning and digital innovation through training courses for school staff.

PNSD saw the establishment of 35 teacher training hubs: so-called Future labs and the subsequent establishment of 100 STEAM hubs.

The National Recovery and Resilience Plan envisioned School Plan 4.0 : The reform will ensure continuous professional and career development of school staff through the establishment of a School of Higher Education and Continuing Education for school leaders, teachers and ATA staff. Indire, Invalsi and Italian and foreign universities will be involved in order to ensure a quality continuing education system in line with European standards. The aim is to provide pedagogical and didactic training that, together with in-depth knowledge of the subject matter, will enable them to effectively meet the challenge of transmitting methodological, digital and cultural competencies in the context of high-quality teaching. School institutions have also been identified to promote the establishment of territorial clusters of schools for the implementation of national training paths for digital transition and the dissemination of integrated digital education, delivered with innovative methods and tools in favour of school personnel, as part of the "projects in place" of the PNRR

"A lot of Italian and international studies identified as a critical point that often, in Italy, technological devices (such as tablets, computers, interactive whiteboards etc.) applied to teaching methods are considered only as support to a traditional pedagogical teaching model by teachers. This teaching model is also characterised with a great distance and asymmetry between teachers

and students and a top-down style in transmission of knowledge. It is underlined from various sides that Italian education in the ICT field is structured in a way that doesn't allow teachers to fully understand the potentialities of digital instruments. This happens in ICT educational courses both before and after future teachers begin their working careers.

Indeed the courses often show softwares and technologies only through written presentations to future teachers. These presentations just describe theoretically the way in which softwares and technologies work, framing them in a closed scheme rather than putting them into a practical context, in which the future teachers can test by themselves how to use these instruments.

Of course according to European Key Competences of lifelong learning there is more than learning how to use softwares and technological tools. Digital competence means be deeply aware about the general principles, mechanisms and logic that underlie the evolutioning digital technologies.

This is very important, because in this way teachers can allow their students to achieve a full comprehension of digital technologies, their development and even the risks connected in using them, which goes further than being able to use digital devices."[16]

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[16] Piergiorgio Guarini, "Improve ICT teaching in Italian teachers' education: A proposal", https://ceur-ws.org/Vol-2817/paper36.pdf

		Importo ammesso a finanziamento	Progetti realizzati	Scuole raggiunte (media per anno)	Docenti coinvolti
D) Accrescere la diffusione, l'accesso e l'uso dell'informazione nella scuola	D.1 - interventi formativi rivolti ai docenti e al personale della scuola, sulle nuove tecnologie della comunicazione;	45.628.737,81	5.557	495	128.618
	D.4 – iniziative per lo sviluppo della società dell'informazione attraverso i centri polifunzionali di servizio;	5.483.532,00	218	495	15.078
	D.5 - Progetti Nazionali	7.072.776,84	8	495	147
TOTALE		58.185.046,65	5.803	495	143.843

	DIDATEC BASE	DIDATEC AVANZATO
DOCENTI FORMATI	2.700	3.800
COSTO DEL PROGETTO	1.260.000,00	1.300.000,00

https://www.miur.gov.it/scuola-digitale Investment in training of teaching staff in new technologies as per the picture below, teacher trained and project cost.

MACEDONIA

In the last two years, continuous education has been delivered to teachers in North Macedonia and it is provided by the Bureau for Education Development. The project is called EDUINO. It started as a tool in which more IT-experienced teachers uploaded ready-made lessons and later it

developed into a place where webinars, workshops and online trainings took place, enabling teachers to improve their digital competencies. The site of the platform is the following:

http://www.eduino.gov.mk/

When the National Platform for Distant Learning was being prepared, the Ministry of Education nominated thirty teachers (mainly IT) who were introduced to the Platform and were later involved in a dissemination process. In this way, there were five teachers in each primary and secondary school who were trained to use the platform and they trained the rest of the teachers. This proved to be a very effective way to improve the digital competencies of each teacher in a very short period of time. The link to the platform: https://lms.schools.mk

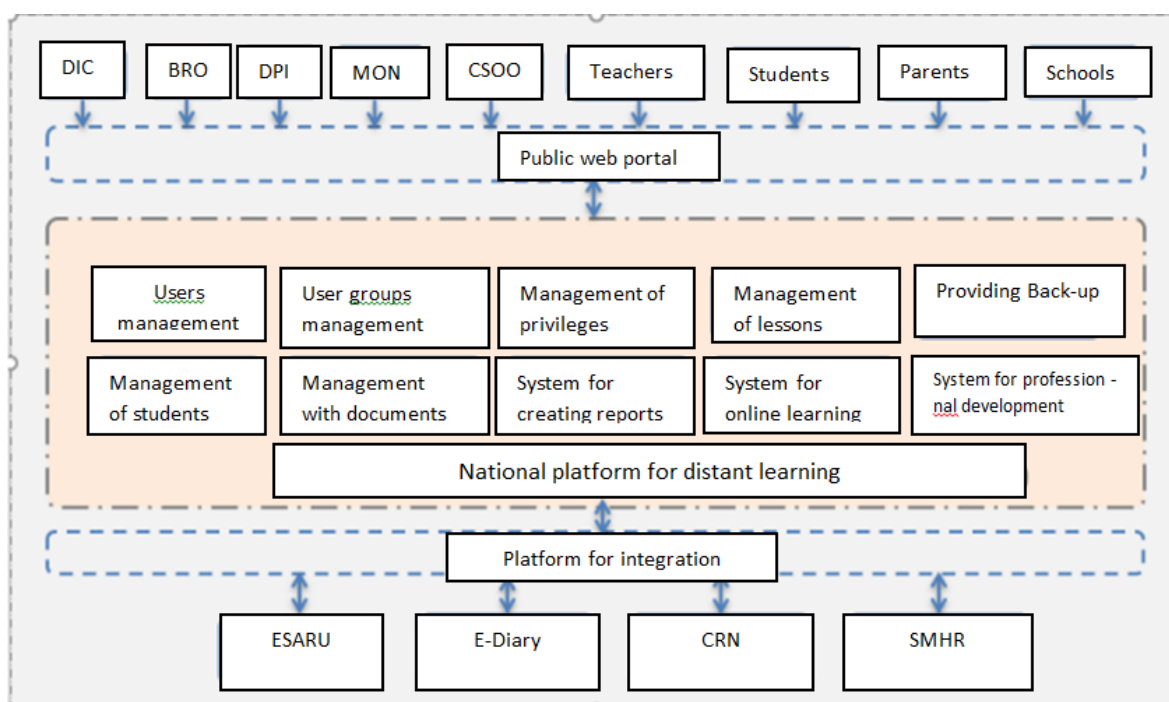The structure of the National Platform for Distant Learning:

Fig1. The structure of the National Platform for Distant Learning (N.Macedonia)

PORTUGAL

In Portugal also, there are initiatives for the promotion of digital competences in higher education: reinforcement of primary-level training courses in the priority áreas of this programme, with an emphasis on cooperation between higher education institutions and companies in their development and on-the-job training. It also includes the implementation and maintenance of a decision support information system that makes it possible to analyse and anticipate the

competences needed, aimed at higher education students. The aim is to adapt/streamline the relationship between supply and demand for ICT courses in emerging áreas).

Then, there is training for preschool, primary and secondary education teachers (Programme for training primary and secondary school teachers, with the participation of the Schools Association Training Centres (CFAE) and higher education institutions).

ROMANIA

Younger teachers receive an initial education in the form of ICT classes in college and depending on their age they have received it as students as well. In Romania, teachers are, on average, 43 years old, which is close to the average age of teachers across OECD countries and economies participating in TALIS (44 years old). Furthermore, 26% of teachers in Romania are aged 50 and above (OECD average 34%). This means that Romania will have to renew about one out of four members of its teaching workforce over the next decade or so.

During their initial education and training, 91% of teachers in Romania were instructed on subject content, pedagogy and classroom practice – a share that is higher than the average of OECD countries and economies participating in TALIS (79%). In Romania, 37% of teachers' report having participated in some kind of formal or informal induction when they joined their current school, compared to 42% of teachers across OECD countries and economies participating in TALIS.

Since more than 70% of teachers are taking courses based on the subject they teach there is no immediate need to improve this. However, a high percentage of teachers claim they need advanced training in ICT, teaching in multicultural environments and teaching to students with special needs[17].

In Romania continuous education is an obligation for every teacher, mainly through regional specialised organisations CCD (Casa Corpului Didactic), but also through a myriad of NGOs which offer accredited training. For example, the course offering of CCD in our county includes programs such as Google Educator, level 1[18]. Also, at the beginning of the Covid Pandemic, the ministry launched an online platform with digital resources and tutorials available to all teachers https://digital.educred.ro/.

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[17] https://www.oecd.org/countries/romania/TALIS2018_CN_ROU.pdf;
https://colaborare.rocnee.eu/files/talis/01052020/Raport_national_TALIS_2018.pdf
[18] https://www.ccd-timis.ro/; https://digital.educred.ro/

2.3 What are the major policies of reference in terms of digital education in the country?

ITALY

The Italian National Plan for Digital Education (Piano Nazionale Scuola Digitale — PNSD)[19] is a policy launched by the Ministry of Education, University and Research for setting up a comprehensive innovation strategy across Italy's school system and bringing it into the digital age. It is one of the pillars of "La Buona Scuola" school reform (Law 107/2015), a vision for concrete action reflecting the government's response to the most significant challenges for innovation in the public administration system. Innovation in the school system and digital education opportunities are key drivers of this vision. This Plan is not a simple order for the deployment of technology; no educational process takes place without intensive teacher-student interaction, and technology cannot be separated from this fundamental human relationship, as the OECD recently reminded us.

Simply introducing more technology in schools is no longer sufficient; if we concentrate our efforts solely on technology we risk ignoring the larger issues, namely knowledge and culture. This Plan answers the call for a long-term vision for Education in the digital age directly linked to the challenges that all of society faces in applying and promoting life-long and life-wide learning, in both formal and non-formal contexts. This has been confirmed by the High Level Conference of the European Commission in December 2014, by several publications of the OECD's Centre for Educational Research and Innovation, by the World Economic Forum's New Vision for Education Report and by studies such as the Ambrosetti think tank's "Education for the 21st century". Education in the digital age must be viewed above all as a cultural initiative. It begins with a new concept of school: an open space for learning — more than just a physical place, a springboard that enables students to develop skills for life. In this vision, technology is empowering, habitual, ordinary and ready to serve the school, primarily in activities aimed at training and learning, but also in administration, spreading to — and in fact bringing together — all school settings: classrooms, common spaces, laboratories, private and informal spaces. It is an organic plan for innovation in Italian schools, with cohesive programmes and actions organised into five main areas: tools, skills, content, staff training and supporting measures. For each of these, we have defined "critical" but achievable objectives linked to specific actions that will enable us to improve the school system as a whole.

The plan and its thirty-five actions are also a request for collective commitment. Not only from those who already work daily to create a more modern and innovative school responsive to students' needs, but also from the communities and private stakeholders touched by the challenges that each school faces every day — in teaching, in organising, in learning and improving. We are working to create a "Stakeholder Club for digital education" in connection with this

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[19] Ministero dell'Istruzione dell'Università e della ricerca – Documento Piano Nazionale Scuola digitale - https://www.istruzione.it/scuola_digitale/allegati/Materiali/pnsd-layout-30.10-WEB.pdf

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document and the actions it promotes, a permanent partnership to open our schools to change and innovation.

MACEDONIA

The current document according to which the reforms are taking place at all levels in education in our country is the Education Strategy 2018 - 2025.

ICT and digital literacy are developed in the seventh pillar of the Strategy- the so-called General / common priorities in the education system. Hence, one of the priorities (Priority III) set out in the Action Plan, which is an integral part of the Strategy, is to ensure the widespread use of ICT in education and training and digital literacy. Sub-priorities, among others, are identified: Use of ICT in the learning process and Establishment of a unified electronic platform for teaching, learning and methodological resources.

Several indicators are provided to monitor the achievement of these priorities, such as:

- approved standards for using ICT at all levels of education;
- provided the necessary ICT equipment to at least 50% of the public educational institutions;
- developed educational software for using ICT according to the standards, which is provided to the users;
- trained staff from the equipped institutions for using ICT in the educational process;
- available fully operational e-platform with updated resources for teaching and learning staff at all educational levels.

http://mrk.mk/wp-content/uploads/2018/10/Strategija-za-obrazovanie-MAK-WEB.pdf

PORTUGAL

At European level, digital competence has long been recognized and defined as one of the essential competences for lifelong learning. In Portugal, the definition of digital competence, in InCoDe 2030, includes the concept of digital literacy, as well as the production of new knowledge through research.

The development of the learners' digital competences is mentioned in almost all the basic and secondary education curriculum. However, unlike in other traditional subjects, this curriculum area is not exclusively taught as a separate topic, but also as a cross-cutting key competence. It can be integrated into school curricula in three main ways:

• as a cross-curricular theme: e-skills are seen as cross-cutting and therefore are taught across all subjects in the curriculum. All teachers share responsibility for developing digital skills.

• as a stand-alone subject: e-skills are taught as a separate subject area, similar to other traditional subject-related competences.

• integrated in other subjects: Digital competences are embedded in the curriculum of other subjects or learning areas.

In Portugal, due to the current curriculum reform, the approach to digital skills is transversal to the curriculum in the 1st cycle of basic education (1st to 4th year), while in the 2nd cycle of basic education (5 º and 6th grades) and in lower secondary education (7th to 9th grades) students attend a separate compulsory subject. In secondary education (12th year), this is an optional autonomous subject.

As a reference for the promotion of digital, the Portuguese Ministry of Education provides the following guidelines:

https://www.dge.mec.pt/sites/default/files/Curriculo/Projeto_Autonomia_e_Flexibilidade/perfil_dos_alunos.pdf

https://escolamais.dge.mec.pt/eixos

https://www.dge.mec.pt/pcdd/pcdd.html

https://www.incode2030.gov.pt/

ROMANIA

There are two major projects involving national strategies currently underway in Romania: Educated Romania, under the patronage of the Romanian Presidency Institution and Smart Edu – a national strategy of the Ministry of Education to digitise Romanian education over a period of 6 years 2021-2027.

In Romania, digital competencies are included in the curriculum as a separate subject, ICT, compulsory for the secondary education and optional for the primary level. The competencies, approved by law in 2017 are in accordance with the key competencies of the European Education and Training 2020 strategy (ET 2020)[20].

However, acquisition of digital skills remains limited. The percentage of young people aged 16-19 who assess their digital skills as low is among the highest in the EU (39% compared to the EU average of 15% in 2019). Existing curricula, programmes and infrastructure do not sufficiently reflect the need to increase the pupils digital skills. The number of highly digitally equipped and connected schools in Romania is significantly below the EU average. As part of the E-Education 2023 strategy, Romania launched two major projects, 'The computer system of Management of

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[20] *https://www.smart.edu.ro/; http://www.romaniaeducata.eu/*

schooling' and 'The National Education Platform' that should contribute to the digitisation of education in over 4,500 schools[21].

2.4 What are the identified training needs on e-skills for teachers in your country?

ITALY

Furthermore, against an evolving technological and demographic background, teachers need new skills more than ever, including for dealing with cultural and linguistic diversity in the classroom, teaching in a technology-rich environment, and adopting collaborative teaching practices. While 92% of teachers report regular participation in professional development, 21% of them declare a further need for training on teaching students with special needs; 16% report a further need for training on the use of information and communication technology (ICT) for teaching; and about 13% report a further need for training in teaching in multilingual and multicultural environments[22].
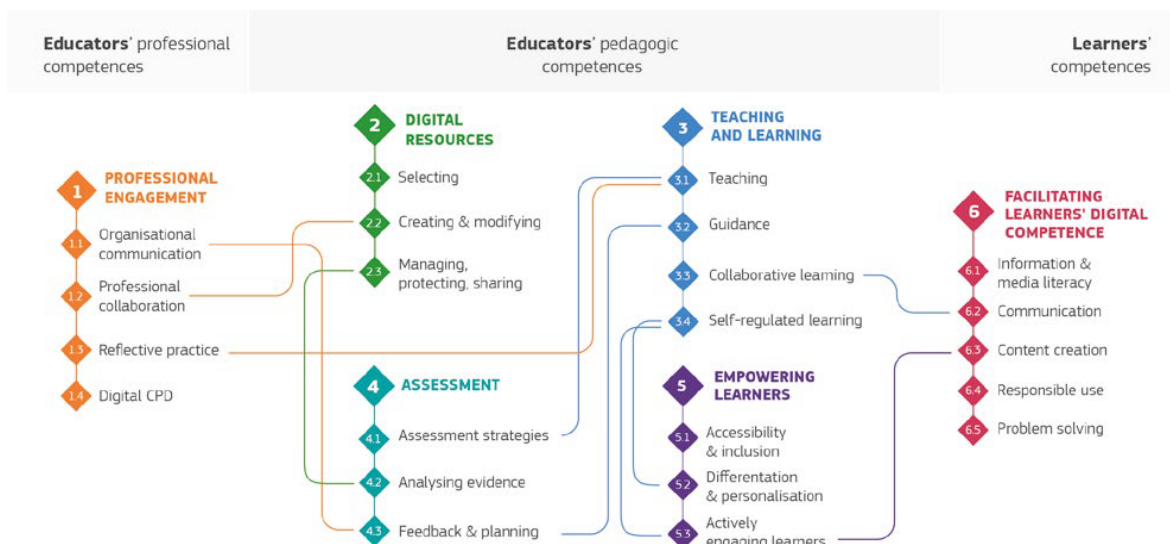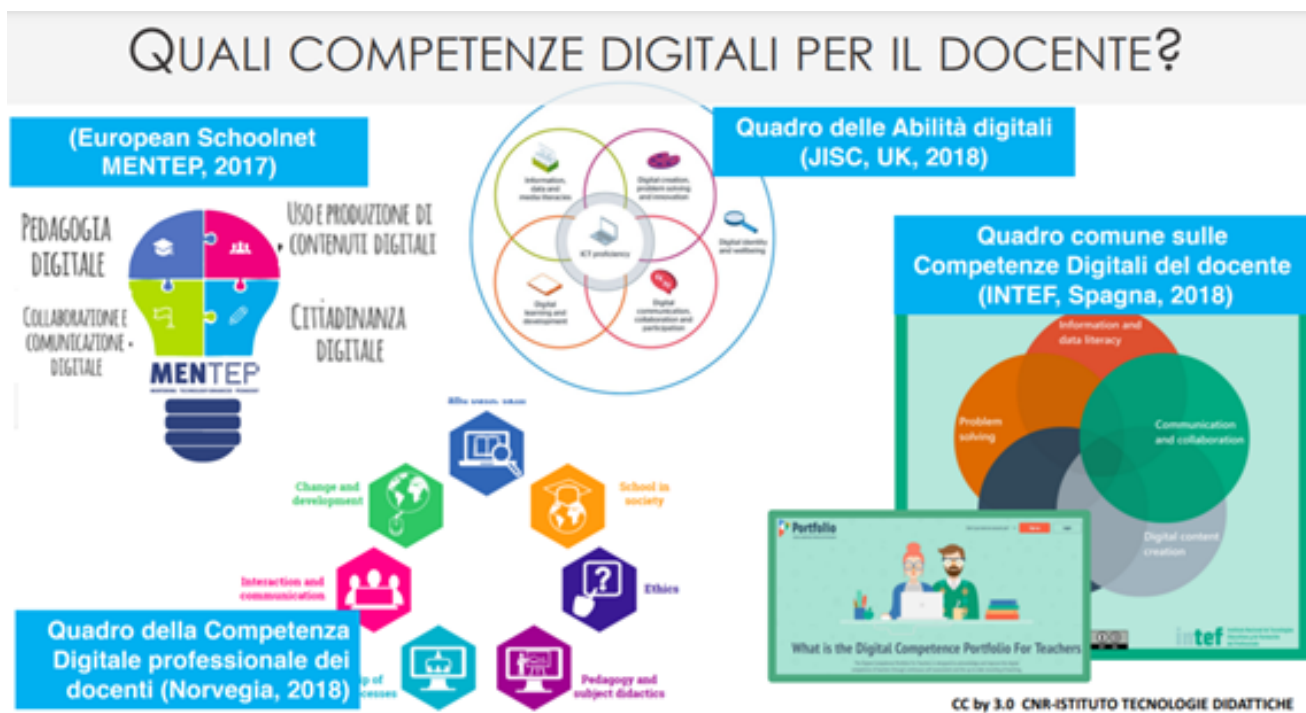
Distance learning has accelerated a process of technological updating that had already begun at European and national level. At present, the binomial "digital-school" cannot but evoke the experience of Distance Learning (ODL), through which we tried to give continuity to teaching activities during the COVID-19 emergency. In actual fact, DaD, which, according to the 2020-2021 School Plan adopted by Ministerial Decree 39/2020, has now been transformed into Integrated Digital Didactics (DDI), has done nothing more than accelerate a process of updating educational institutions in a technological sense, which had already begun at a European and national level, forcing teachers to field new skills linked, for example, to the management of virtual interactions or to assessment, for which it was necessary to change parameters and types of tests.

The development of teachers' digital skills is one of the objectives set out in the National Digital School Plan (PNSD), the Ministry of Education's policy document introduced by Law 107/2015, which dictates the strategies for developing 'sustainable' digital innovation models within the Italian education and training system. Teachers must be able to accompany students in a process of digital education, as moreover recommended by the Council of the European Union which, in 2018, updated the key competences for lifelong learning, defining the digital one as "basic competence". The use of ICT in the school environment is important because it makes it possible to apply the socio-constructivist pedagogical model, thanks to which learning is fostered by experience, collaboration, personalisation and the construction of knowledge, also with a view to preparing students for the world of work. In this direction, among the particularly relevant actions of the PNSD, in addition to the LIM Diffusion Plan, the Cl@ssi 2.0 Plan and the Digital Publishing Plan have provided for the creation and testing of new learning environments, teaching-learning processes and innovative products, exploiting multimedia and digital technologies.

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[21] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0522&from=RO

[22] https://www.prometheanworld.com/it/risorse/contenuto/blog/competenze-digitali-sempre-piu-importanti-per-gli-insegnanti/

What digital skills for the teacher[23]?

QUALI COMPETENZE DIGITALI PER IL DOCENTE?

The training of teachers in didactic innovation, above all as the ability to convert the use of technology into a pedagogical and didactic sense, is considered a priority objective, divided into a series of actions; among these, for example: Action #18, which provided for the creation of a Digital Profile for each teacher; Action #25, dedicated to in-service training for didactic and organisational innovation and therefore intended as a support measure for the continuous development of skills; Action #27, aimed at strengthening initial training on didactic innovation. Together with the activities for the development of digital competences of students and school staff, the PNSD also envisages that schools activate actions to strengthen network and connectivity infrastructures. In the digitisation process, schools are accompanied by a dedicated system figure, that of the digital animator, identified by each school institution in the manner it deems most appropriate. The digital animator has to coordinate the implementation of the PNSD activities included in the Three-Year Education Offer Plan, in a manner consistent with the school's needs. From a comparative perspective, we also note the report "Digital Education at School in Europe", carried out by the Eurydice network in the 2018/2019 school year, in which strategies and policies on digital education at school by 38 European countries are analysed.

MACEDONIA

The training needs on e-skills for teachers in Republic of North Macedonia are the following (according to survey results):

- Microsoft Office (Word, Excel, PowerPoint)
- Using different platforms for distant learning (Zoom, Teams, Moodle)
- Using social media for promoting the schools
- Using the Internet for the purpose of research and finding teaching materials

The majority of teachers have already received training in some of these areas. The trainings have been provided by the Bureau for Education Development and other certified training providers. They have also received training on using the National Platform for Distant Learning by the trainers nominated by the Ministry of Education. A great number of teachers have individually attended different workshops for improving their e-skills.

PORTUGAL

To ensure the education of the youngest sections of the population by stimulating and reinforcing digital literacy and digital competences at all levels of schooling and as part of lifelong learning it's necessary (according to the survey):

- Promotion of pedagogical innovation in teaching and learning processes (Reinforcement of analytical and critical competences, through the promotion of pedagogical projects and practices in the field of logic, algorithms and programming, ethics applied to the digital environment, media literacy in the digital age, and citizenship in the digital age).

- Development of digital educational resources (Design, development, certification and dissemination of digital educational resources for different levels of education, disciplines, curriculum components and training components, promoting innovative educational environments).

- Promotion and dissemination of the Robotics and Digital Literacy Code (Campaigns to promote the Robotics and Digital Literacy Code, supported with a 3, 5, 10 and 15-year plan aimed at young people in primary and secondary education. The campaigns aim to convey a positive impression of the ICT sector and industry in general, stimulating an interest in developing digital competences and pursuing STEM careers).

- Use of digital technologies in a context of inclusion for specific education and training needs (Development and democratisation of digital media in learning, and supporting training in schools and higher education).

ROMANIA

The main training need identified by the Ministry of Education on e-skills for teachers in Romania is the use of the G-suite for Education and Microsoft Office 365 A1, as the Ministry reached agreements with Google and Microsoft so that schools are granted free licences for these products. However, it is important for teachers to start creating lessons for the online and digital environment, not merely using Google Meet to simply broadcast the lesson.

2.5 During COVID pandemic, what was the official protocol for training in your country? Were there any specific tools given by the government to face the new situation?

ITALY

Following the Coronavirus (COVID-19) emergency, from 5 March 2020, face-to-face educational activities relating to the 2019/2020 school year in educational services for children and schools of every order and degree were suspended throughout the national territory, as well as those relating to the academic year 2019/2020 in universities and AFAM (Higher Education in Art and Music) institutions. At the same time, distance learning was activated. To face this situation, various interventions were undertaken aimed at reconciling the protection of the health of students and school and university staff with the safeguarding of the right to education, at the same time guaranteeing them from any harmful effects deriving from the suspension of teaching activities in presence. As a consequence, the final state exams of the upper secondary school related to the school year 2019/2020 were allowed in attendance, respecting the rules of physical distance.

In the following months, various provisions were introduced to ensure the safe resumption of teaching activities in presence in the educational services and schools, for the school year 2020/2021, as well as in universities and ADAM (Higher Education in Art and Music) institutions, for the academic year 2020/2021.

However, starting from October 2020, considering the particularly widespread nature of the pandemic and the increase in cases in the country, new provisions limitative of didactic activities in presence were progressively introduced. A restart of the same activities, with different modulations, was then planned for universities and AFAM (Higher Education in Art and Music) institutions starting from January 2021 and, for educational services for children and schools, from April 2021.

For the school year 2021/2022 it was established that the activities of the educational services for children and kindergartens, primary as well as middle and upper secondary schools should take place in presence. Exceptions to the activity in presence are possible, until 31 December 2021, only in 'red' areas and under exceptional circumstances.

For the academic year 2021/2022, the activities of universities, AFAM (Higher Education in Art and Music) institutions and ITS (Higher Technical Institutes are carried out primarily in presence[24]. The Italian government has introduced different methods to limit the spread of the virus, among which the Green Certificate. The COVID-19 Green Certificate[25] is the free document in digital and printable format that makes it easier to attend public events in Italy (such as fairs, concerts, sports competitions, and festivities during religious or civil ceremonies), to access nursing homes and to move in and out of areas that may be classified as 'red area' or 'orange area''.

MACEDONIA

In 2020, the Ministry of Education issued Plans and protocols for the educational process in the primary and secondary schools in the Republic of North Macedonia. The protocol provided two alternatives for realisation of the educational process- one for Learning with physical presence in the schools, and the other for distant learning. Since the beginning of this school year, the schools have opened their doors for student under strict conditions, for example:

- Mixing of different classes is strictly forbidden
- Wearing of masks, maintaining distance and disinfection are obligatory
- Students can enter the library only one at a time
- Classrooms and toilets are disinfected after each lesson
- Positive cases of COVID are registered on daily basis and the Institute for Public Health is informed about each case
- Distant learning is allowed for students with chronic respiratory diseases. In such cases, teachers send materials to students on the B=National platform and organise online revision and testing

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[24]https://temi.camera.it/leg18/temi/le-misure-adottate-a-seguito-dell-emergenza-coronavirus-covid-19-per-il-mondo-dell-istruzione-scuola-istruzione-e-formazione-professionale-universit-istituzioni-afam.html
[25]https://www.salute.gov.it/portale/nuovocoronavirus/dettaglioNotizieNuovoCoronavirus.jsp?lingua=english&menu=notizie&p=dalministero&id=5531

Link to the Plan and protocol for the educational process in the primary and secondary schools in Republic of North Macedonia:

https://mon.gov.mk/stored/document/Plan%20za%20odrzuvane%20nastava%20vo%20osnovno%20i%20sredno%20obrazovanie%202021%202022_1.pdf

PORTUGAL

During the COVID pandemic, the Portuguese education ministry asked schools to draw up a contingency plan so that the necessary social distancing could take place within the school space. In addition, each school also defined a plan for the development of teaching activities under the Distance Learning regime. In compliance with the XXII Constitutional Government's Program, and with a view to achieving the goal of "Universalization of the Digital School", the Ministry of Education is proceeding with the free transfer (with an obligation to refund at the end of the teaching cycle) of a kit consisting of a laptop, headphones with microphone, a backpack, a hotspot and a SIM card. At the same time, the Ministry of Education has put into practice the Digital Training Plan for Teachers (PCDD) which aims to ensure the development of digital skills necessary for teaching and learning in this new digital context. For this, the Directorate-General for Education (DGE) coordinates with the Training Centres of School Associations (CFAE) the development of this initiative through a set of activities, including training workshops at 3 levels of digital proficiency. The training of teachers has a decisive role in supporting the transversal integration of the Digital in their professional and pedagogical practices, in school life, in their daily routines and procedures, in the lives of students, in their learning practices and the exercise of citizenship.For instance, In Spain, where education is a regional competence, each region published local protocols of prevention against transmission and spread of Covid for the educational centres of their community, for each educational year.

ROMANIA

In Romania, the official protocol for training underwent numerous changes. If in the beginning of the pandemic, there was no legal basis to compel school to hold classes online, and teachers were using their own resources to keep in touch with the students, slowly a legal system was developed that clarified what actions to be taken in different scenarios: physical presence, online teaching and blended and hybrid learning. The rules for a school to hold classes online or offline have also changed drastically over the past two years, taking firstly into consideration the rate of infection nationally, then locally (with a very difficult to achieve rate for offline presence, 1/1000 Covid cases incidence), and now the physical presence being allowed in schools where there is at least a 60% percent level of vaccination among teachers or where the infection rate is below 3/1000.

Very specific sanitary rules were put in place if teaching occurs offline, and conditions in which a specific class spends two weeks learning online of a single Covid case appears in that class (this only applies to unvaccinated students).

To cope with the new reality of online teaching, the government implemented the large-scale use of the G suite platform in all schools and developed portals with online teaching resources created by other teachers or NGOs.

https://www.edu.ro/sites/default/files/O%20R%20D%20I%20N%20comun%20ME%205.338_2021%20%2B%20MS%201.082_2021aprobare%20masuri%20organizare%20activitati%20scoli%20SARS-CoV-19.pdf

2.6 Other information of interest

ITALY

Italy launched its National Coalition for Digital Skills and Jobs[26]. On 8 April 2020 the Ministry for Technological Innovation and Digitalization launched the Italian National Coalition for Digital Skills and Jobs – Repubblica Digitale -[27].

Digital skills have never been as important as they are now. The new Italian digital coalition aims at increasing opportunities for people to find a job and to allow everyone to be ready for the digital era. With this initiative, the EU is now home to 24 National Coalitions for digital skills and jobs. 'In Italy, digital illiteracy, skills shortages, obsolete workforce competences and poor digital civic literacy are more severe than in most other European countries', said Paola Pisano, the Minister for Technological Innovation and Digitalization (MID). 'To solve these serious impediments to any digital transformation program, we are launching the National Coalition for Digital Skills and Jobs within the initiative Repubblica Digitale. It is one of the actions we are taking and we will pursue to address the problem. With the Coalition, we aim at identifying and engaging as many stakeholders as possible, and to create the cultural change and the improvement of competences which are necessary to fully realise the benefits of digital transformation'.

MID leads Repubblica Digitale, while the coordination board that steers the initiative brings together several Ministries (e.g. Education, Work and Welfare, Economic Development, University and Research). More than 90 organisations, including businesses, municipalities, other public entities and NGOs, have already joined the coalition.

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[26] https://digital-strategy.ec.europa.eu/en/news/italy-launches-its-national-coalition-digital-skills-and-jobs
[27] https://innovazione.gov.it/progetti/repubblica-digitale/

The objectives of the Italian coalition are to bridge the different forms of social and cultural digital divide among the Italian population, foster digital inclusion and promote the development of skills for the jobs of the future. To achieve these long-term goals, the Coalition will set up actions to:

- Boost digital skills among all citizens, by providing them with learning and self-development tools (self-assessment kits, e-books, online courses), and help people use the new services and tools of digital citizenship actively and responsibly. For example, with the project 'A tablet and a smile for the elderly', elderly people in small towns will be offered a tablet and they will learn to use digital service with the help of young volunteers.
- Launch and increase the number of initiatives for skilling, upskilling and reskilling, through new ways of training the workforce and students. To this purpose, a first project, 'Saturday of the Future', has been recently launched.
- Promote the development of skills for digital and emerging technologies, for example with innovative training formats and workshops with universities, research centres and IT companies.
- Raise awareness of the importance of digital skills and digital culture, through the national broadcasting network, events and an annual contest rewarding the best initiatives.

The Members of the Italian Coalition have already launched more than 100 initiatives and this number is rapidly increasing, with more than three million potential beneficiaries. The majority of the current initiatives[28] aims to improve basic skills for digital citizenship and 56% of the beneficiaries are citizens.

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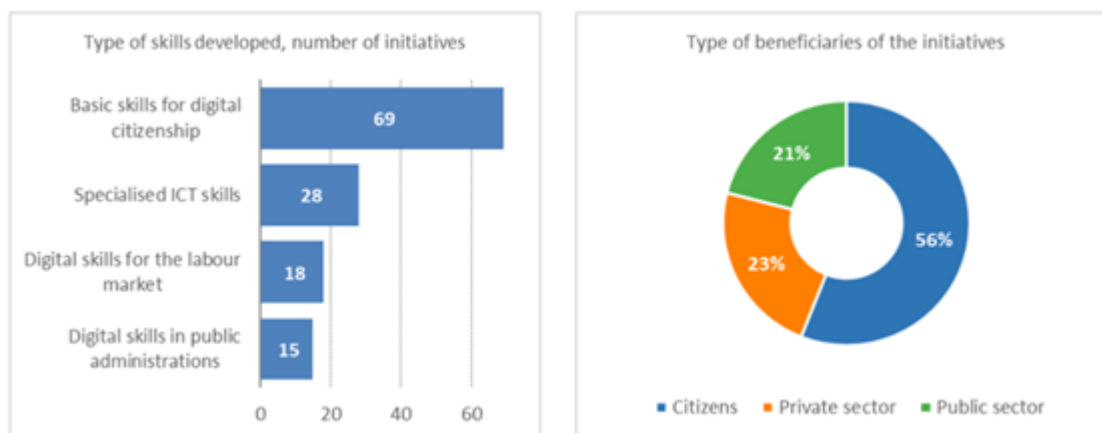
28 Figure shows the current initiatives aims to improve basic skills

MACEDONIA

According to the European Union's statistics office, Eurostat, 64 % of young people in N.Macedonia had basic or above-mentioned digital skills. According to the experts, this data is unfavourable and only shows the need for sustainable digitalization of Macedonian society.

The fact that 64 percent of young people in N. Macedonia aged 16 to 24 have basic or above basic digital skills, should raise the alarm that in Macedonian society we still can not talk about digitally literate generations, analysed by the professionals. After the latest research of Eurostat, it showed that our young people lag behind the leading Croatia in terms of digital literacy by 33 %, who have 97 % - the largest percentage of young people who have basic and above basic digital skills.

https://www.slobodnaevropa.mk/a/%D0%B4%D0%B8%D0%B3%D0%B8%D1%82%D0%B0%D0%BB%D0%B8%D0%B7%D0%B0%D1%86%D0%B8%D1%98%D0%B0%D1%82%D0%B0-%D0%B5-%D0%BF%D0%BE%D1%82%D1%80%D0%B5%D0%B1%D0%B0-%D0%B0-%D0%BD%D0%B5-%D1%82%D0%B5%D0%BE%D1%80%D0%B8%D1%98%D0%B0-%D0%BD%D0%B0-%D0%B7%D0%B0%D0%B3%D0%BE%D0%B2%D0%BE%D1%80/30743105.html

ROMANIA

In Romania there is a huge discrepancy in educational opportunities and digital tools between the rural and urban environments. According to Eurostat 92% of urban households had in 2019 access to the internet compared to 77% of rural households. Furthermore only 6 out of the 10 poorest households have Internet access in Romania and only 64% percent of people living in rural environments use the internet at least once a week[29].

2.7 Desk research conclusion

The desk research performed by partners in the frame of HiClass project highlights several relevant elements for the project.

First, there are similarities observed among the different participating countries (Italy, Portugal, Romania, North Macedonia):

- All of them are concerned by the digitalisation of education and consider it an opportunity to improve the level of education. In all the countries, there are major educational policies promoting the digitalization of education, and existing plans for continuous training of teachers in this field.

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[29] *http://snspa.ro/wp-content/uploads/2020/04/Policy-note-educatie_final.pdf*

Some disparities can also be observed, responding to country specifics:

- In Italy, there is a specific issue linked to demography and an ageing educational workforce, that lowers the level of digitalisation.
- The digital competences of teachers and other staff involved in the process of education in North Macedonia is below average. Also, the general level of youth Macedonian in digital literacy remains relatively low compared to other countries (64%);
- In Romania, there is a high disparity of digital educational opportunities according to the environment (rural or urban).

Then, this report highlights as a main outcome the following digital competence needs in education:

- Management of distance learning platforms;
- Didactic innovation using latest technologies for the development of digital educational contents;
- Need for competences to manage digital resources, for research and finding material;

Those main needs can be framed in the DigiCompEdu framework as belonging to the categories 2) Digital resources and 3) teaching and learning mostly.

03 National Survey main findings in the single schools
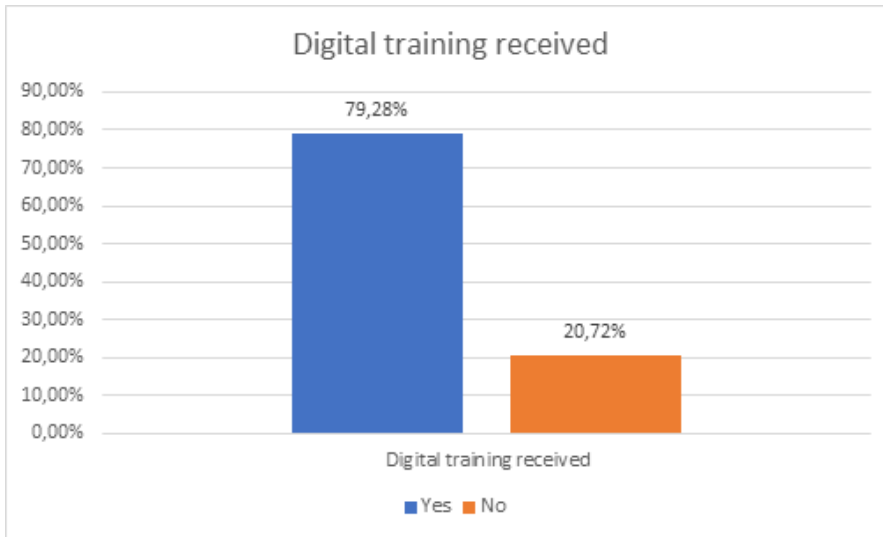
ITALY

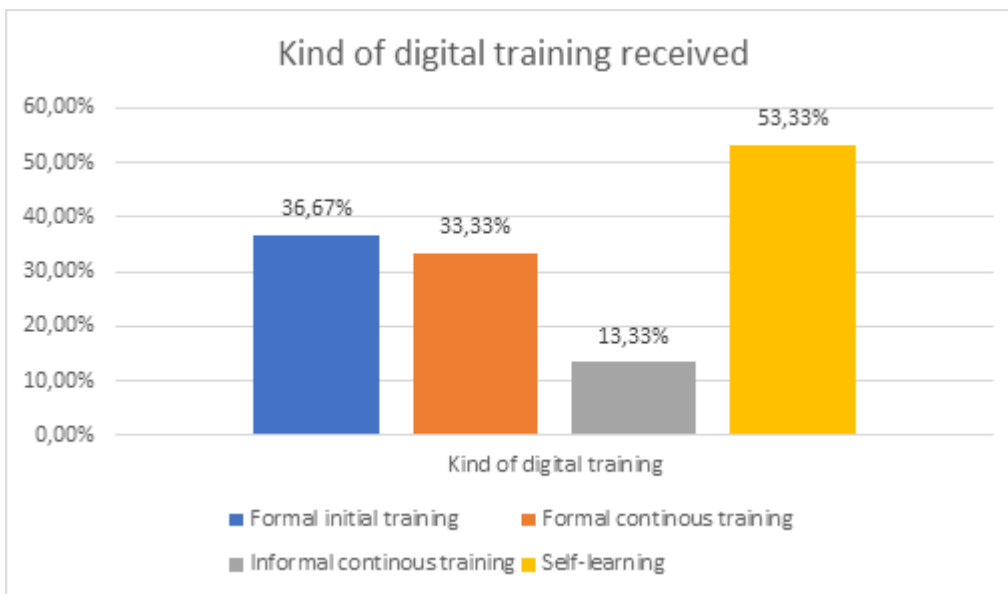## Participant profile and digital experience

Age of participants
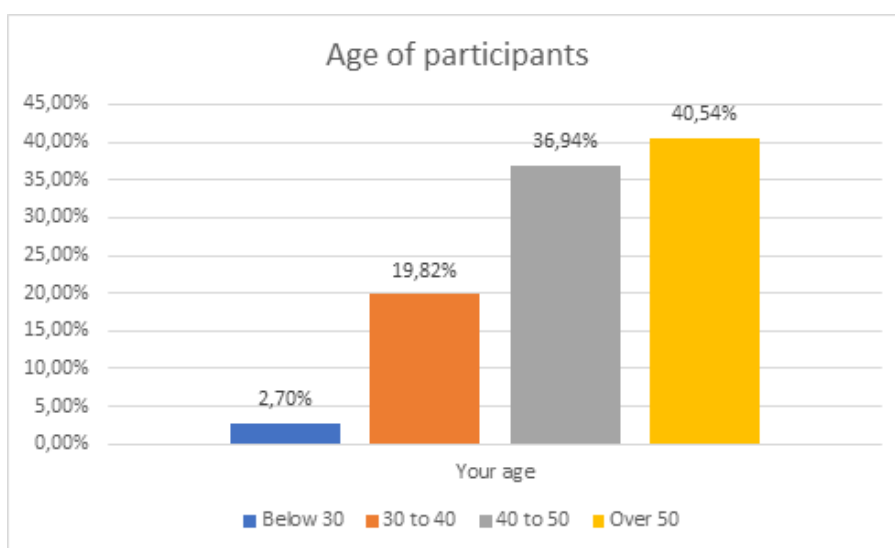
Most respondents were aged > 50 years' old but also the aged 40 to 50 answered the survey.

Digital training received

Digital training received

The diagrams shows that most teachers have received digital training

Kind of digital training received

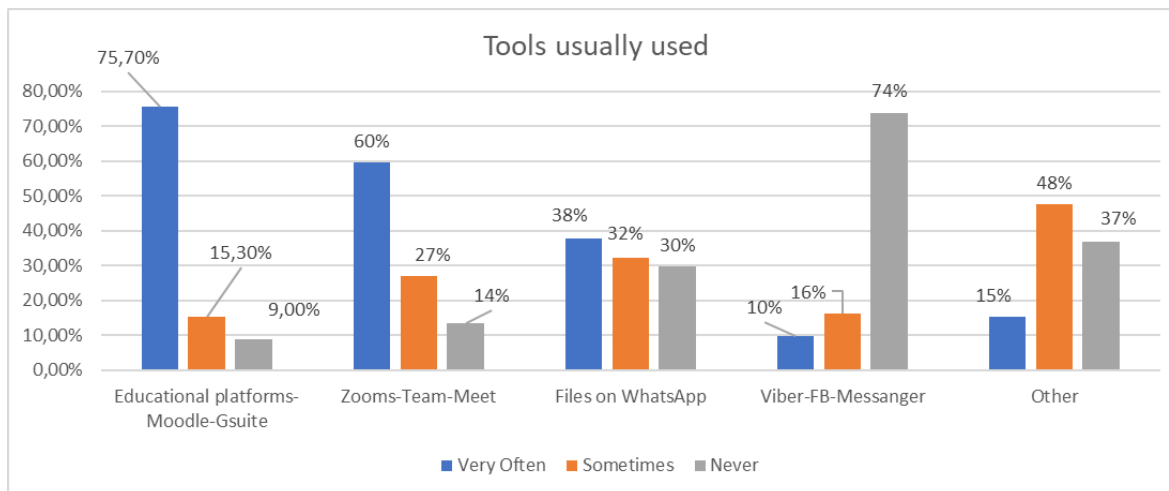We can notice that the results are really close to each other. Self-learning has a very high percentage as well.

Evaluation, from 1 to 5, 1 being the lowest and 5 the highest level, your level in the following list of competences?

The digital level of competences

Difficulties faced while dealing with digital education
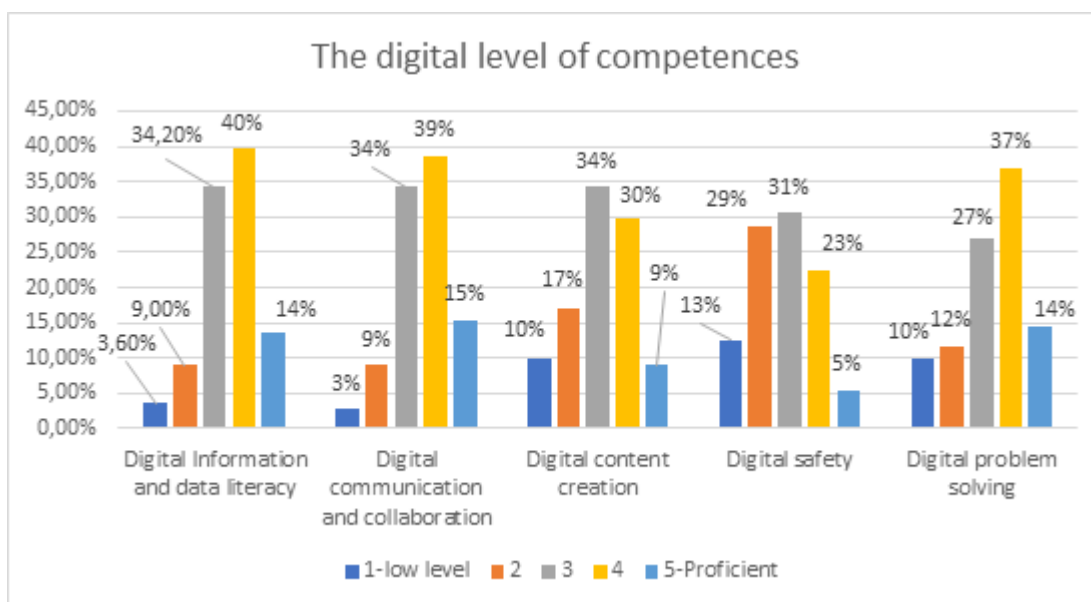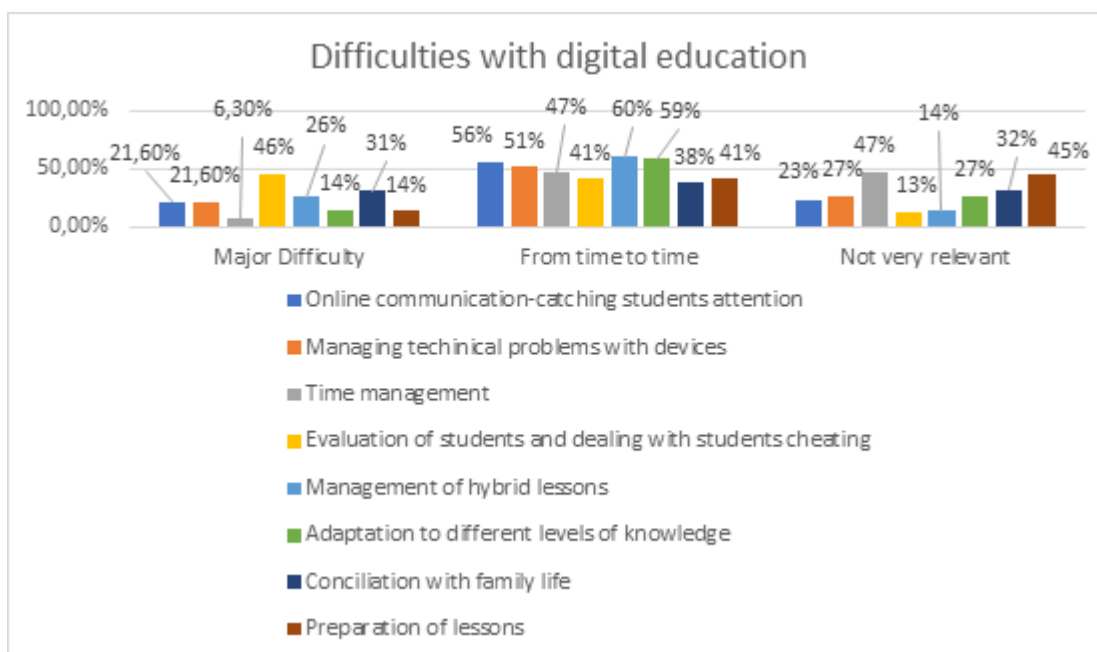
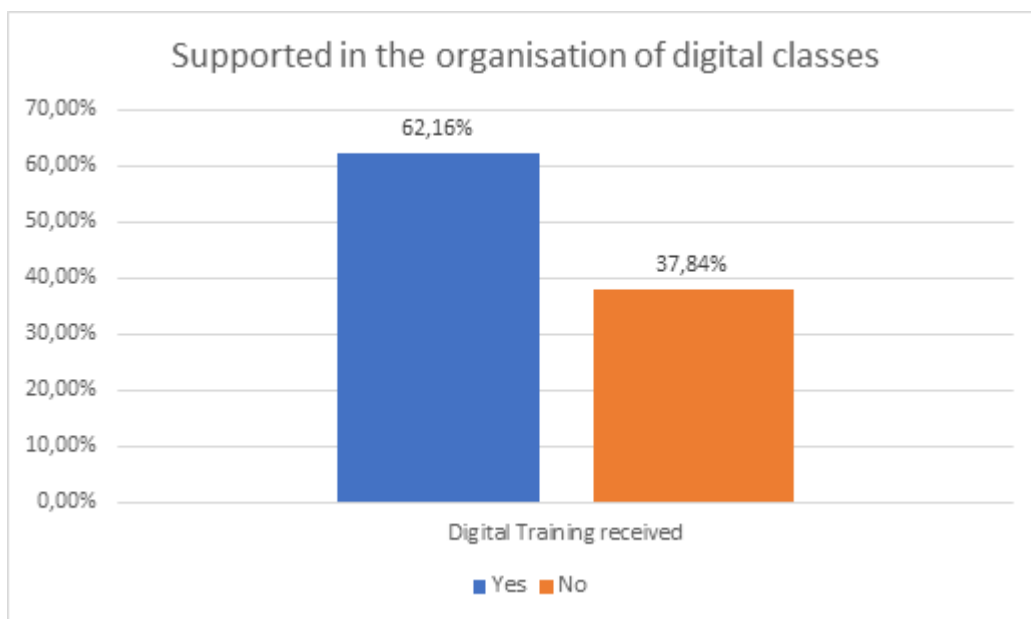Difficulties with digital education

Main tools usually used

Most respondents said the difficulties presented were mainly encountered occasionally, except for evaluation fraud which was regarded as a major difficulty.

**Supporting the organisation of digital classes in your school**

Most of the teachers (62,16%) feel supported in the organisation of digital classes

Person in charge of digital activities
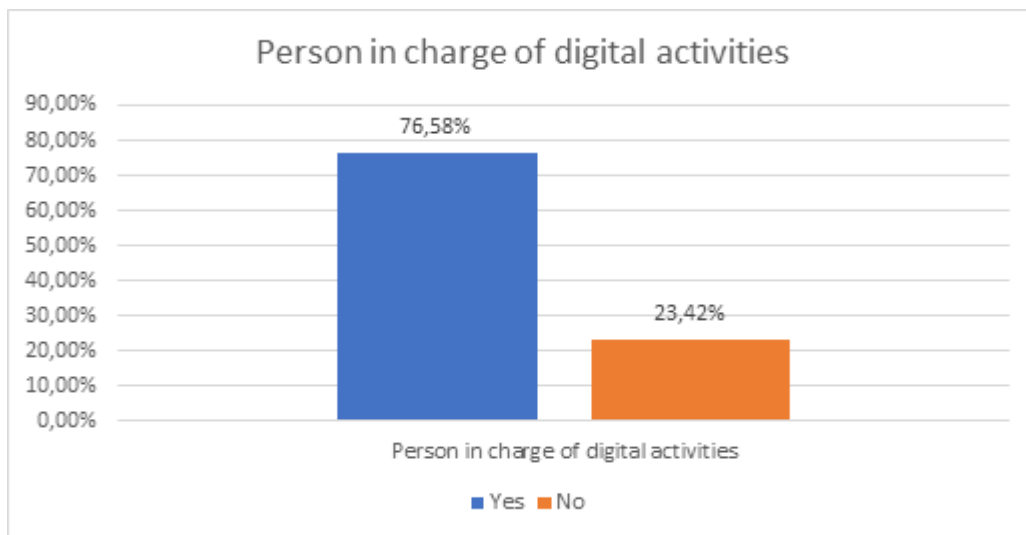
The majority of the teachers think that it is necessary to have someone in charge of digital activities and support the technical or pedagogical problems that arise in their school.

Digital problem what the teachers do
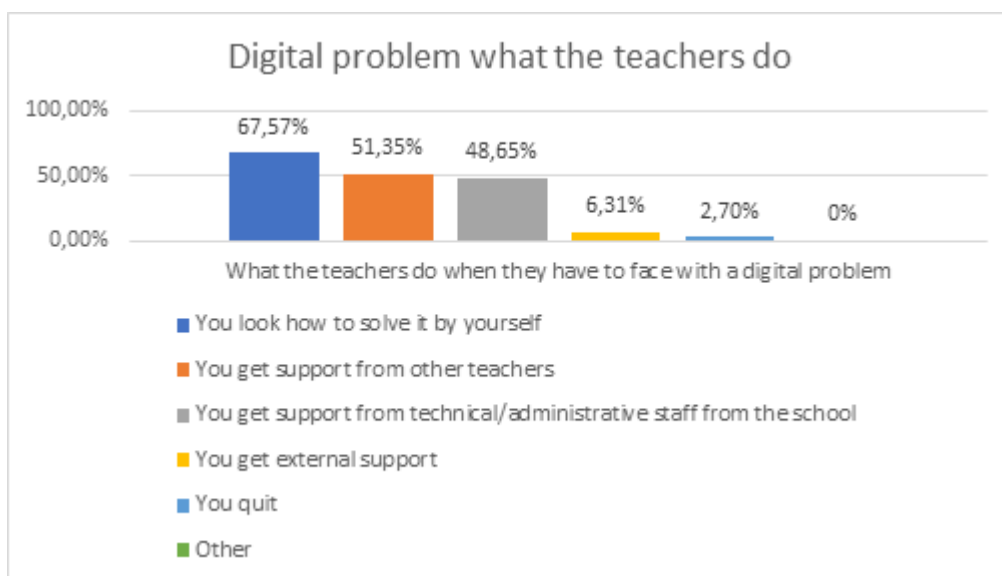
The survey shows that 67,5% of the teachers solve the problems by themselves
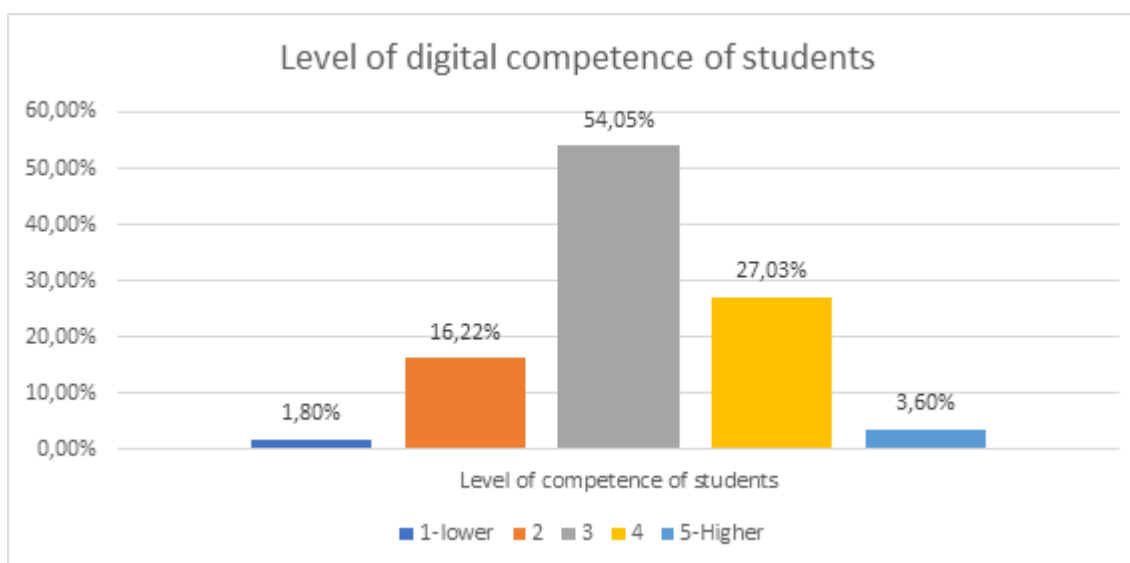
Main functions of the digital duty manager

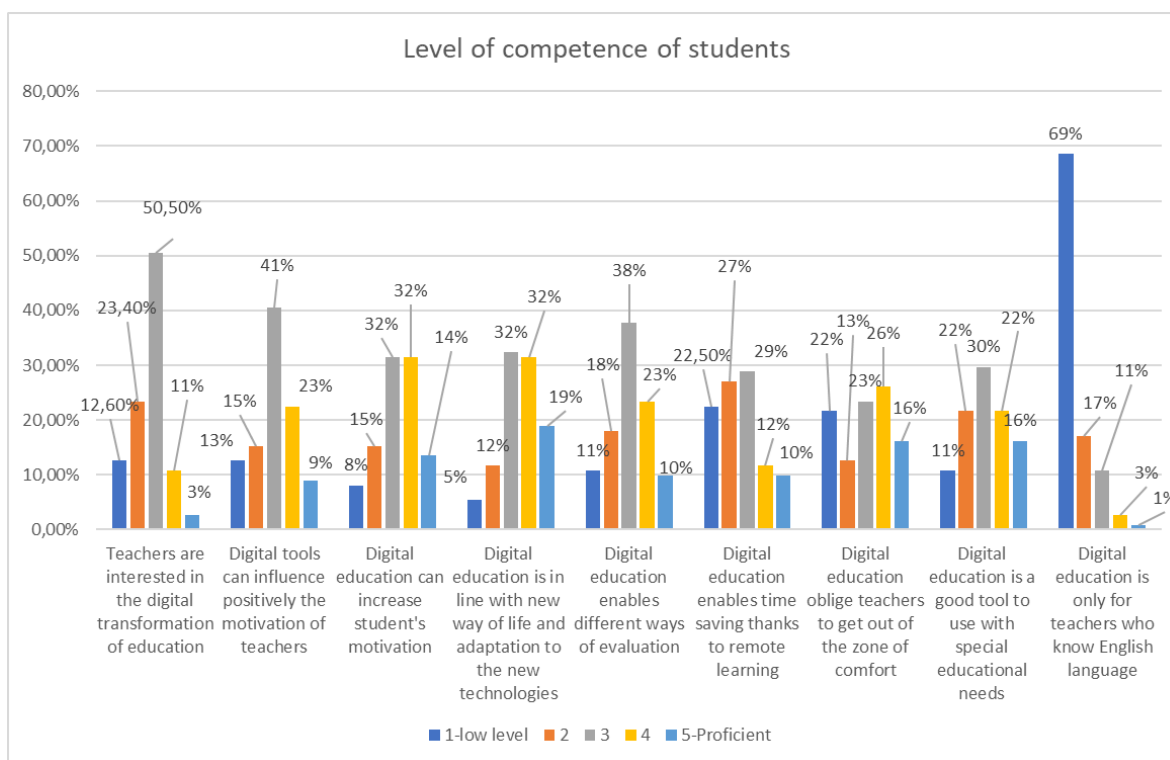Main functions of the digital duty manager
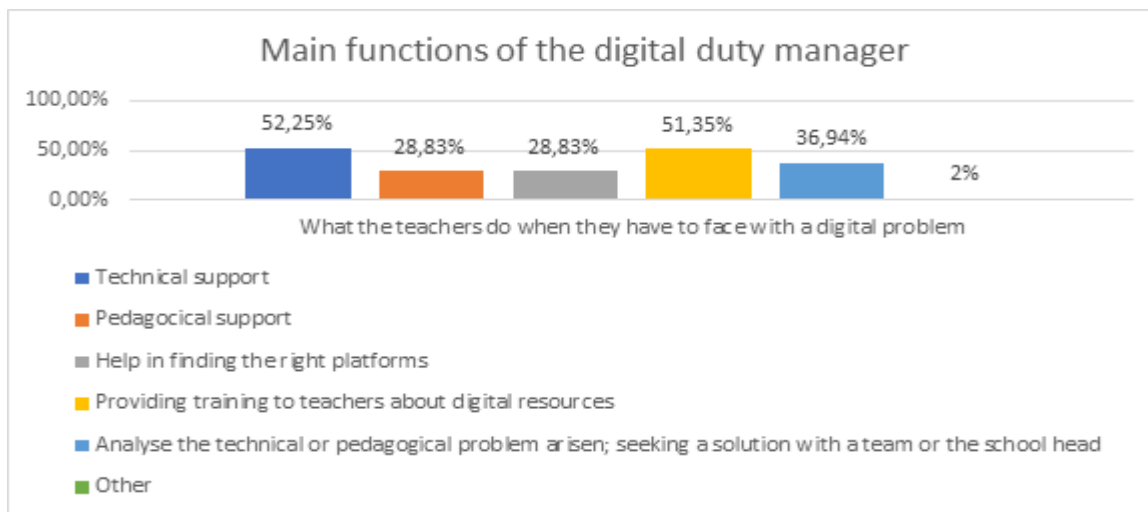
The survey shows that the Digital Duty Manager should provide Technical support (52,25%) and training to teachers on digital resources (51,35%)
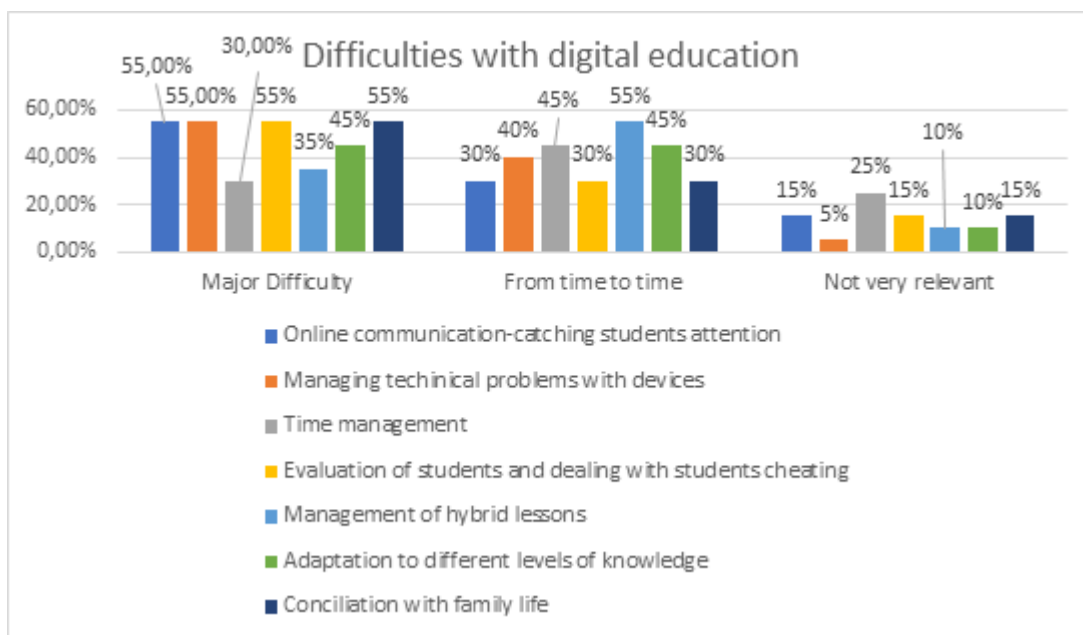
Teachers' perception of the digital education
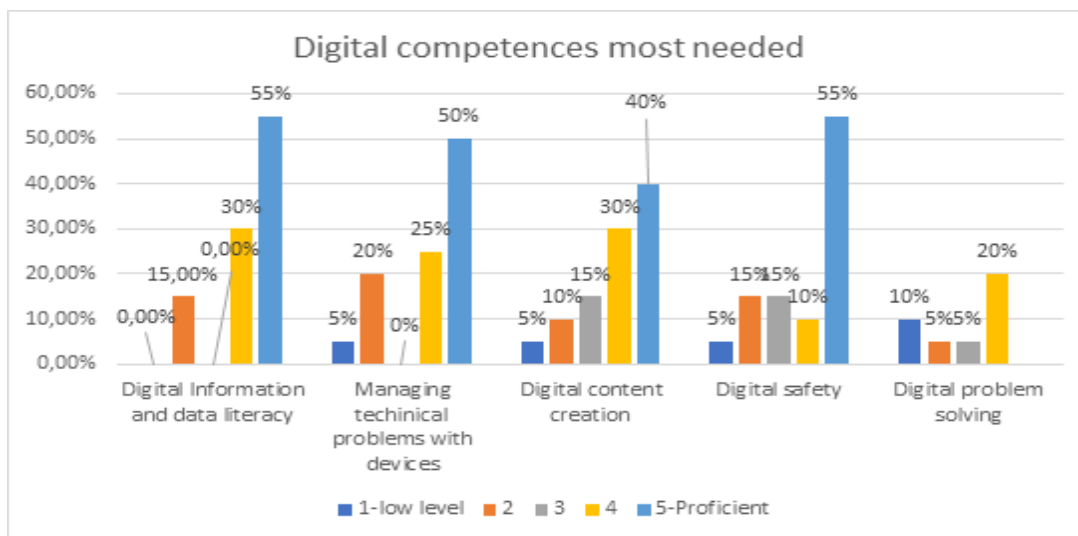
Level of digital competence of students

Level of digital competence of students

Level of competence of students

Legend: 1-low level, 2, 3, 4, 5-Proficient

Research among non-teaching staff

Teachers face most while dealing with digital education

Difficulties with digital education

	Major Difficulty	From time to time	Not very relevant
Online communication-catching students attention	55,00%	30%	15%
Managing techinical problems with devices	55,00%	40%	5%
Time management	30,00%	45%	25%
Evaluation of students and dealing with students cheating	55%	30%	15%
Management of hybrid lessons	35%	55%	10%
Adaptation to different levels of knowledge	45%	45%	10%
Conciliation with family life	55%	30%	15%

Digital competences that are most needed by teachers

Digital competences most needed

|	1-low level	2	3	4	5-Proficient
Digital Information and data literacy	0,00%	15,00%	0,00%	30%	55%
Managing techinical problems with devices	5%	20%	0%	25%	50%
Digital content creation	5%	10%	15%	30%	40%
Digital safety	5%	15%	15%	10%	55%
Digital problem solving	10%	5%	5%	20%	

More than a half of the non-teaching staff think that the difficulties teachers face most are online communication, catching students' attention online, managing technical problems with devices, evaluation, dealing with students' cheating and reconciling family life

Evaluation of level of agreement with the following statements, 1 being the lowest level of agreement, and 5 the highest
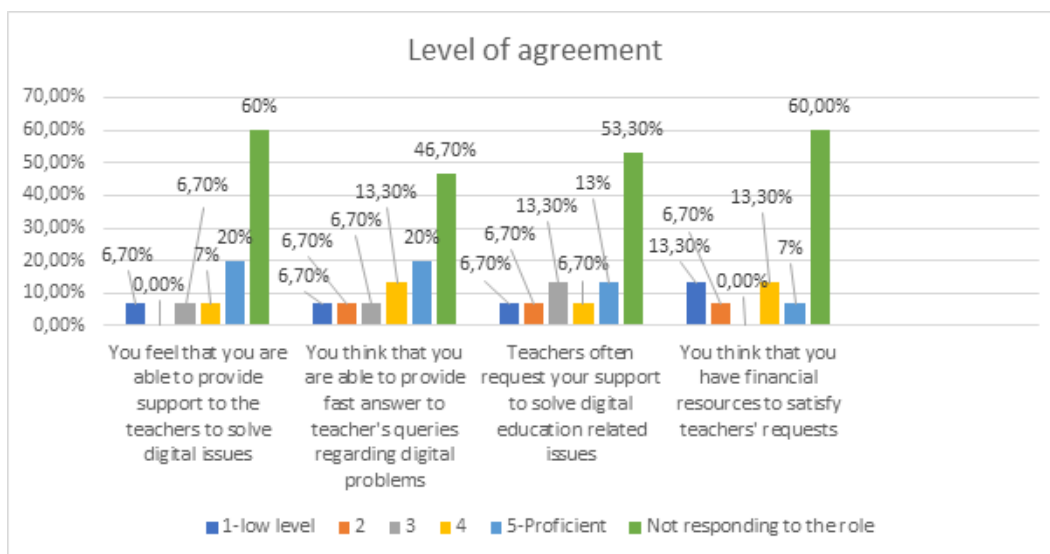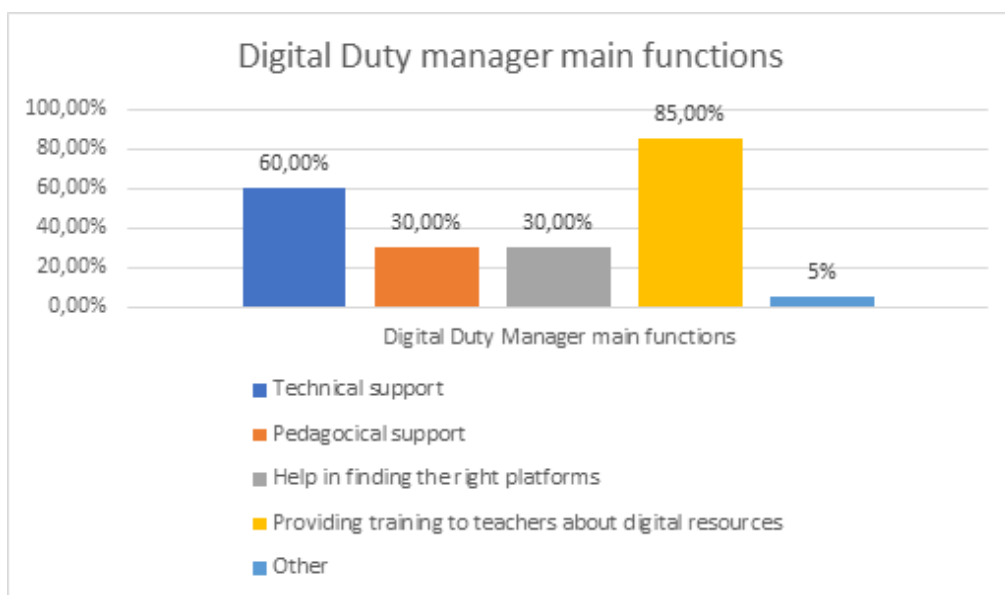

Perception of the Digital Duty Manager profile needed

Do you think there is a need for a person in charge of digital duty management in your school?
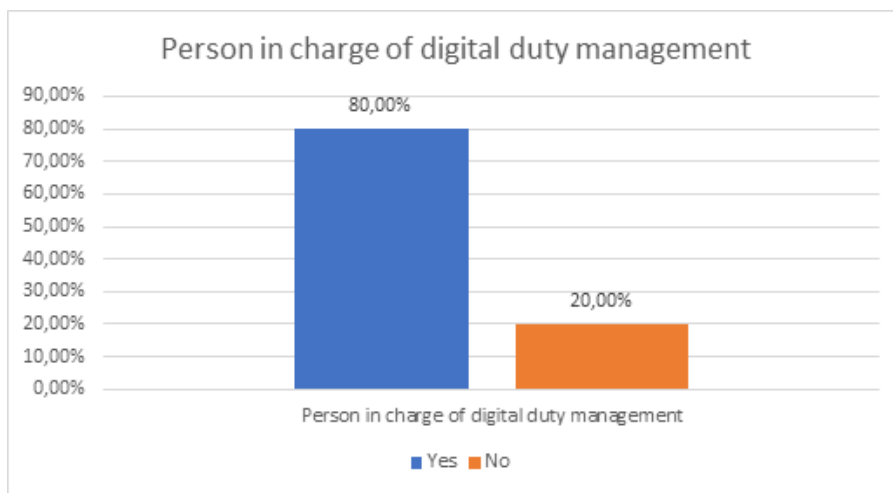
80% of the non-teaching staff think that a digital duty Manager is necessary in our school

What should the main functions of the digital duty manager be?
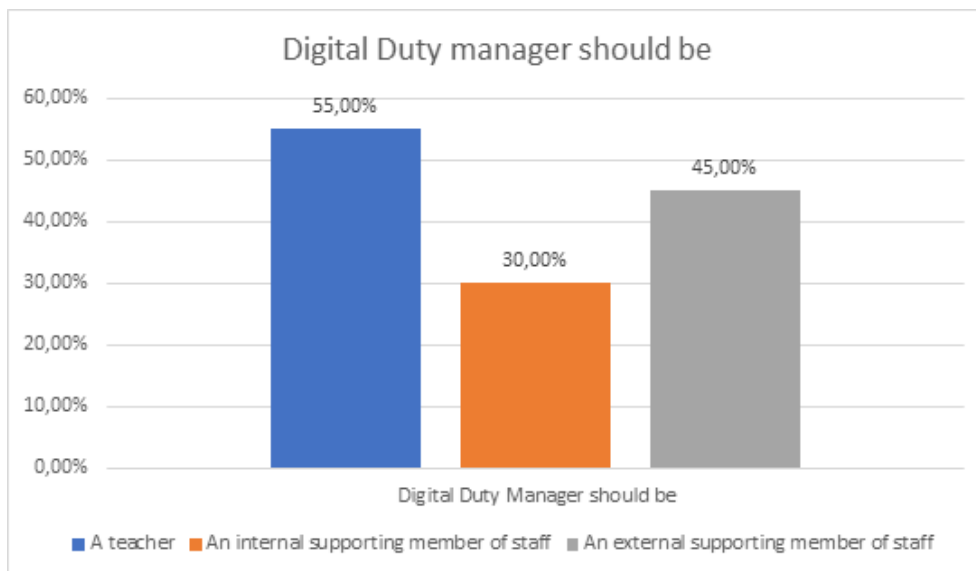

85% of the non-teaching staff answered that the Digital Duty Manager should provide training to teachers on digital resources

The level of competences of the digital duty manager in the following area should be, 1 being the lowest level of competences and 5 the highest…
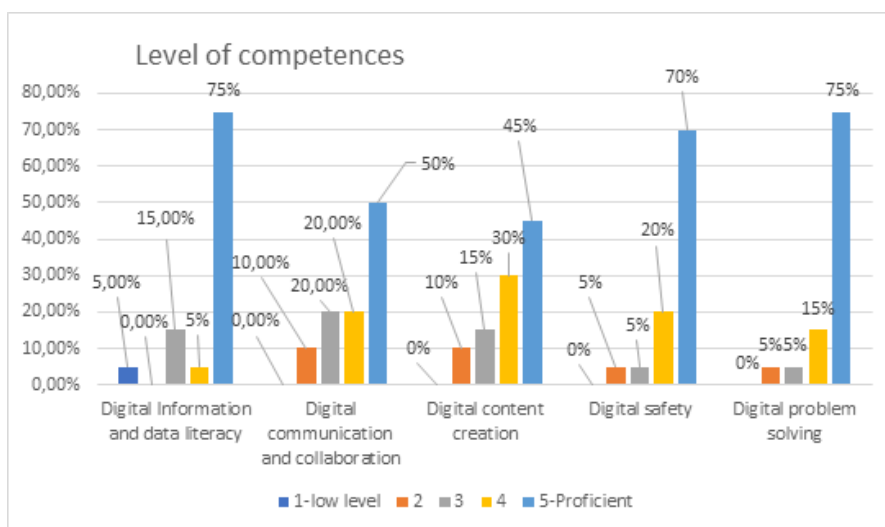
The Digital Duty Manager should be…

Looking at the diagrams 55% of the results highlight that the Digital Duty Manager should be a teacher while 45% think that this figure should be external from the school

Conclusion

The two surveys conducted in ITALY highlight not only the level of digital skills but allow a comparison between what the teachers and the technical administrative staff think.

Analysing the survey data, we find the largest number of responses coming from the group aged over 50. Most respondents (> 55%) confirm that they have received digital training.

Training appears to be mainly autodidactic for both profiles (> 50%) while for the technical/administrative profile, participation in training courses is also highlighted.

In digital education in schools, the main elements that stand out are:

Technical/administrative staff

- Communicating and attracting the attention of students: more than 50% have serious difficulties;
- Managing technical issues of devices: more than 55% experience the problem;
- Time management: more than 45% encountered the problem with occasional difficulty;

- Evaluating students and managing the phenomenon of "cheating" (copying): more than 55% find the problem as relevant;
- 55% consider managing hybrid teaching as an occasional difficulty.

Teachers:

- As regards digital literacy and mastery 39% of responses are positive, as well as communication and collaboration through digital tools;
- The creation of digital content, on the other hand, stands at 34% as an intermediate point;
- IT security has an average value between sufficient and good;
- Problem solving, on the other hand, sees its score with 39% of positive answers.

According to the technical / administrative staff, the people interviewed believe that information and data literacy are essential for teachers as well as communication and collaboration, security and problem solving. Unfortunately, the negative data is the lack of interactions on digital issues between the teachers and the technical/administrative staff (according to the results of the survey, over 65% do not communicate directly with teachers).

The section dedicated to teachers on the difficulties encountered with digital teaching is interesting:
- 26% emphasise the difficulty in capturing students' attention online;
- 21% stress the difficulty with technical problems while 51% encounter this occasional difficulty;
- The 'cheating' phenomenon is considered for 45% as a relevant phenomenon while for 41% it is only occasional;
- The management of hybrid digital teaching is considered as relevant by 26% of the teachers, while 60% assess it as occasional.

The survey highlights how the main platforms used by teachers are:

- Moodle-GSuite > 75%;
- Zooms-Meet-Teams > 59%;

As regards Viber-Messenger, 73% say they never use this tool.

According to the technical / administrative staff, the teachers are not very interested in facing the challenges of digital teaching. In fact, 75% of the answers oscillate between the negative and the median value, whereas the figure gets worse (80%) when it comes to the motivation of teachers to implement the teaching digital.

The requirements of the professional figure of the Digital Duty Manager highlight the following points:
- Teachers feel supported by the school in organising digital lessons (62%) and the professional figure of the Digital Duty Manager is needed (76%); this figure is also confirmed by the technical / administrative staff (80%).

Today teachers solve their digital problems independently (67%), 51% are helped by other teachers and 48% receive support from technical / administrative staff.

Following the questionnaire, the main characteristics of the Digital Duty Manager should be:
- Support in training on the use of digital resources (80% of the answers);
- Technical support (75)%;
- Support in training on the use of digital resources (51%);
- Analysing the technical or pedagogical problems that have emerged; looking for a solution with a team or with the Headmaster (37%).

According to the survey results, our findings are as follows:
- Regarding digital literacy and mastery 75% of the answers are positive, as well as communication and collaboration through digital tools (over 50%);
- The creation of digital content, on the other hand, is equal to 45%;
- Cybersecurity has a very high value for over 70% as well as problem solving which stands at a high value for over 75% of the survey participants.

According to the technical / administrative staff, the figure of the Digital Duty Manager should be:
- a teacher (35%);
- a support figure within the staff other than the teacher (30%);
- a support figure external to the staff (45%).
- The perception of the students' digital competence by teachers stands at an average value with 54% of the answers, while analysing the rest of the answers received what emerges is the following:
- Teachers are interested in the digital transformation of education, 50% of the answers show an average data on the scale from 1 to 5;
- Digital tools can positively influence teachers' motivation, 40% of the answers show an average data on the scale from 1 to 5;
- Digital education can increase students' motivation, 31% of the answers show a medium and medium-high data on the scale from 1 to 5;

- Digital education is in line with the new lifestyle and adaptation to new technologies, 32% of the answers show an average data on the scale from 1 to 5;
- Digital education allows different ways of evaluating, for 37% of teachers the answer was affirmative;
- Digital education forces teachers to leave their comfort zone, for 26% of teachers this data is evaluated in a medium-high manner;
- Digital education is a valid tool to use with SEN students, on this statement the answers are equal in the range from 1 to 5;
- Digital education is only useful for teachers who know English, 68% respond negatively to this statement;
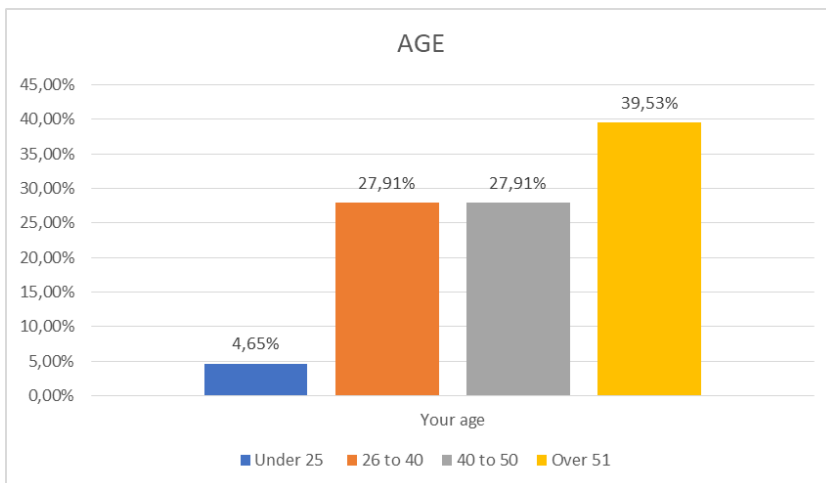
According to the teachers, digital skills should be improved through online lessons, learning by doing and face-to-face lessons.

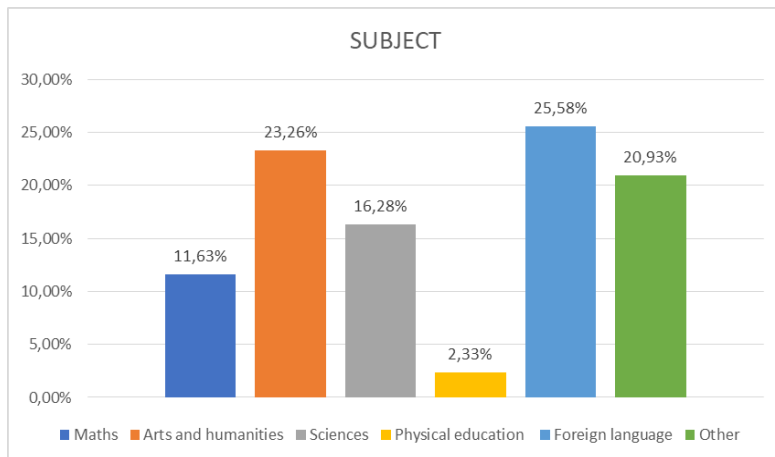# Research among teaching staff

NORTH MACEDONIA

## Participant profile and digital experience

Age of participants

Most respondents were aged 26 to 50 years old, which is a wide age group.
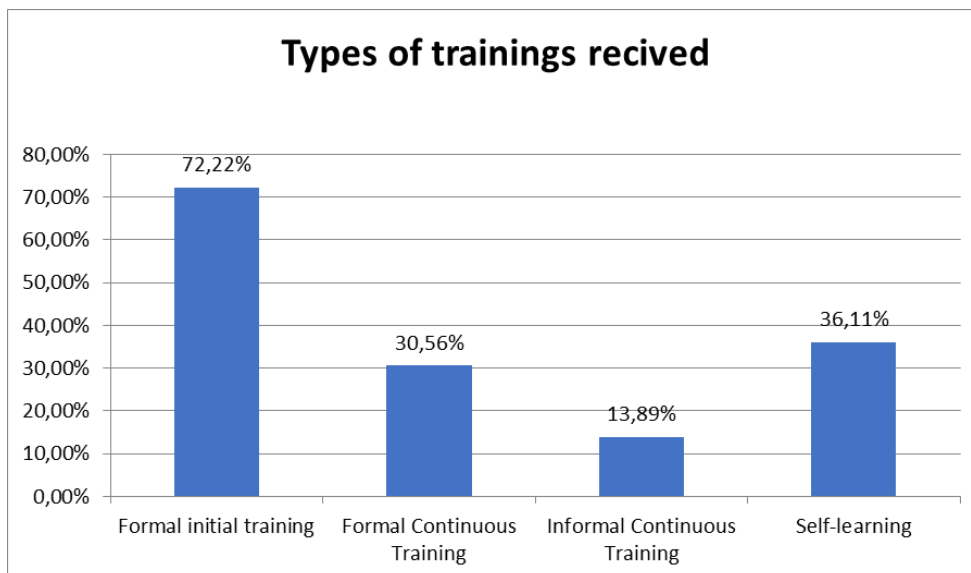
Subject they teach

It is to be noticed that most respondents were teachers from foreign language fields. We can conclude that foreign language teachers are the largest group in the school, also they often use digital media and use it in teaching.
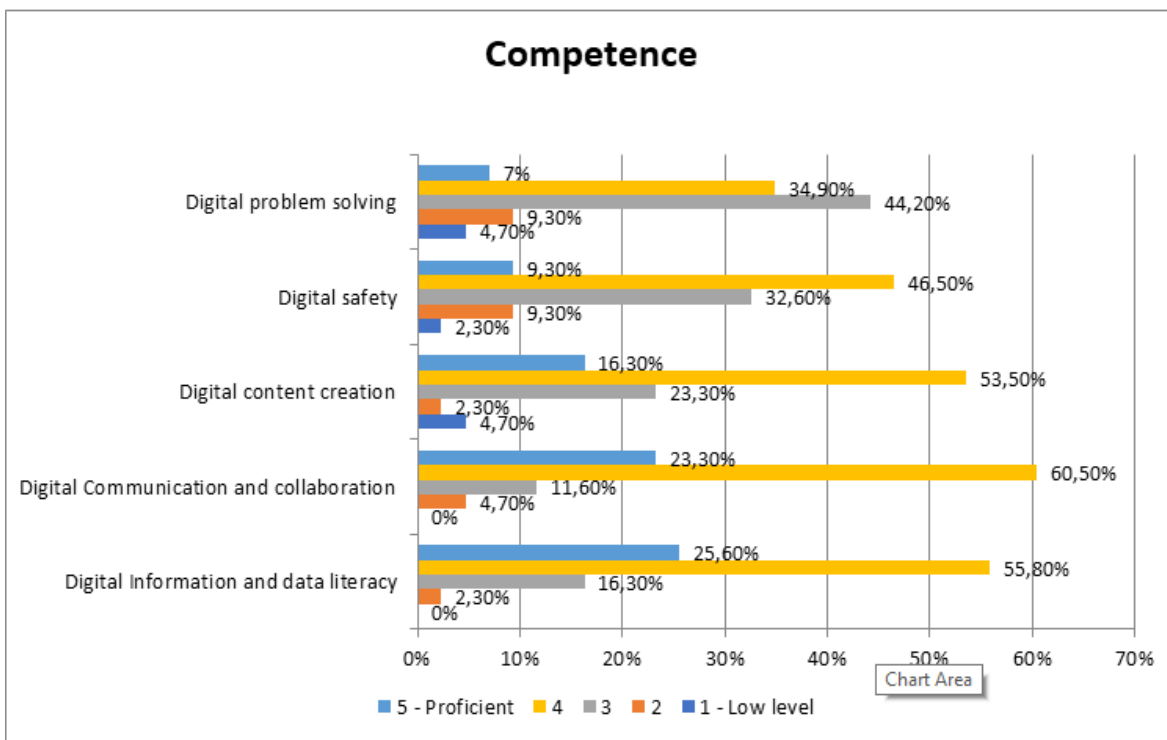
Digital training received
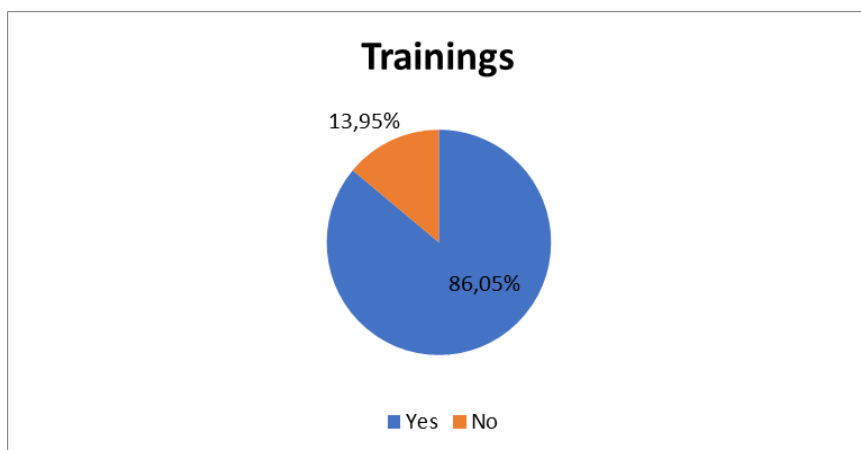
We can conclude that most of the teachers got some form of digital training.

Types of trainings received

Types of trainings recived

Formal initial training	72,22%
Formal Continuous Training	30,56%
Informal Continuous Training	13,89%
Self-learning	36,11%

Most of the teachers, especially younger (below 40) got the initial training in school, because of subject informatics, they learned in high school (Windows, MS Office, basics of Internet). Other groups got training after they became teachers, with numerous projects initiated by the Ministry of Education of N.Macedonia. And of course, by self-learning.

Self evaluation of teachers (from 1 to 5, 1 being the lowest and 5 the highest level)

Competence

- Digital problem solving: 7%, 34,90%, 44,20%, 9,30%, 4,70%
- Digital safety: 9,30%, 46,50%, 32,60%, 9,30%, 2,30%
- Digital content creation: 16,30%, 53,50%, 23,30%, 2,30%, 4,70%
- Digital Communication and collaboration: 23,30%, 60,50%, 11,60%, 4,70%, 0%
- Digital Information and data literacy: 25,60%, 55,80%, 16,30%, 2,30%, 0%

Legend: 5 - Proficient, 4, 3, 2, 1 - Low level

We can conclude that the yellow bar (4-high level) is dominant in all topics, except Digital problem solving. This shows they feel confident regarding digital safety, content creation, communication, data literacy, except problems connected with software and hardware maintenance.

Most faced difficulties

Difficulties

Difficulties

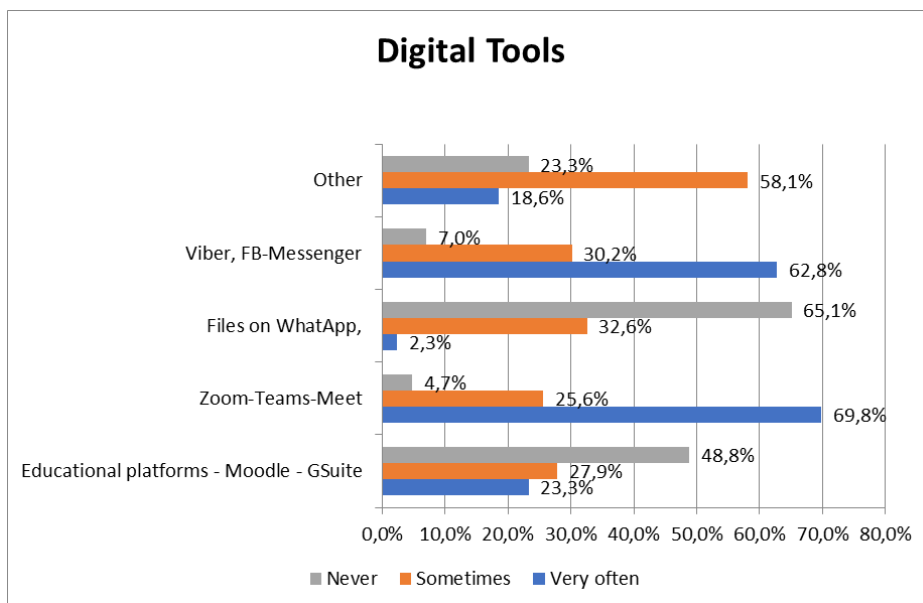| Category	Not very relevant	From time to time	Major difficulty
Preparation of lessons	51,20%	41,90%	7%
Conciliation with family life	44,20%	41,90%	14%
Adaptation to different levels of knowledge	34,90%	55,80%	9,3%
Management of hybrid lessons	39,5%	51,2%	9,3%
Evaluation of students and dealing with students cheating	18,6%	53,5%	27,9%
Time management	60,5%	34,9%	4,7%
Managing technical problems with devices	14,0%	65,1%	20,9%
Online communication - catching attention of students online	37,2%	46,5%	16,3%

Other eventual difficulties faced:

- Wifi access
- Cheating of students,
- Students are not interested to learn anything
- All students do not have computers, tablets, smart phones, wifi
- How to implement something in my subject
- Online communication
- Students being passive
- Use of foreign language
- Use of our personal digital equipment

We can conclude that there are not major difficulties in topics offered, except mostly technical problems with devices. Also from time to time, there are problems with cheating students, getting their attention and interest, adaptation of different levels of knowledge, and not having appropriate and modern digital equipment.

Tools used in digital teaching

Digital Tools

Tool	Never	Sometimes	Very often
Other	23,3%	58,1%	18,6%
Viber, FB-Messenger	7,0%	30,2%	62,8%
Files on WhatApp,	65,1%	32,6%	2,3%
Zoom-Teams-Meet	4,7%	25,6%	69,8%
Educational platforms - Moodle - GSuite	48,8%	27,9%	23,3%

Our teachers mostly use Teams for online classes (established as official by our Department of Education), also FB-Messenger and Viber for communication with students and parents.

Most attractive tools to students

- Messenger, teams
- Interactive, ex.Collaboration space - One note
- Moodle
- Presentations ,research
- Zoom
- Multimedia
- Physical presence

Students mostly use Messenger, Teams, but they are interested in researching, use of multimedia, and of course they prefer face to face school, compared to online.
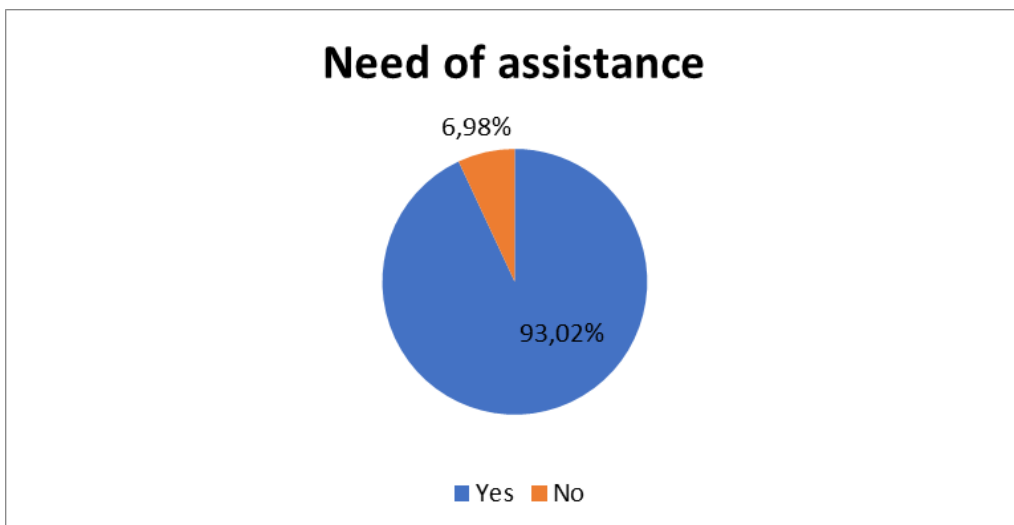
Perception of the Duty Manager profile needed

**Support in the organisation of digital classes**
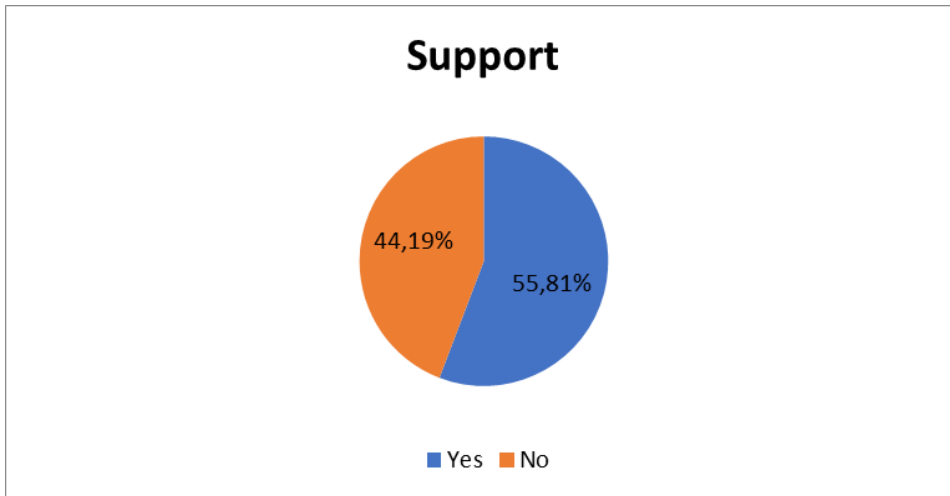
Almost the same number of teachers think they are not supported in the organisation of the classes by the school, no strong conclusion here.

Need of a person in charge and support in digital activities

We can strongly confirm that teachers need support from a person in digital activities.

**What teachers do when faced with digital problem**
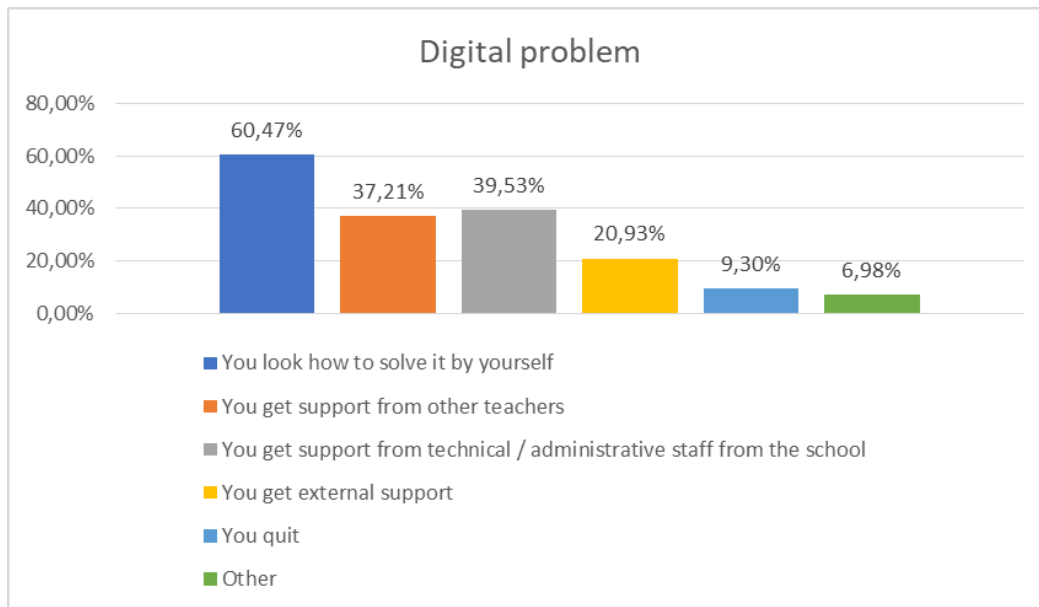
Additional comments:

- Help by students
- Support by our IT teachers
- Outside support (family, friends)
- Help of other colleagues
- I search online
- I solve it by my own
- Not enough IT equipment in the school

When our teachers meet difficulties, they mostly solve them by themselves, or with help of technical/administrative staff (IT colleagues) in the school.
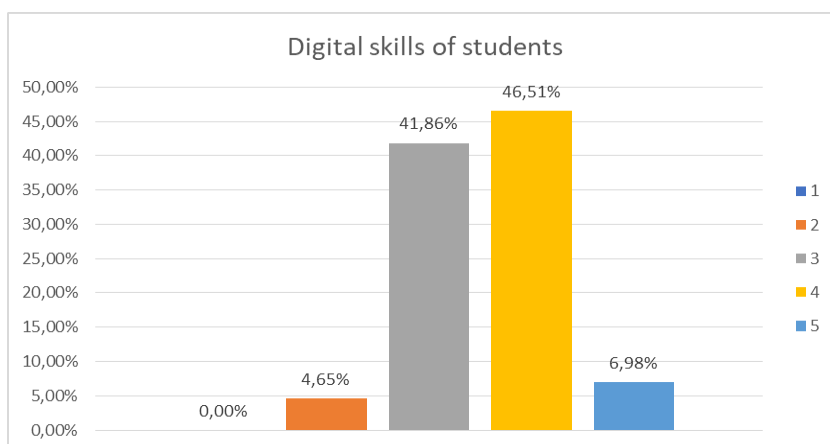
Main functions of the digital duty manager
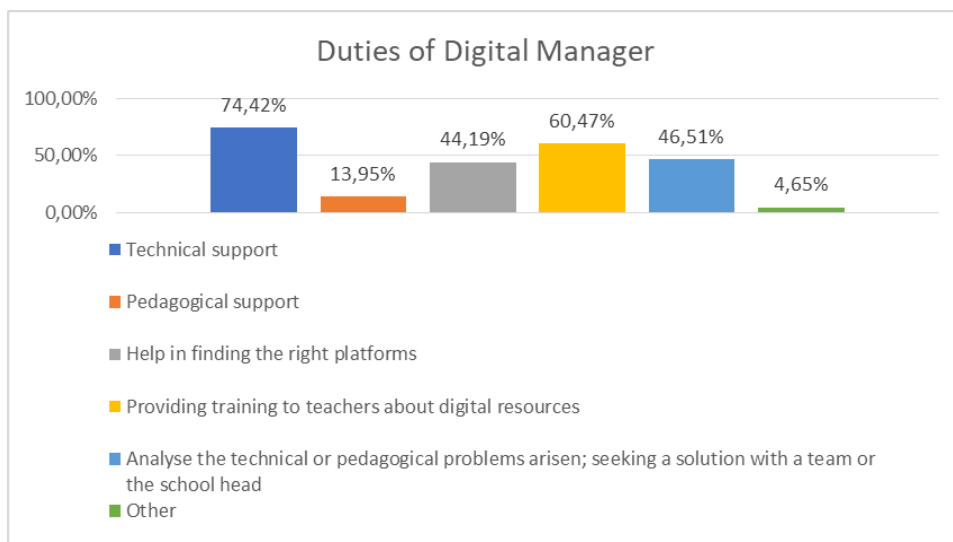
Digital Duty Manager should help teachers in solving technical problems, also to provide some kind of training about digital resources.
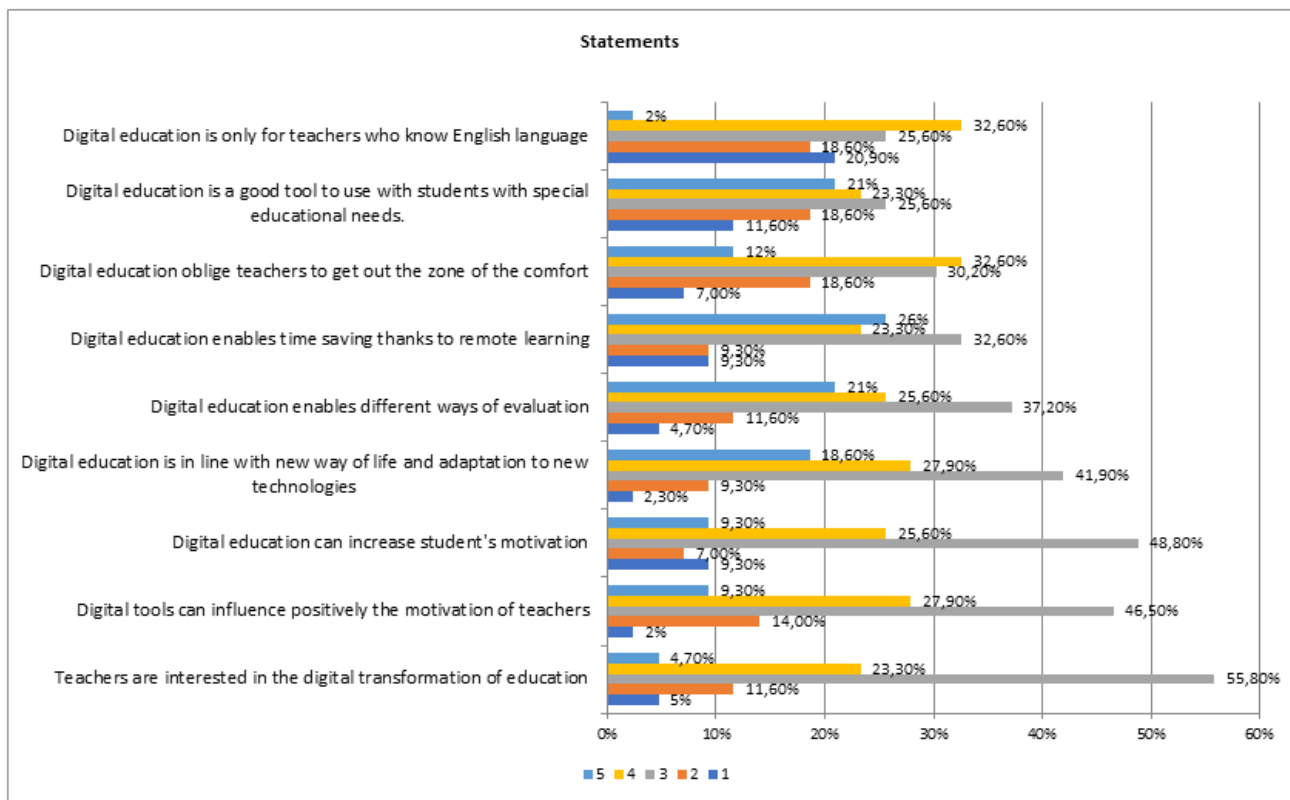
Teacher's perception of the digital education

Evaluate the level of digital skills of students (From 1 to 5, one being the lowest and 5 the highest level of competence)
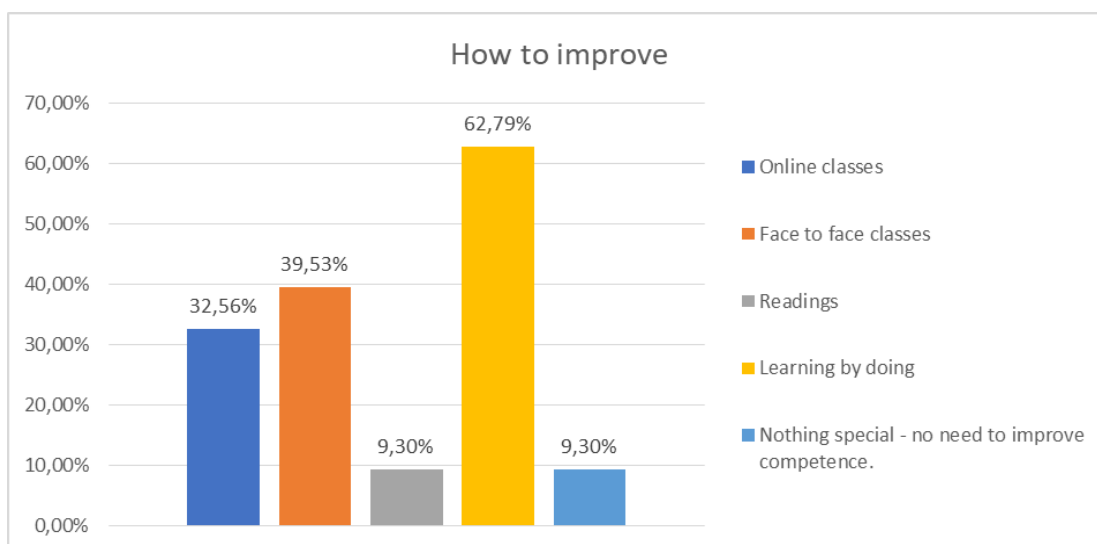

Most of the students have a solid level of digital competence.

From 1 to 5, one being the lowest and 5 the highest level,evaluate the statements

Most of the answers are with medium level of agreement, meaning teachers mostly agree with statements proposed. They agree that they have to get out of their comfort zone, to learn English if they want to improve their digital skills.

How to improve digital competence

How to improve

- Online classes — 32,56%
- Face to face classes — 39,53%
- Readings — 9,30%
- Learning by doing — 62,79%
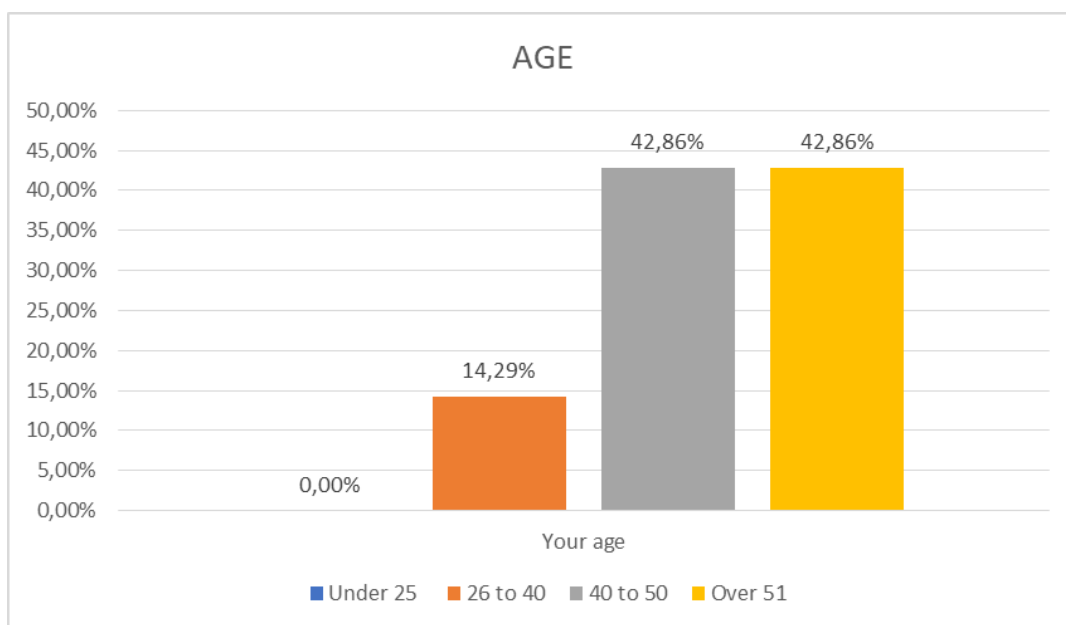- Nothing special - no need to improve competence. — 9,30%

Teachers want to improve their competence by practising – learning by doing, by face to face classes, not by reading theoretical knowledge.

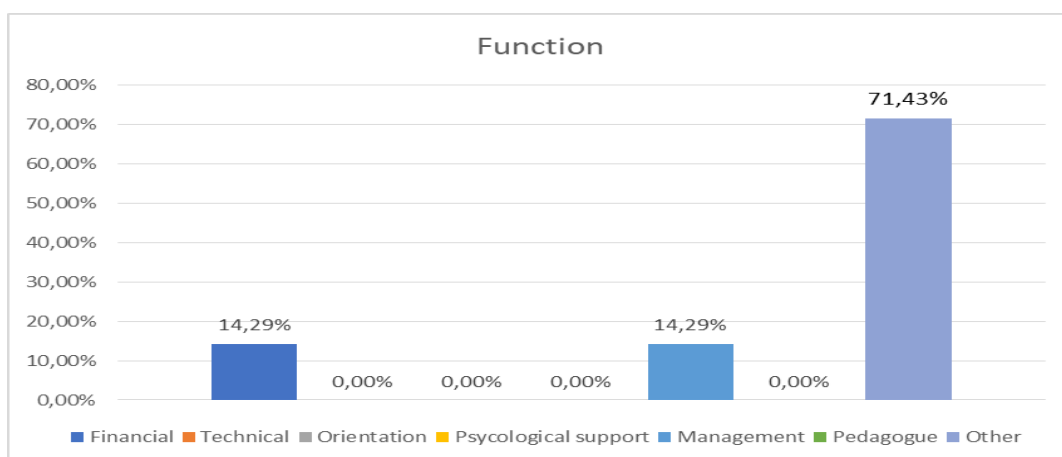# Research among non-teaching staff

Participant profile and digital experience
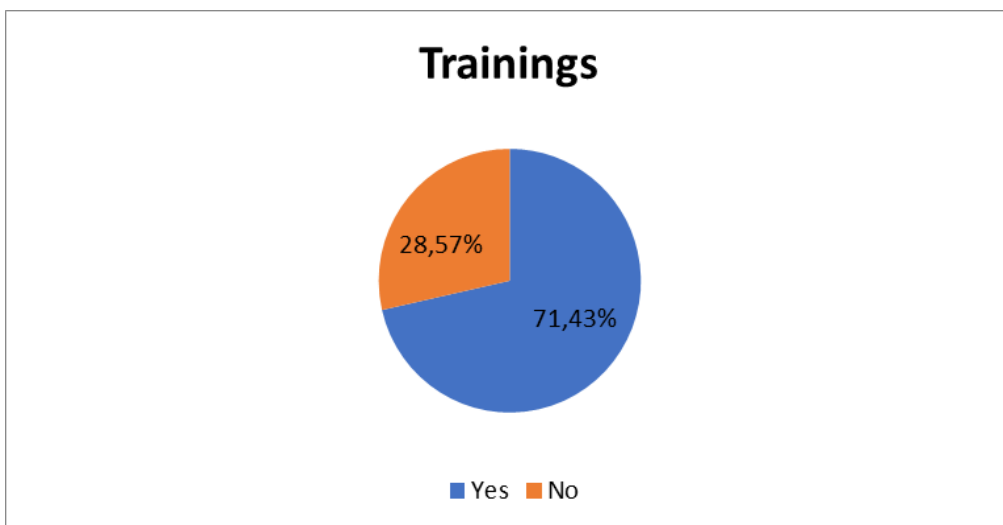
Age of participants

AGE

Most respondents were over 40 years old, which is a wide age group.

Function in the school

Function

It is to be noticed that most respondents were from other fields than ones offered in the survey. It means there are other profiles in our school.

Digital training received

Trainings

We can conclude that most of the non-teaching staff got some form of digital training.

Types of trainings received

Types of trainings recived
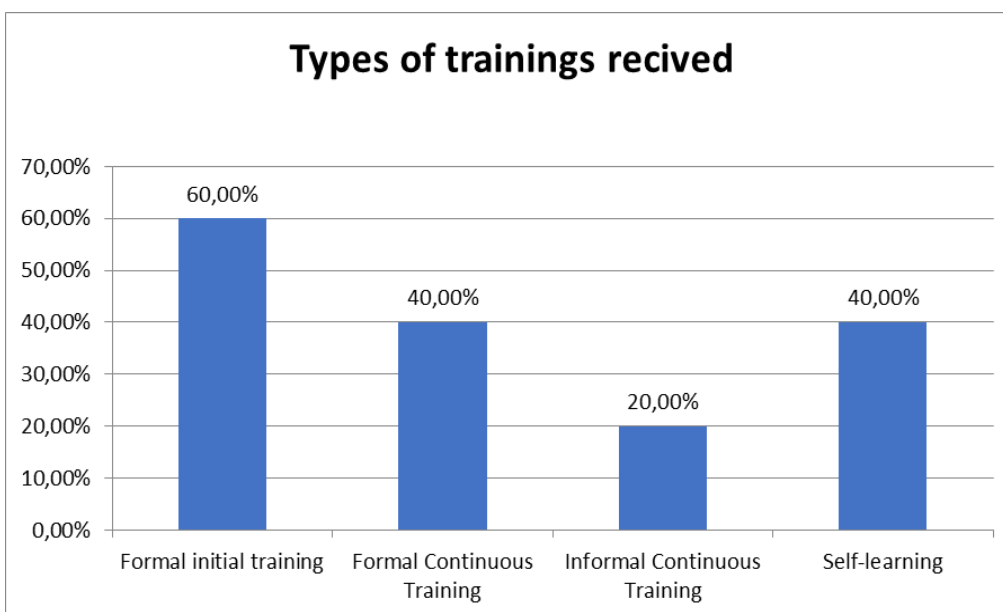
Most of the non-teaching staff got the initial training in school, because of subject informatics, they learned in high school (Windows, MS Office, basics of Internet). Other groups got training after they became employees, with numerous projects initiated by the Ministry of Education of N.Macedonia. And of course, by self-learning.

Most faced difficulties

Difficulties

|	Not very relevant	From time to time	Major difficulty
Conciliation with family life	57,10%	42,90%	0%
Adaptation to different levels of knowledge	14,30%	71,40%	14,3%
Management of hybrid lessons	0,0%	85,7%	14,3%
Evaluation of students and dealing with students cheating	0,0%	42,9%	57,1%
Time management	28,6%	71,4%	0,0%
Managing technical problems with devices	0,0%	57,1%	42,9%
Online communication - catching attention of students…	0,0%	0,0%	57,1%

Other eventual difficulties faced:

- Technical support
- Students are not interested to learn anything
- Teachers have difficulties to evaluate knowledge of students
- Conclusion: We can conclude that there are not major difficulties in topics offered, except catching attention of students. Also from time to time, there are problems with cheating students, adaptation of different levels of knowledge, and management of hybrid lessons.

Opinion of digital competence of teachers (from 1 to 5, 1 being the lowest and 5 the highest level)

Competence
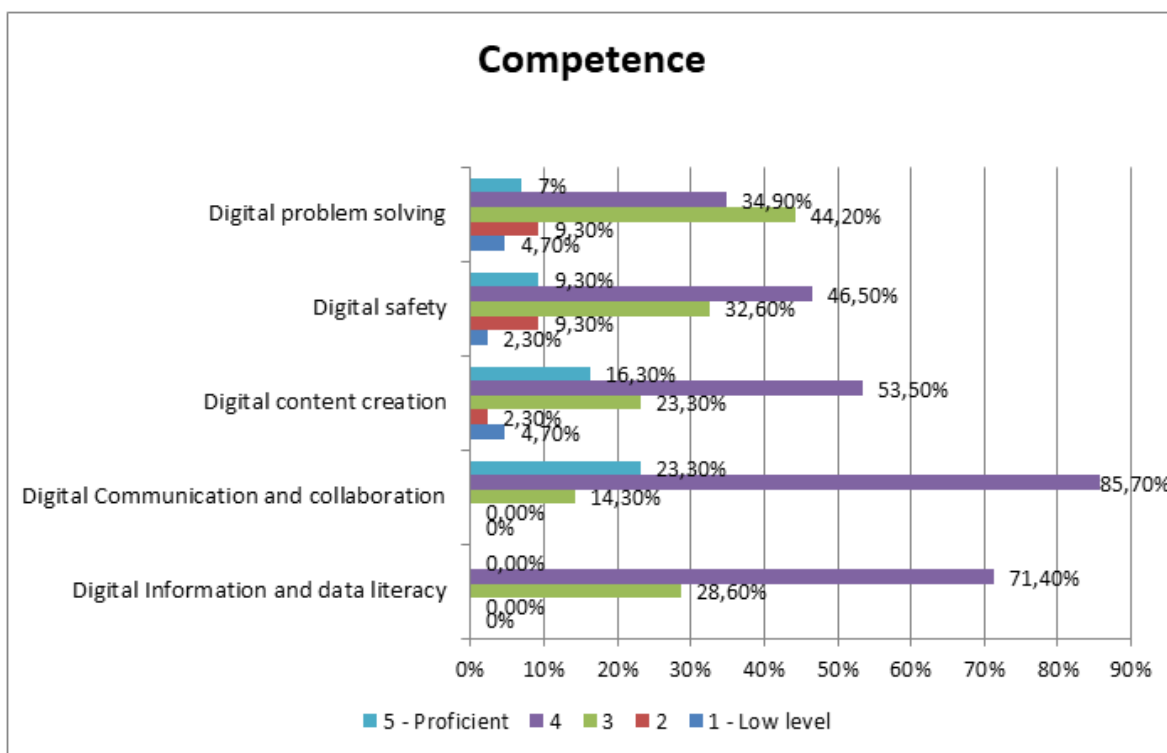
We can conclude that purple bar (4-high level) is dominant in all topics, except Digital problem solving. This shows that non-teaching staff think that teachers feel confident regarding digital safety, content creation, communication, data literacy, except problems connected with software and hardware maintenance.

Communication with teachers regarding digital education
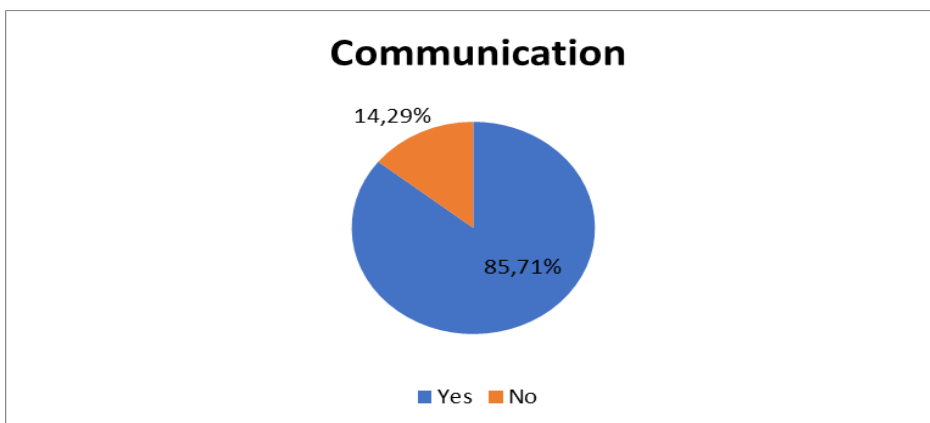
Communication

Non-teaching staff mostly communicate with teachers regarding digital education.

Evaluation of agreement with the statements, 1 being the lowest level of agreement, and 5 the highest
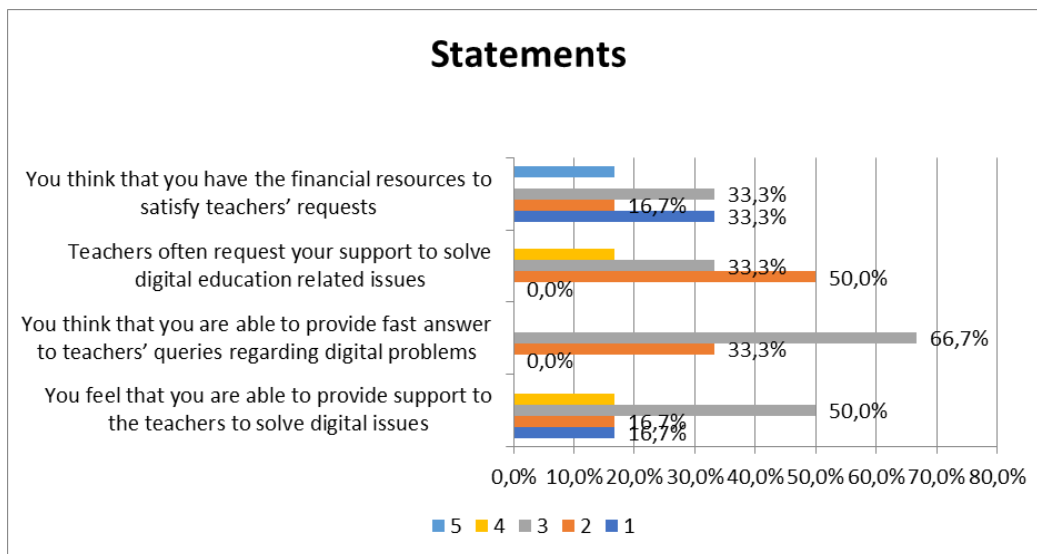
Most of the non-teaching staff do not feel enough confidence to help teachers in digital issues, and also not enough finance to support the teacher's request.

Evaluation of agreement with the statements, 1 being the lowest level of agreement, and 5 the highest
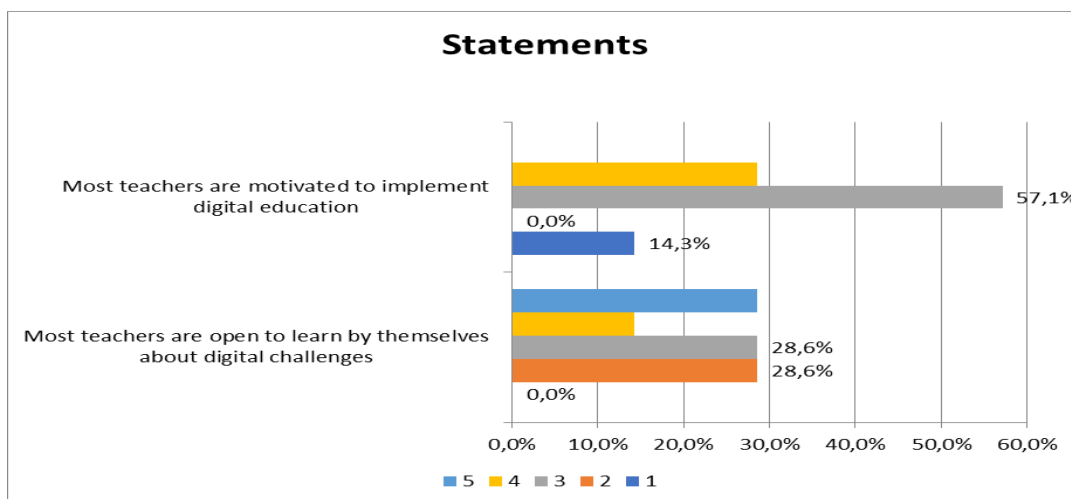
Non-teaching staff think that teachers are not motivated enough to learn by themselves and implement digital education.

Perception of the Duty Manager profile needed

Need of a person in charge of Digital Duty Management
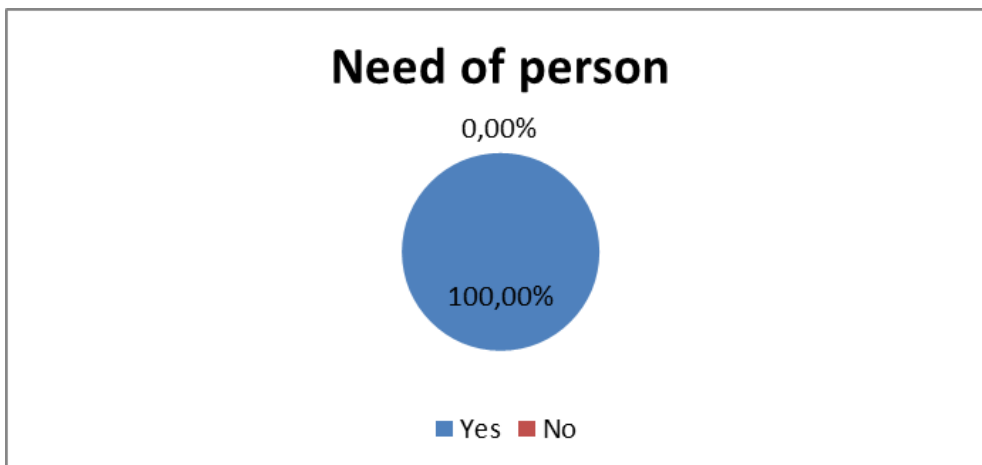
They strongly agree there is a need for a Digital Duty Manager in school.

Main functions of the digital duty manager

Conclusion: Digital Duty Manager should help teachers in solving technical problems, also to provide some kind of training about digital resources.

Level of competence of Digital Duty Manager

Competence

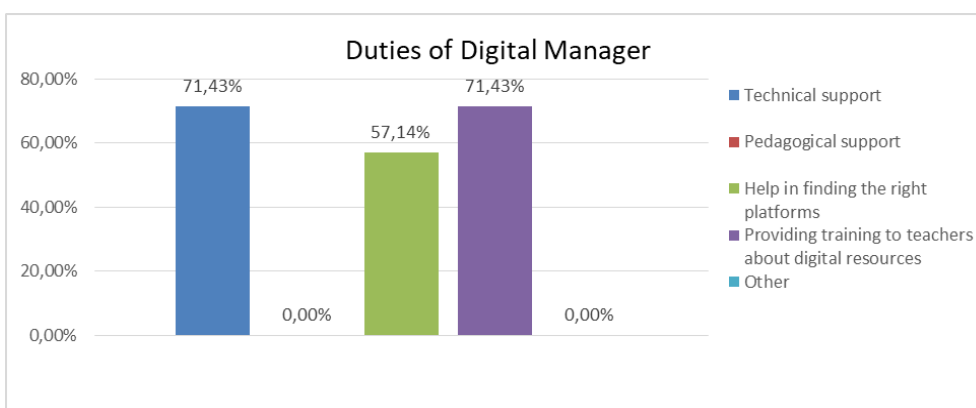|	
Digital problem solving	57% / 28,60% / 0,00% / 14,30% / 0,00%
Digital safety	43,90% / 42,90% / 0,00% / 14,30% / 0,00%
Digital content creation	57,10% / 14,30% / 28,60% / 0,00% / 0,00%
Digital Communication and collaboration	57,10% / 28,60% / 0,00% / 0,00% / 14%
Digital Information and data literacy	57,10% / 28,60% / 14,30% / 0,00% / 0%

■ 5 - Proficient ■ 4 ■ 3 ■ 2 ■ 1 - Low level
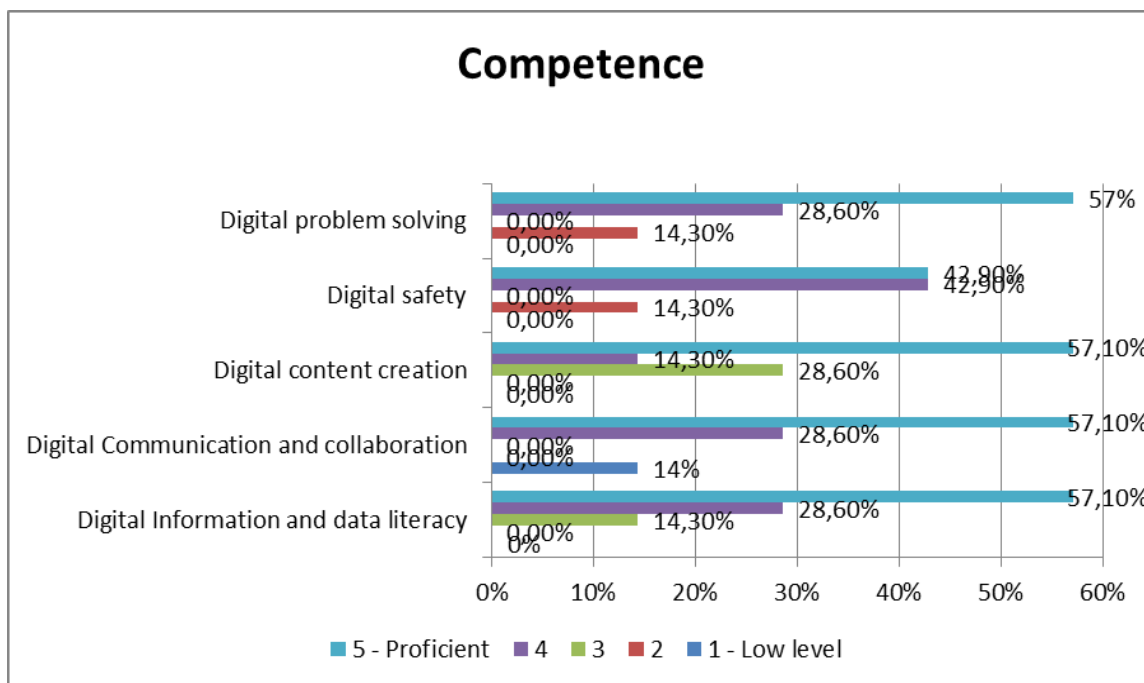
Digital Duty Manager should have proficient competence in all sectors offered.

Where from to choose Digital Duty Manager

Where from

- 14,29% A teacher
- 42,86% An internal supporting member of staff?
- 42,86% An external supporting member of staff?

Non-teaching staff agree that the Digital Duty Manager should not be a teacher, but supporting staff (internal or external). Mainly, teachers have other duties and can not be fully dedicated as required.

Conclusions

Most respondents were aged 26 to 50 years old, which is a wide age group, and they are teachers from foreign language fields.

- We can conclude that foreign language teachers are the largest group in the school, also they often use digital media and use it in teaching.
- We can conclude that most of the teachers got some form of digital training.
- Most of the teachers, especially younger (below 40) got the initial training in school,
- Other groups got training after they became teachers, with numerous projects initiated by the Ministry of Education of N.Macedonia. And of course, by self-learning.
- Teachers feel confident regarding digital safety, content creation, communication, data literacy, except problems connected with software and hardware maintenance.
- Teachers mostly face technical problems with devices. Also from time to time, there are problems with cheating students, getting their attention and interest, adaptation of different levels of knowledge, and not having appropriate and modern digital equipment.
- Our teachers mostly use Teams for online classes (established as official by our Department of Education), also FB-Messenger and Viber for communication with students and parents.
- Students mostly use Messenger, Teams, but they are interested in researching, use of multimedia, and of course they prefer face to face school, compared to online.
- Almost the same number of teachers think they are not supported in the organisation of the classes by the school, no strong conclusion here.
- We can strongly confirm that teachers need support from a person in digital activities.
- When our teachers meet difficulties, they mostly solve them by themselves, or with help of technical/administrative staff (IT colleagues) in the school.
- Digital Duty Manager should help teachers in solving technical problems, also to provide some kind of training about digital resources.
- Most of the students have a solid level of digital competence.
- Teachers agree that they have to get out of their comfort zone to learn English if they want to improve their digital skills.
- Teachers want to improve their competence by practising – learning by doing, by face to face classes, not by reading theoretical knowledge.
- Most of the non-teaching staff do not feel confident enough to help teachers in digital issues, also not enough finance to support the teacher's request.

- Non-teaching staff think that teachers are not motivated enough to learn by themselves and implement digital education.
- Digital Duty Manager should have proficient competence in all sectors offered.
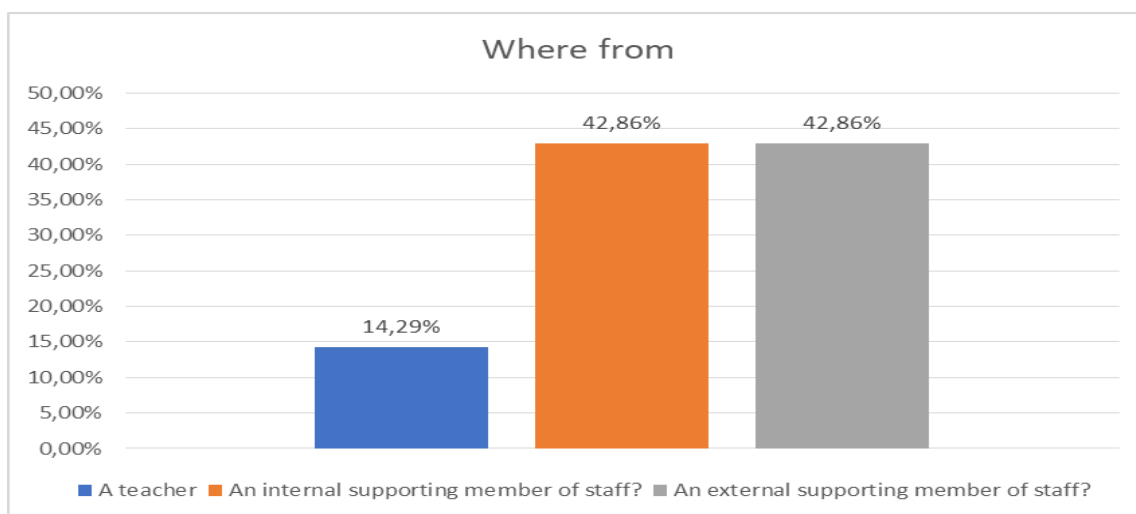- Digital Duty Manager should not be a teacher, but supporting staff (internal or external). Mainly, teachers have other duties and can not be fully dedicated as required.

Research among teaching staff

PORTUGAL
Participant profile and digital experience

Age of participants
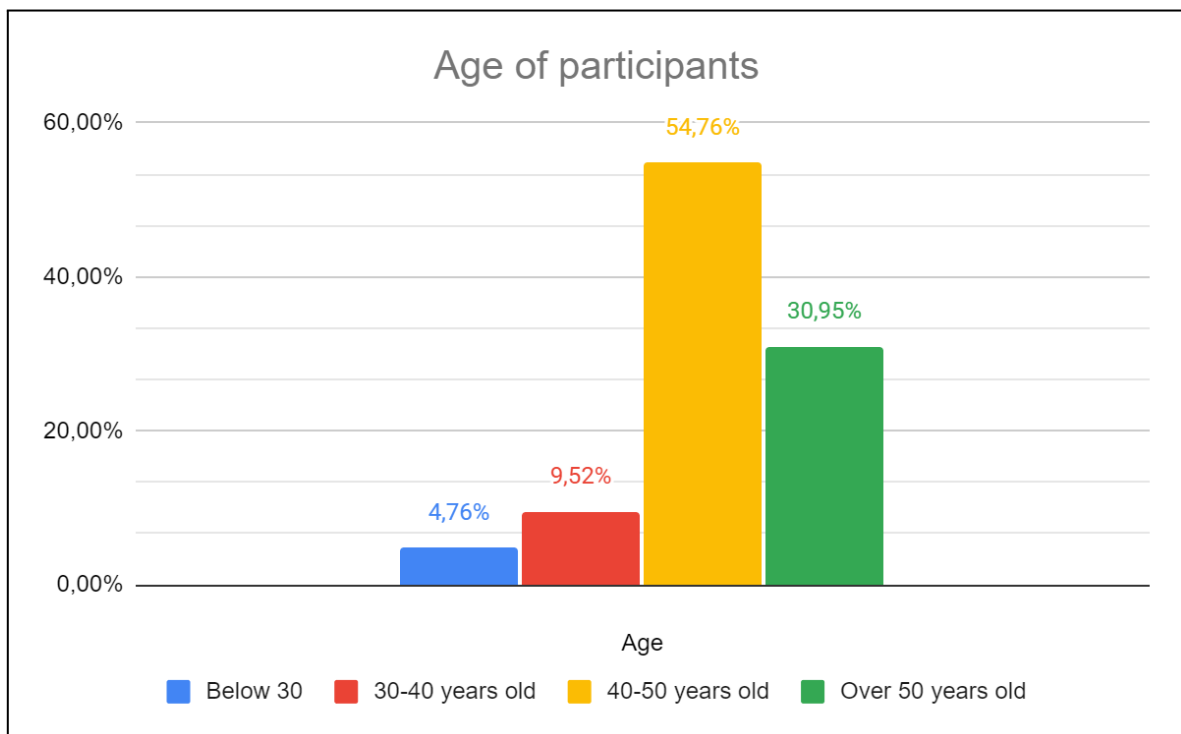
Most respondents were aged > 40 years' old but also the aged < 40 answered the survey.

Digital training received
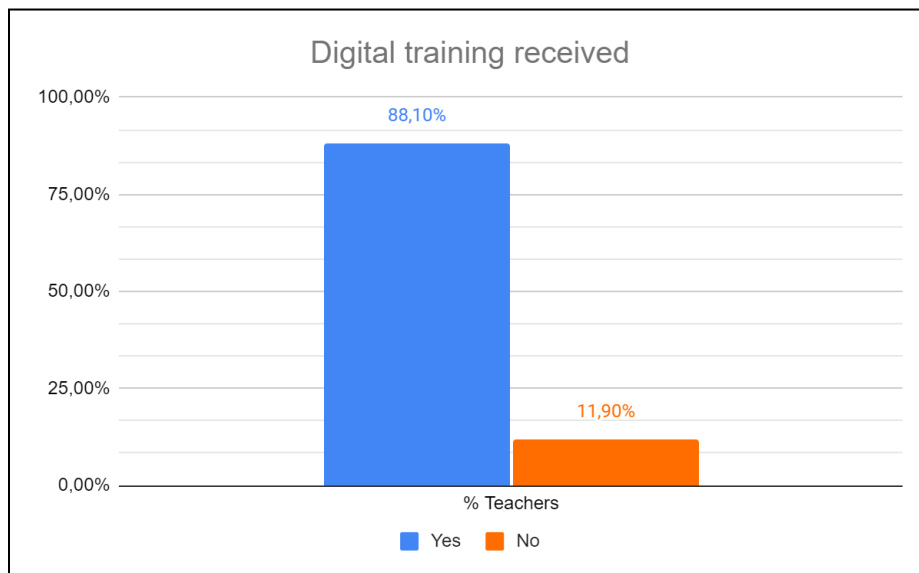
The diagram shows that most teachers have received digital training.

Kind of Digital training received
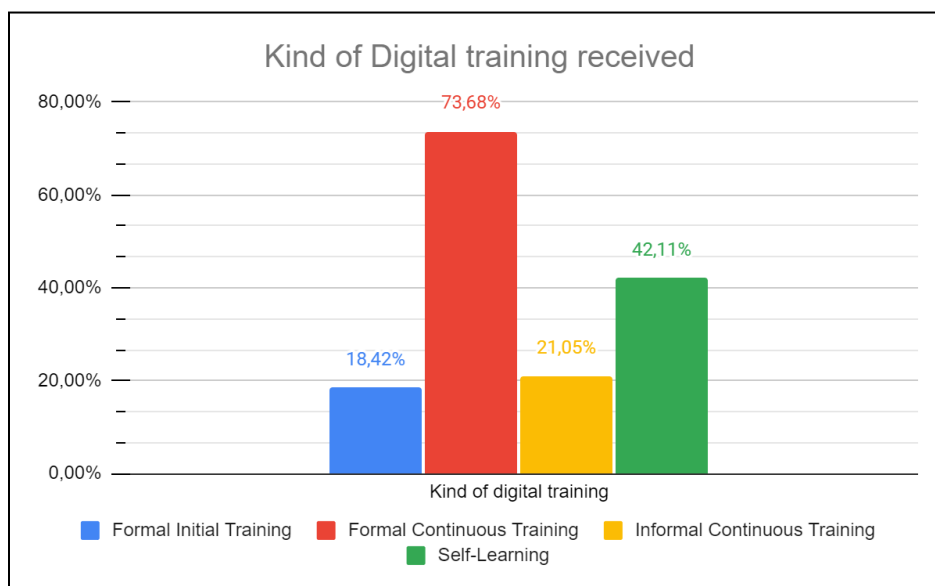
We can notice that the formal continuous training and self-learning are the most prevalent.

Evaluation, from 1 to 5, 1 being the lowest and 5 the highest level, your level in the following list of competences?

The digital level of competence
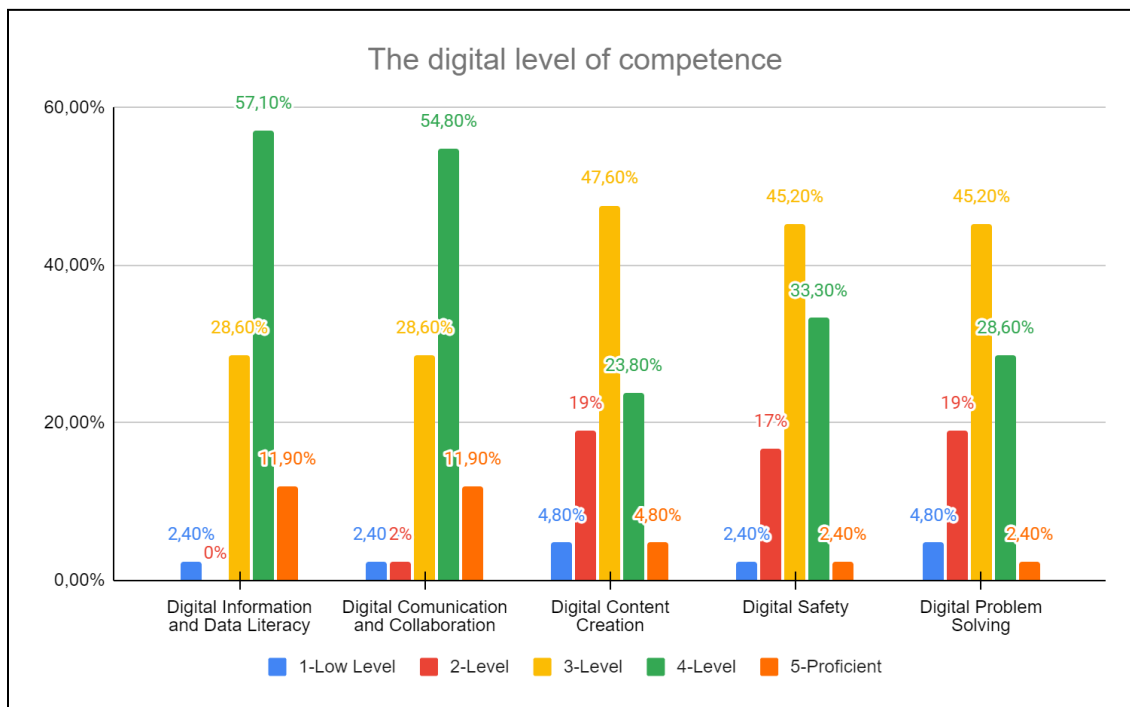
Difficulties faced while dealing with digital education
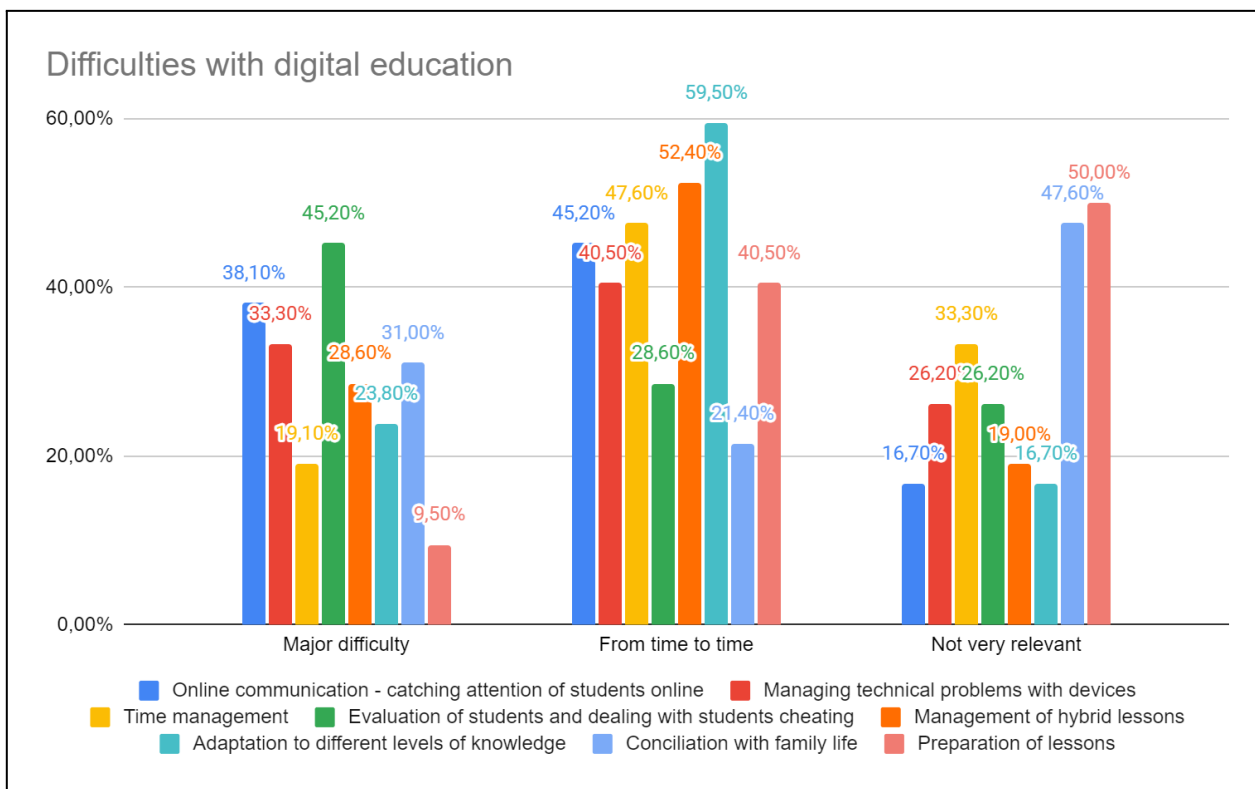
Main tools usually used
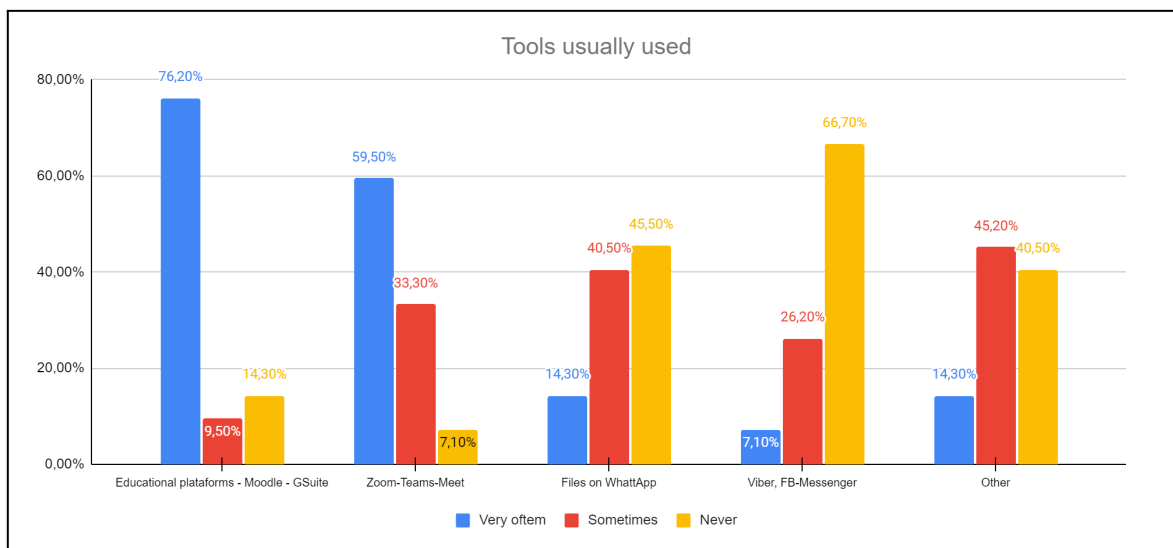
Supporting the organisation of digital classes in your school
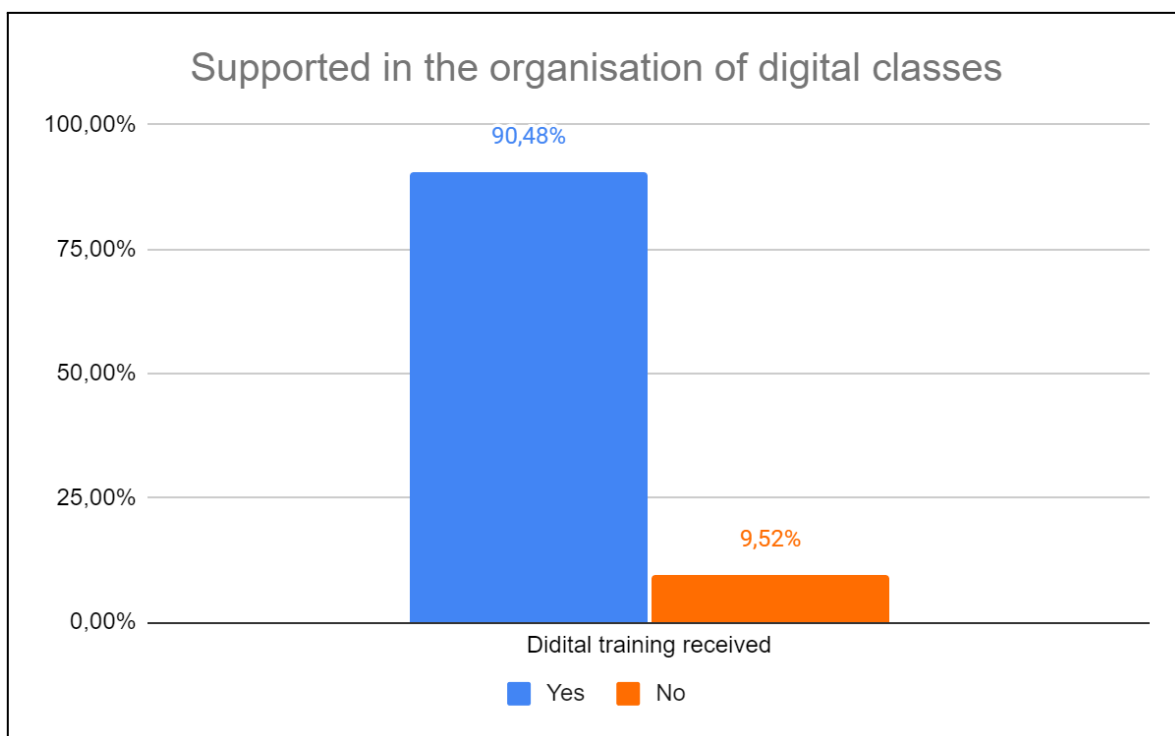
Most of the teachers (90,48%) feel supported in the organisation of digital classes.

Person in charge of digital activities

Person in charge of didtal activities
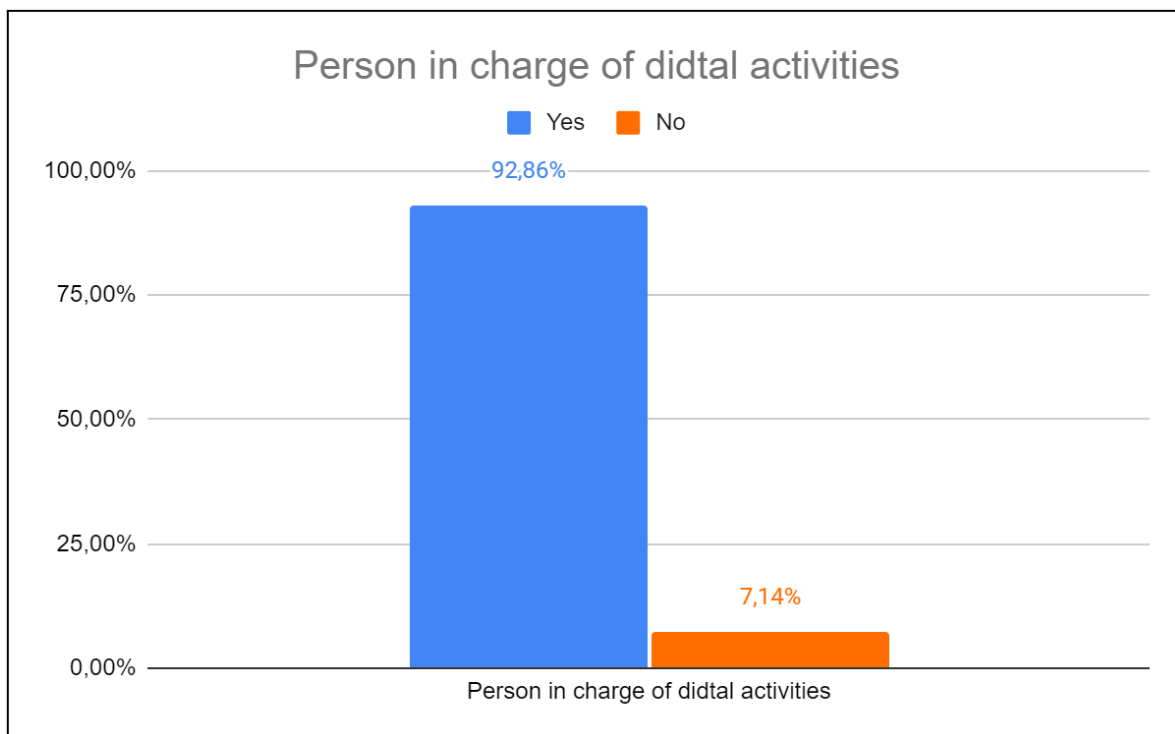
The majority of the teachers (92,86%) think that it is necessary to have someone in charge of digital activities and support the technical or pedagogical problems that arise in their school.

Digital problem what the teachers do
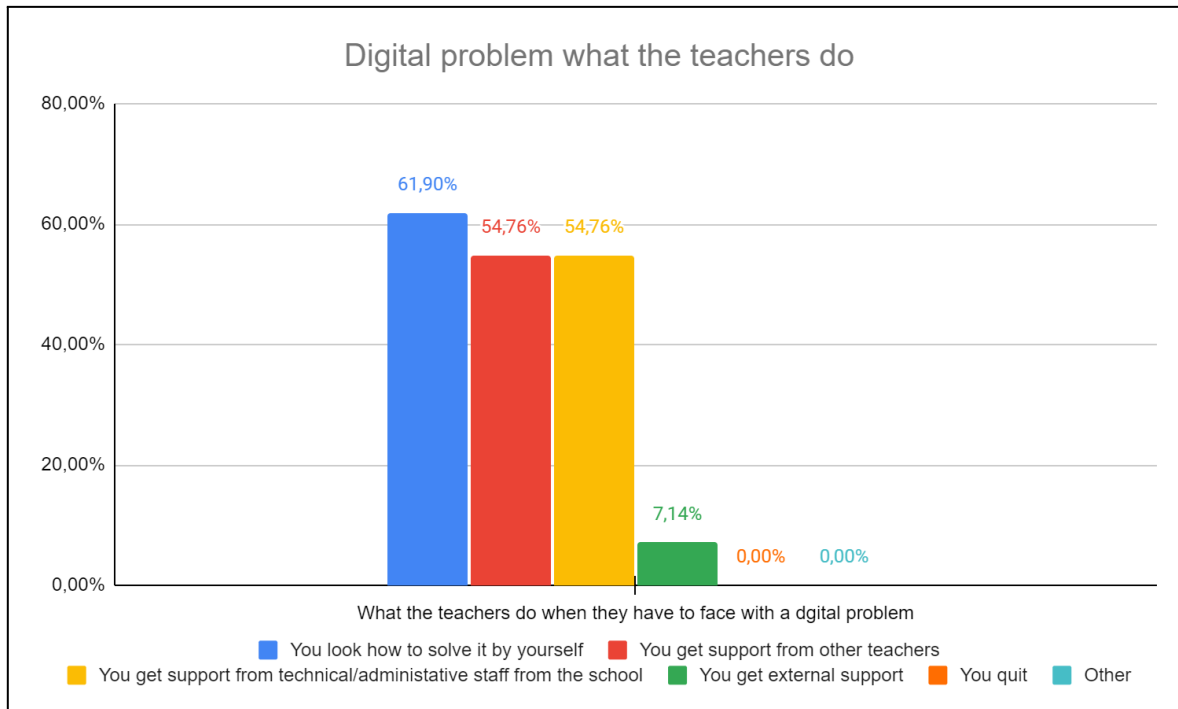
The survey shows that 61,9% of the teachers solve the problems by themselves, but 54,76% get support from other teachers and from technical / administrative staff from the school.

Main functions of the digital duty manager
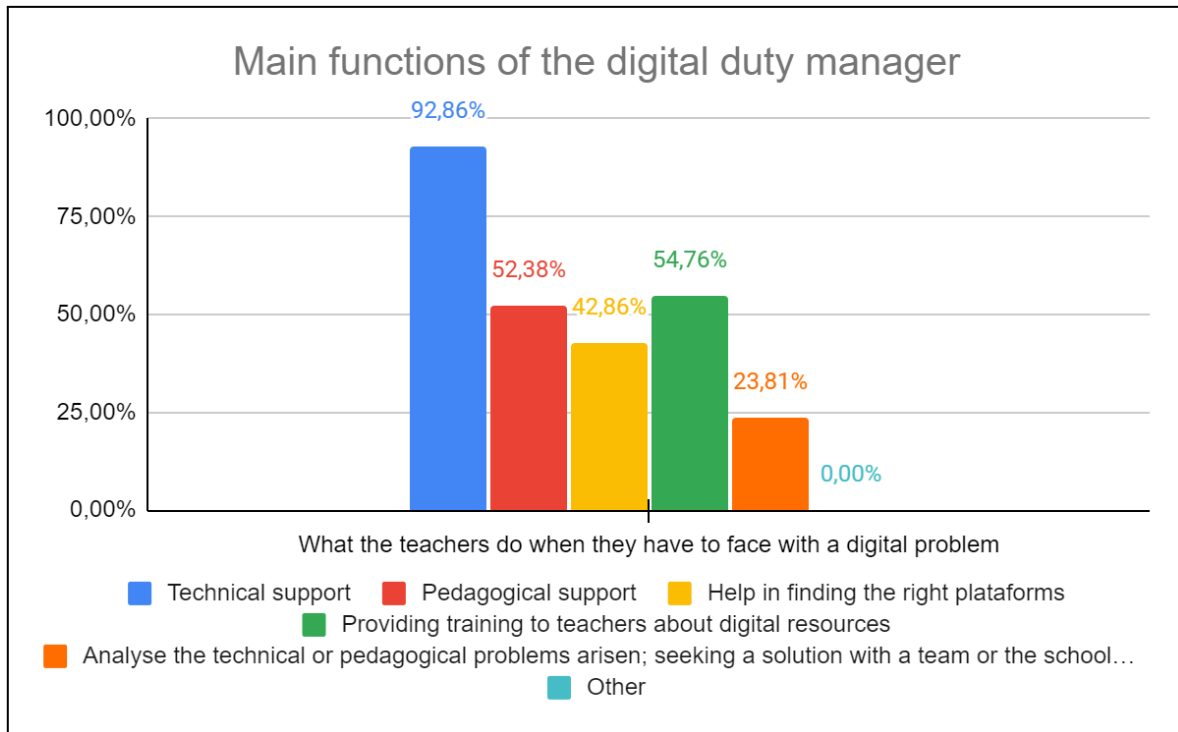
The survey shows that the Digital Duty Manager should provide Technical support (92,86%), Pedagogical support (52,38%) and training to teachers on digital resources (54,76%).

Teachers' perception of the digital education
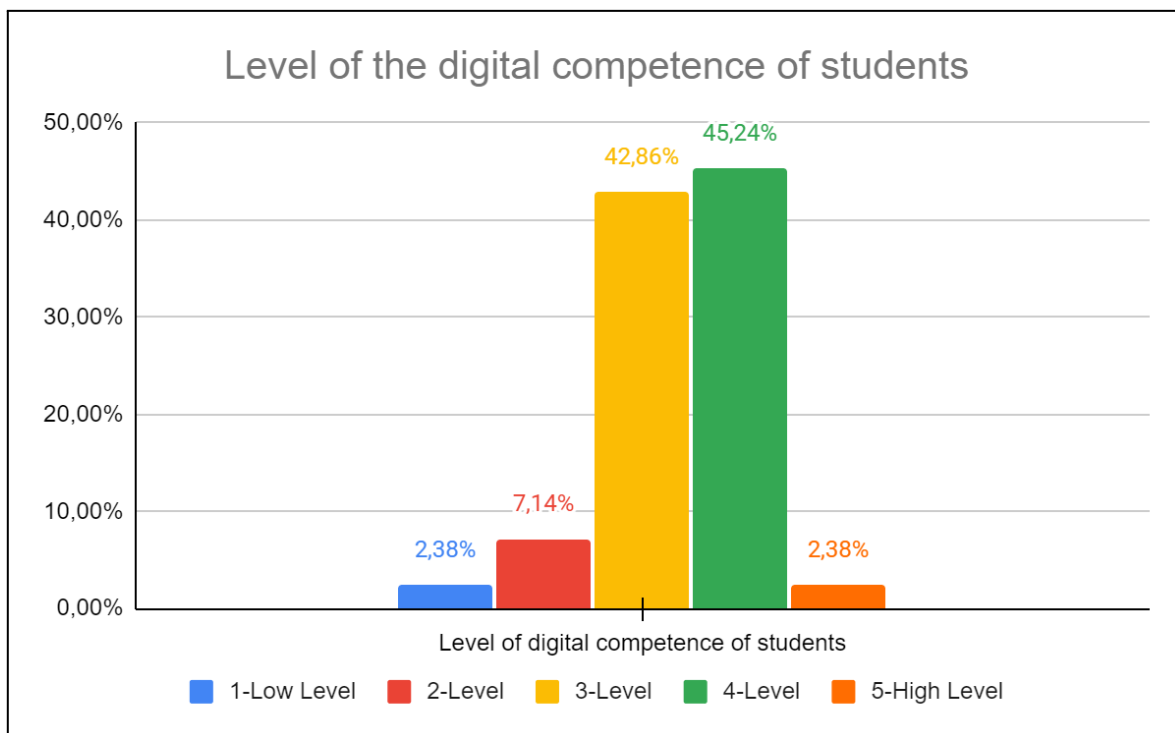
Level of digital competence of students

Level of the digital competence of students

Level of competence of students

Level of competence of students

Legend: 1-Low Level, 2-Level, 3-Level, 4-Level, 5-High Level
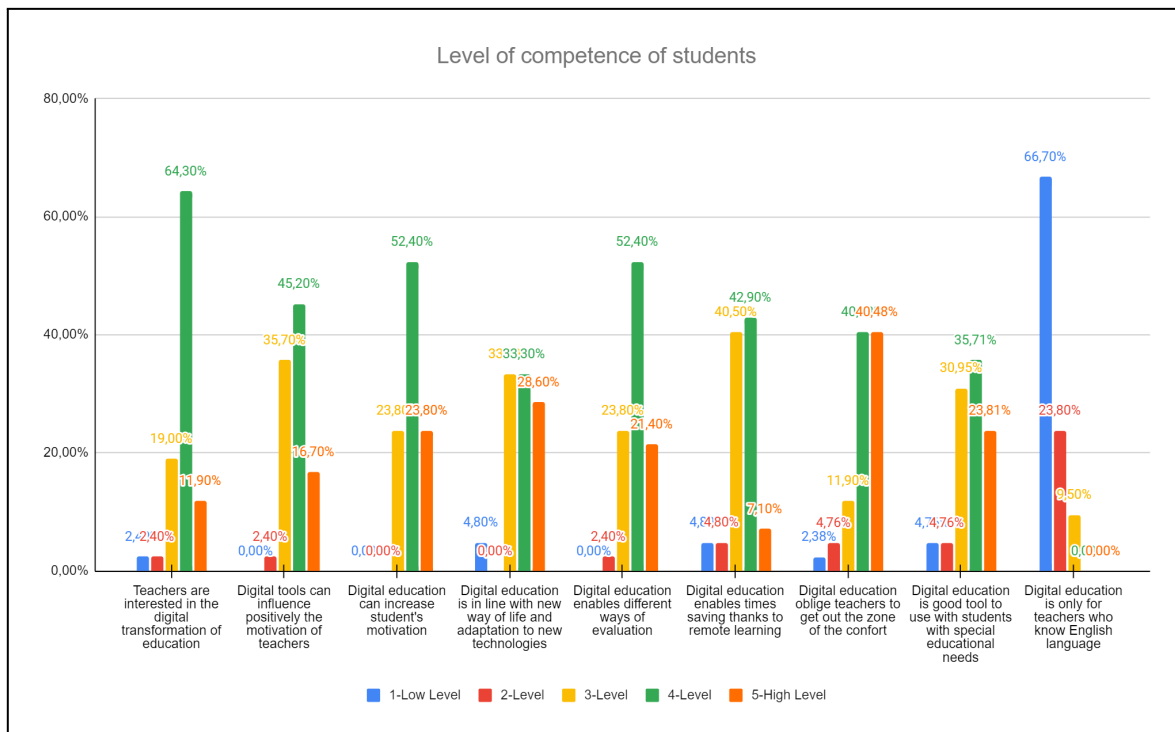
95,2% of teachers are interested in the digital transformation of education. For the majority of the teachers, digital devices have a positive impact on their motivation (97,6%). For 100% of the teachers digital education can increase the students' motivation. 95,2% of the teachers answered that digital education is in line with new ways of life and adaptation to new technologies. 97,6% of the teachers answered that digital education enables different ways of evaluation. For 90,5% of the teachers digital education enables time saving thanks to remote learning. According to 92,5% of the teachers, digital education forces them to get out of their comfort zone. 90,5% of the teachers think that digital education is a good tool for students with special educational needs. The majority of the teachers (66,7%) think that digital education is not only for teachers who can speak English but also for the others.

Research among non-teaching staff

Teachers face most while dealing with digital education

Difficulties with Digital Education
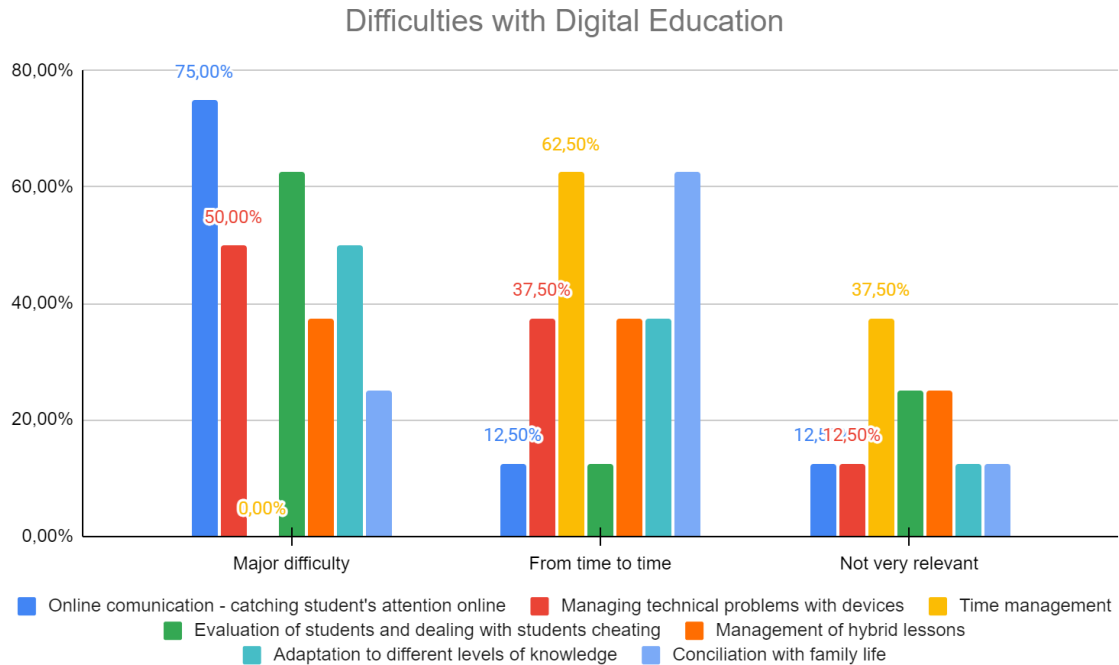
We can notice that the biggest agreement regarding the difficulties is about online communication - catching students' attention.

Digital competences that are most needed by teachers

Digital competences most needed
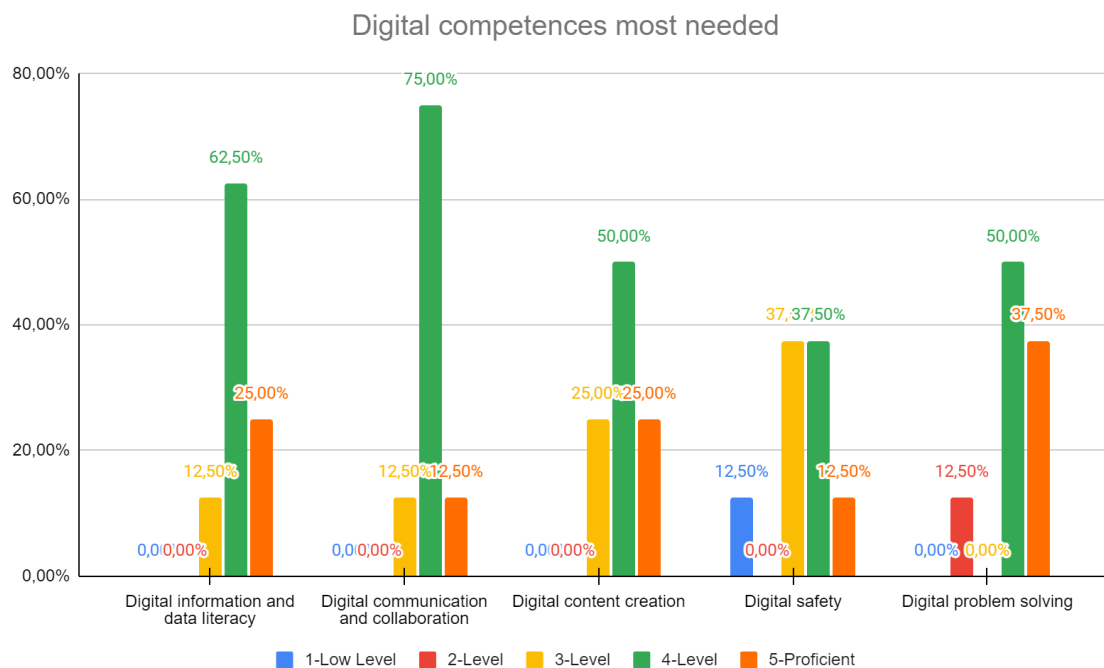
Digital Information and data literacy, digital Communication and collaboration and digital content creation are the digital competences most needed by teachers.

Evaluation of level of agreement with the following statements, 1 being the lowest level of agreement, and 5 the highest

Level of agreement

Perception of the Digital Duty Manager profile needed
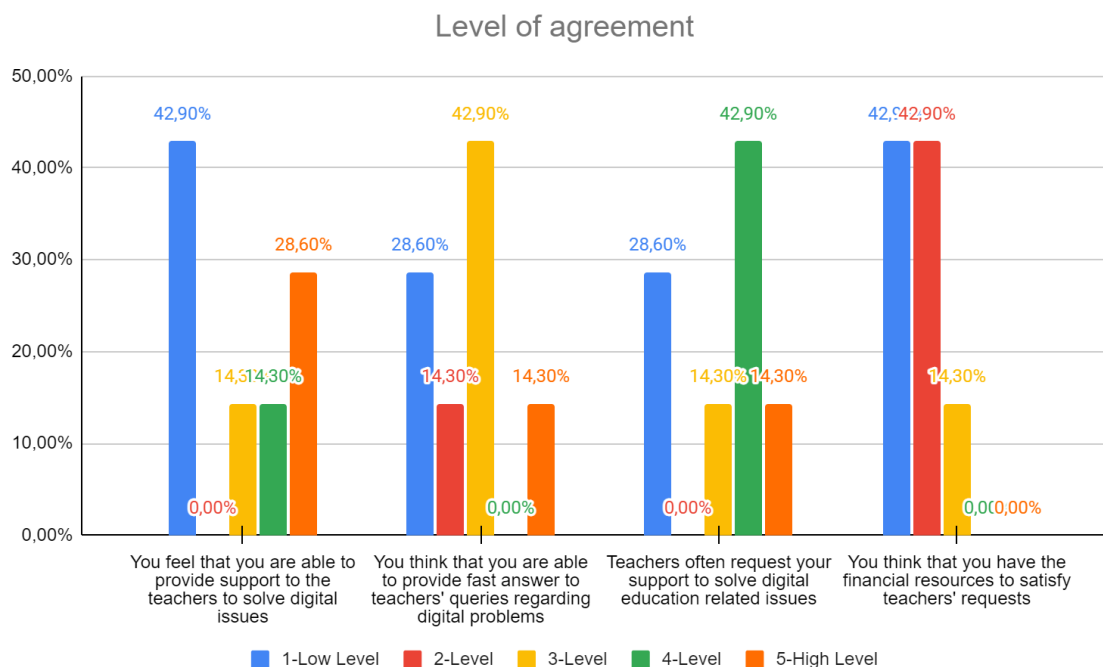
Do you think there is a need for a person in charge of digital duty management in your school?

Person in charge of digital duty management
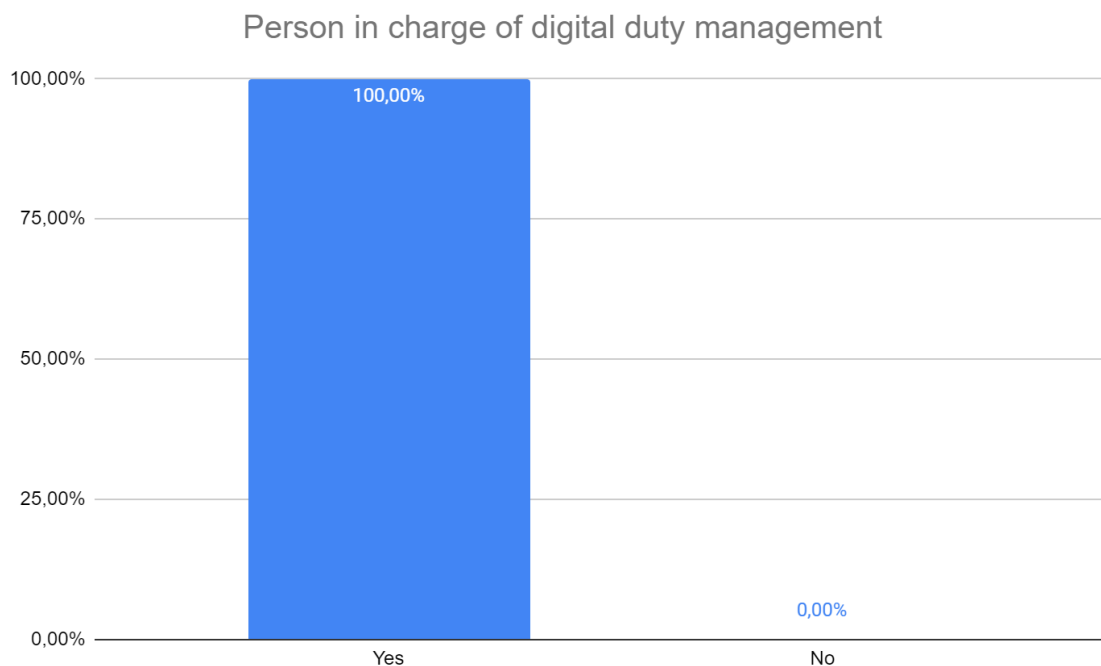
100% of the non-teaching staff think that a digital duty Manager is necessary in our school.

What should the main functions of the digital duty manager be?

Digital duty manager main functions
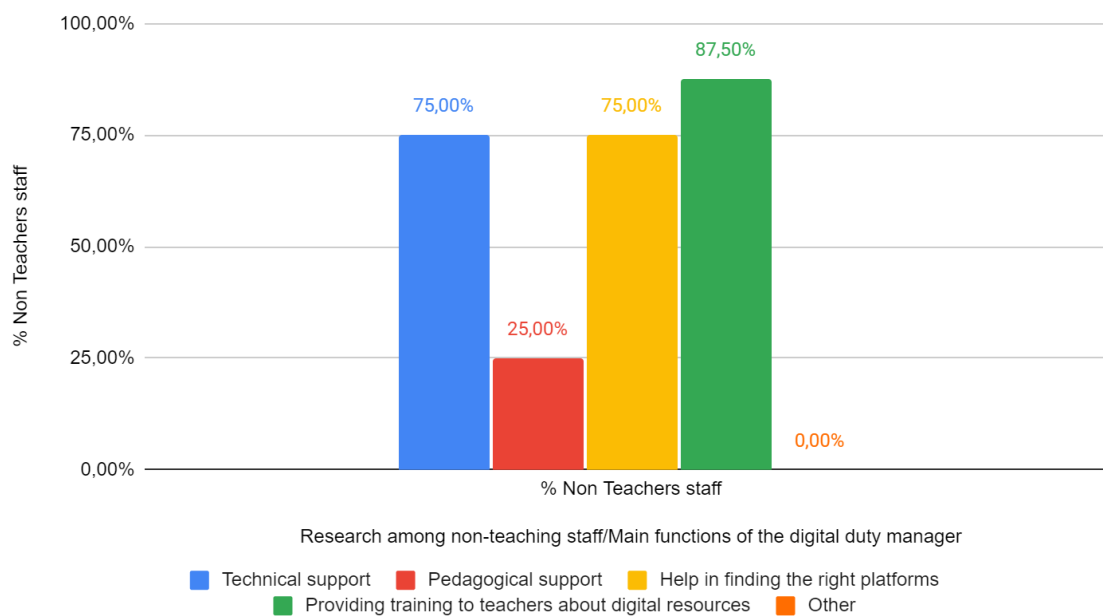
87,5% of the non-teaching staff answered that the Digital Duty Manager should provide training to teachers on digital resources.

The level of competences of the digital duty manager be in the following area. 1 being the lowest level of competences and 5 the highest
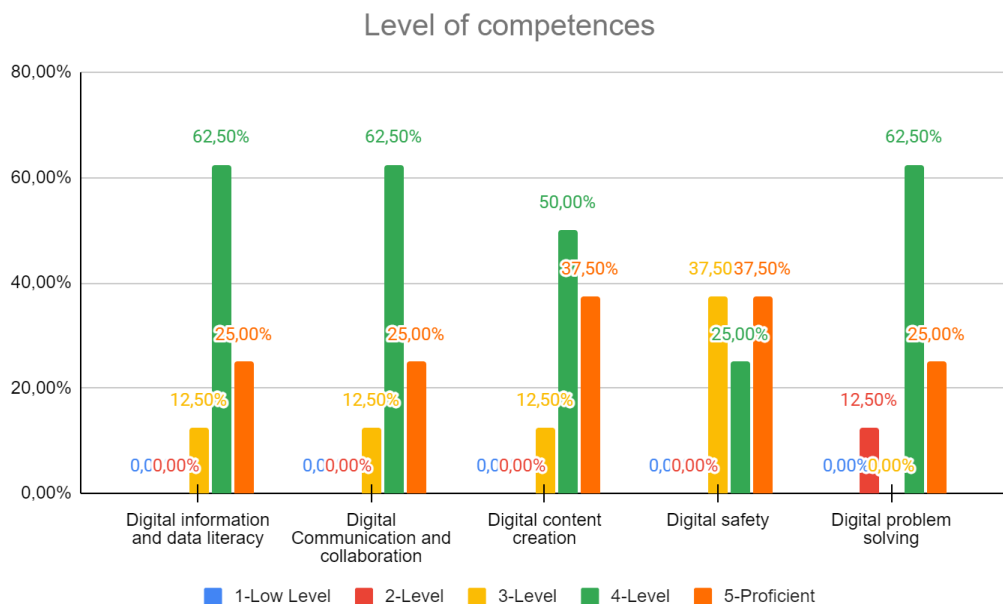
The Digital Duty Manager should be
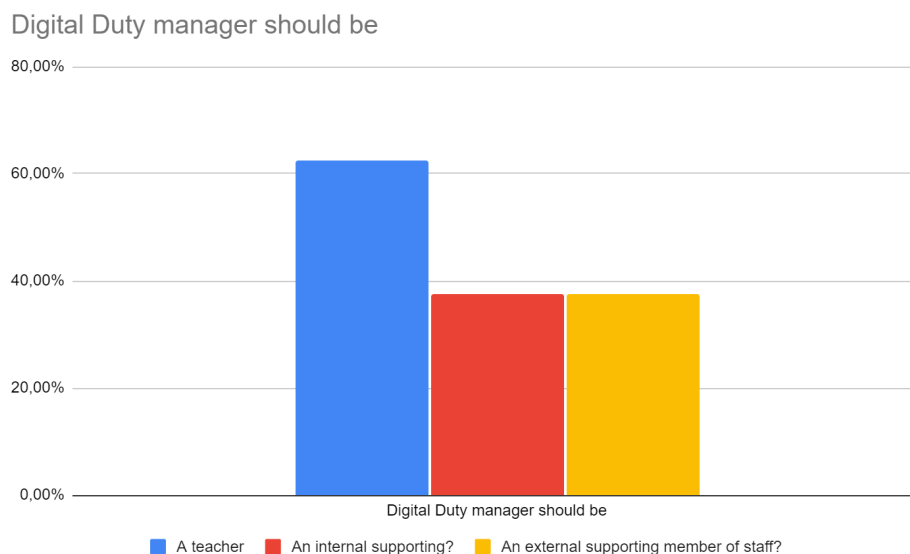
Looking at the diagrams 62,5% of the results highlight that the Digital Duty Manager should be a teacher while 37,5% think that this figure should be an internal supporting member or an external supporting member from the school.

Conclusions

The two surveys highlight not only the level of digital skills but allow a comparison between what the teachers and the technical administrative staff think.

Analysing the survey data, we find the largest number of responses coming from the group aged over 40. Most respondents (> 90%) confirm that they have received digital training.

Training appears to be mainly formal continuous training for both profiles (> 71%).

In digital education in schools, the main elements that stand out are:

Technical/administrative staff:

- Communicating and attracting the attention of students: more than 70% have serious difficulties;
- Managing technical issues of devices: more than 50% experience the problem;
- Time management: more than 60% encountered the problem with occasional difficulty;
- Evaluating students and managing the phenomenon of "cheating" (copying): more than 60% find the problem as relevant;
- 37,5% consider managing hybrid teaching as an occasional difficulty.

Teachers:

- As regards digital literacy 97,6% of responses are positive, as well as communication and collaboration through digital tools where 95,3% of responses are positive;
- The creation of digital content, on the other hand, stands at 71,4% as an intermediate point;
- IT security has an average value between sufficient and good, 78,5%;
- Problem solving, on the other hand, sees its score with 73,8% of positive answers.

According to the technical / administrative staff, the people interviewed believe that information and data literacy are essential for teachers as well as communication and collaboration. The questionnaire shows that there are some interactions among the teachers on digital issues and there is some communication between the teachers and the technical/administrative staff (62,5% communicate with teachers).

The section dedicated to teachers on the difficulties encountered with digital teaching is interesting:

- 38,1% emphasise the difficulty in capturing students' attention online;
- 33,3% stress the difficulty with technical problems while 51% encounter this occasional difficulty;
- The 'cheating' phenomenon is considered for 33,3% as a relevant phenomenon while for 40,5% it is only occasional;
- The management of hybrid digital teaching is considered as relevant by 28,6% of the teachers, while 52,4% assess it as occasional.

The survey highlights how the main platforms used by teachers are:

- Moodle-GSuite > 75%;

- Zooms-Meet-Teams > 57%.

According to the technical / administrative staff, the teachers are interested in facing the challenges of digital teaching. In fact, 87,5% of the answers oscillate between the median value and the maximum value. About the motivation of teachers to implement the teaching digital the value in the same range is 87,5%.

The requirements of the professional figure of the Digital Duty Manager highlight the following points:

- Teachers feel supported by the school in organising digital lessons (90,48%) and the professional figure of the Digital Duty Manager is needed (92,86%); this figure is also confirmed by the technical / administrative staff (100%).

Today teachers solve their digital problems independently (61,9%), 54,76% are helped by other teachers and 54,76% receive support from technical / administrative staff.

The **main characteristics of the Digital Duty Manager** should be:
- Support in training on the use of digital resources (54,76% of the answers);
- Technical support (92,86%);
- Support in training on the use of digital resources (54,76%);
- Analysing the technical or pedagogical problems that have emerged; looking for a solution with a team or with the Headmaster (23,81%).

According to the technical / administrative staff, the main skills of the Digital Duty Manager are:
- Regarding digital literacy and mastery 100% of the answers are positive, as well as communication and collaboration through digital tool, the creation of digital content, and cybersecurity;
- Problem solving which stands at a high value for over 87,5% of the survey participants.

According to the technical / administrative staff, the figure of the Digital Duty Manager should be:
- a teacher (62,5%);
- A support figure within the staff other than the teacher (37,5%);
- A support figure external to the staff (37,5%).

The perception of the students' digital competence by teachers stands at an average value with 88,1% of the answers, while analysing the rest of the answers received what emerges is the following:

- 95,2% of teachers are interested in the digital transformation of education;

- For the majority of the teachers, digital devices have a positive impact on their motivation (97,6%);

- For 100% of the teachers digital education can increase the students' motivation;

- 95,2% of the teachers answered that digital education is in line with new way of life and adaptation to new technologies;

- 97,6% of the teachers answered that digital education enables different ways of evaluation;

- For 90,5% of the teachers digital education enables time saving thanks to remote learning;

- According to 92,5% of the teachers, digital education forces them to get out of their comfort zone;

- 90,5% of the teachers think that digital education is a good tool for students with special educational needs;

- The majority of the teachers (66,7%) think that digital education is not only for teachers who can speak English but also for the others.

  According to the teachers, digital skills should be improved through online lessons (45,24%), learning by doing (95,24%), reading (19,05%) and face-to-face lessons (14,29%).

ROMANIA

Research among teaching staff

Participant profile and digital experience

Age of participants
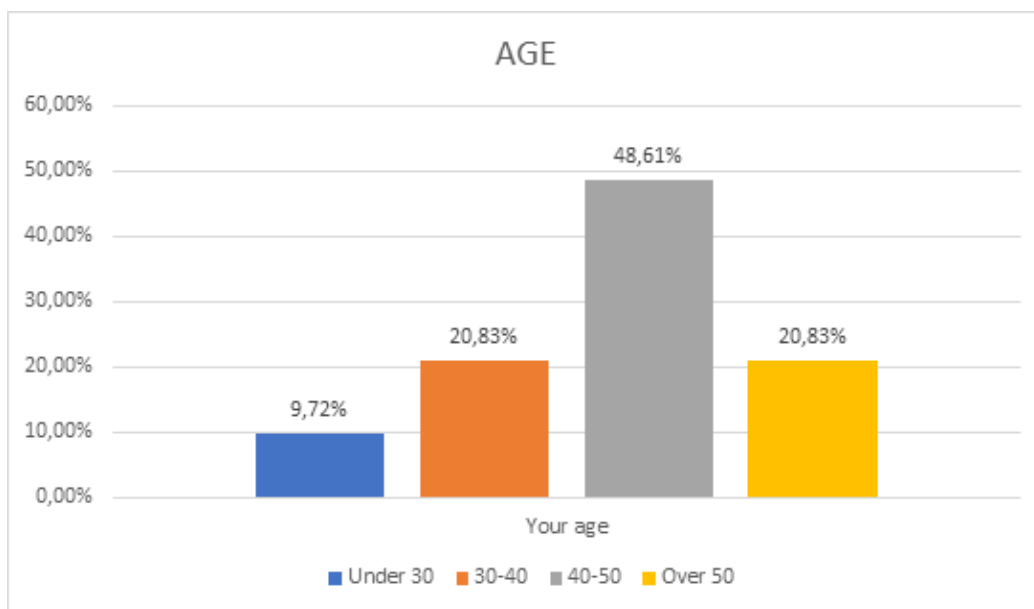
Most respondents were aged 40 to 50 years old

Digital training received
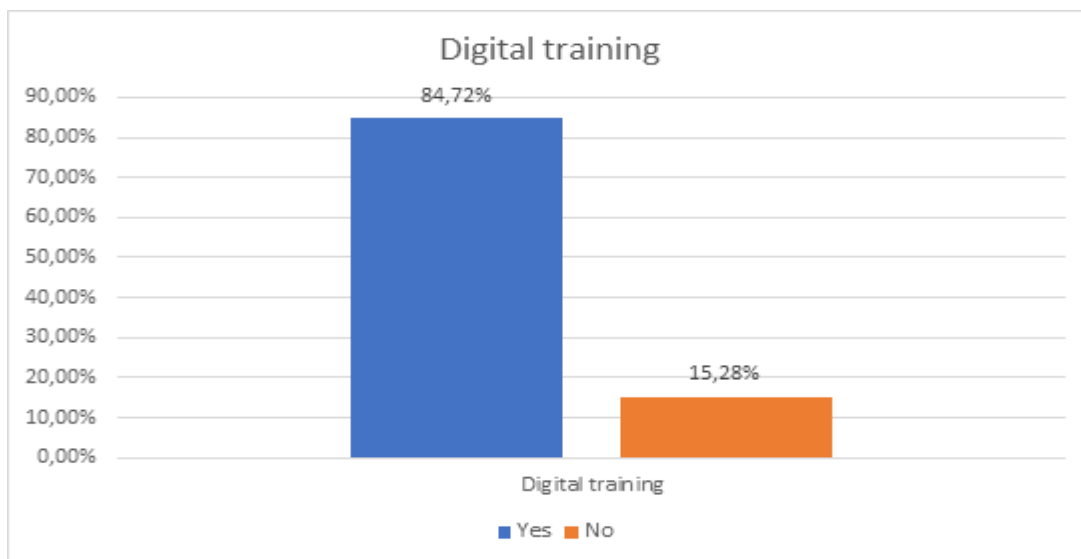
Digital training

Most respondents have received some sort of digital training.

Types of digital training
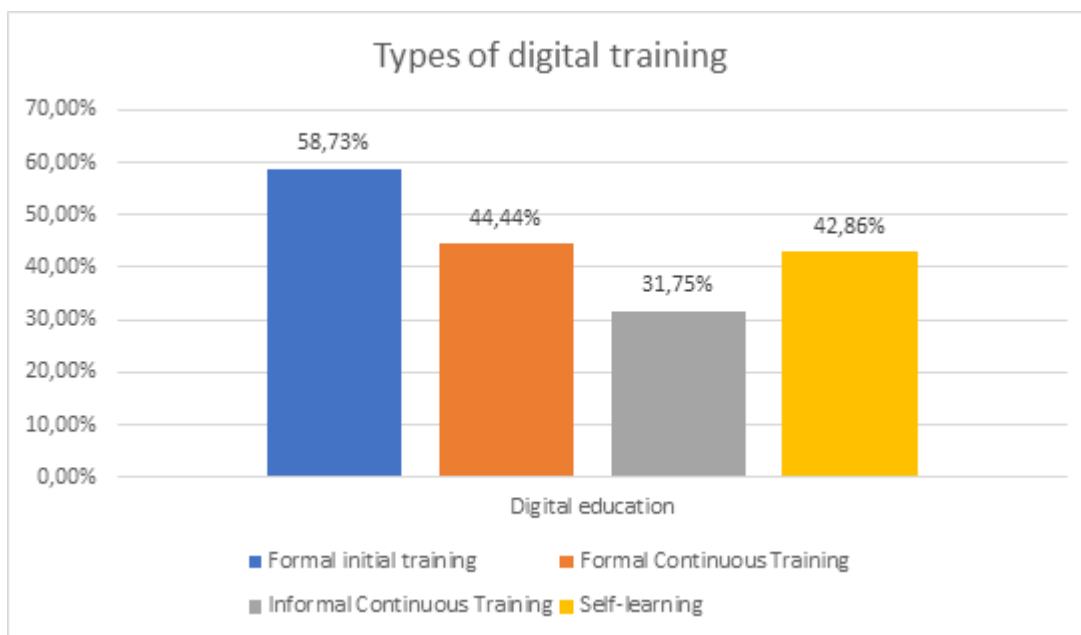
Most respondents have received initial training, but also go through formal continuous training.

Evaluation, from 1 to 5, 1 being the lowest and 5 the highest level, your level in the following list of competences?
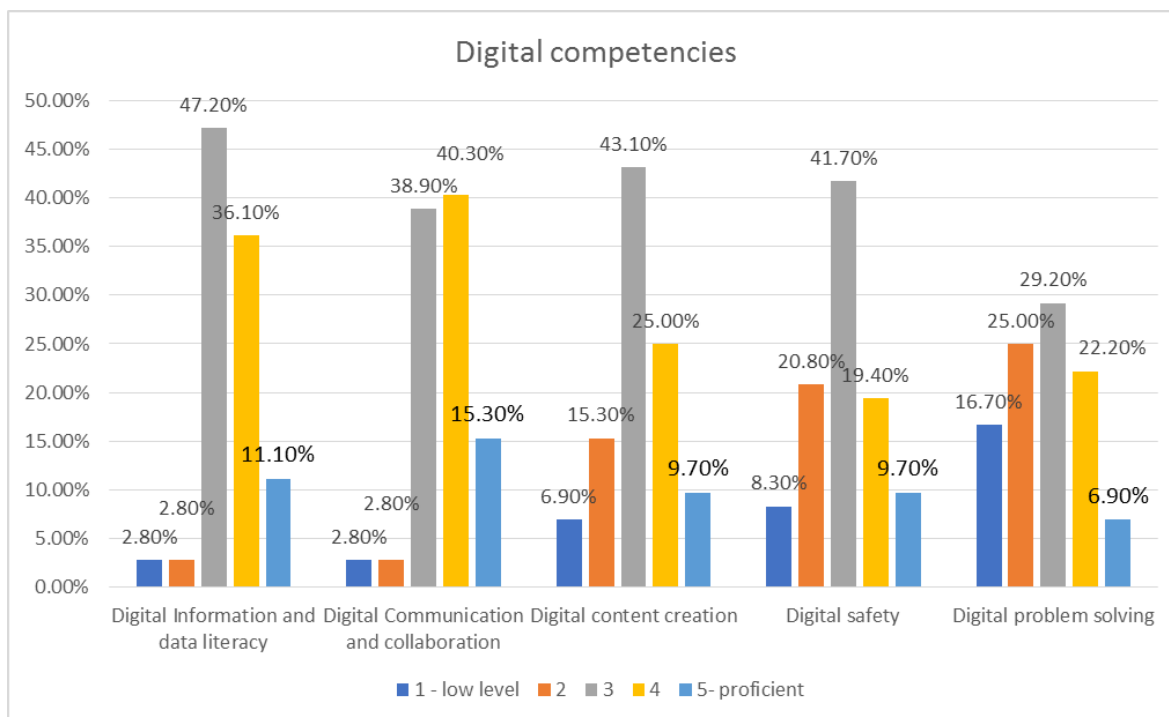
Most respondents claim they are fairly competent in all aspects that were questioned.

Difficulties faced while dealing with digital education

Most respondents said the difficulties presented were mainly encountered occasionally, except for evaluation fraud which was regarded as a major difficulty.

Difficulties

90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%

Online communication - catching attention of students online: 11.10% / 70.80% / 18.10%

Managing technical problems with devices: 5.60% / 76.40% / 18.10%

Time management: 11.10% / 52.80% / 36.10%

Evaluation of students and dealing with students cheating: 56.90% / 33.30% / 9.70%

Management of hybrid lessons: 31.90% / 48.60% / 19.40%

Adaptation to different levels of knowledge: 9.70% / 56.90% / 33.30%

Conciliation with family life: 12.50% / 40.30% / 47.20%

Preparation of lessons: 1.40% / 54.20% / 44.40%

■ Major difficulty   ■ From time to time   ■ Not very relevant
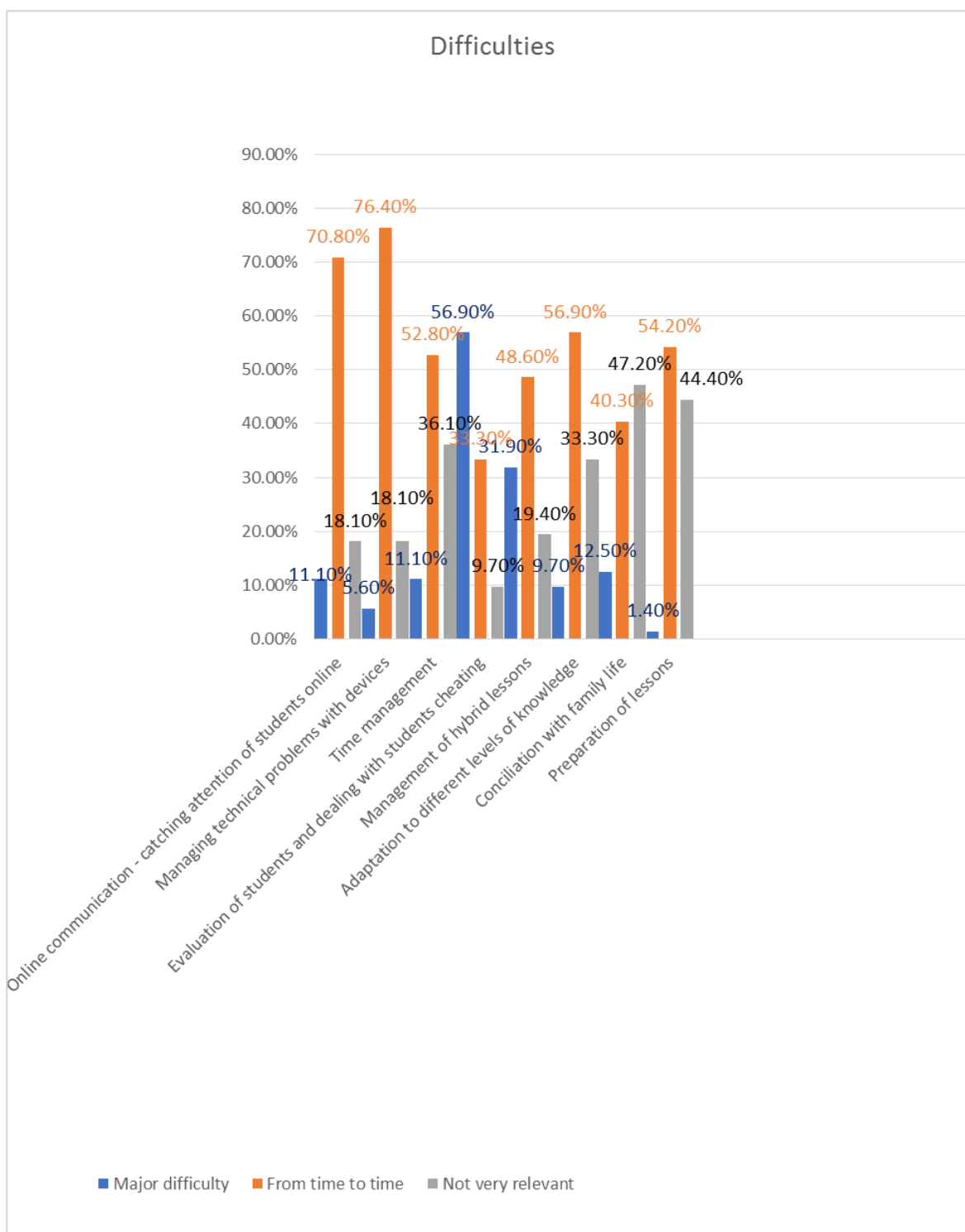
Main tools usually used
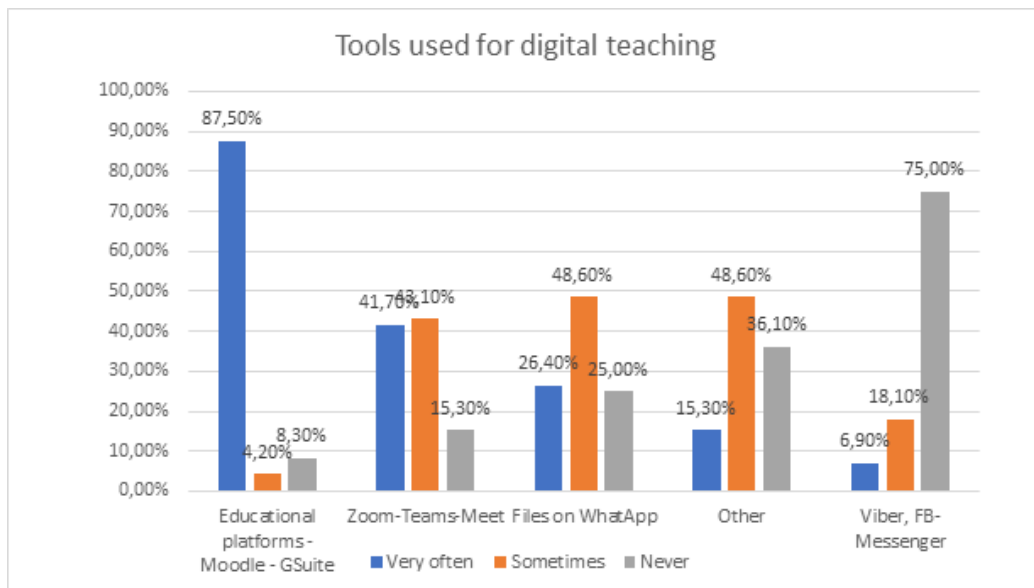
Most respondents use educational platforms in their digital teaching.

Supporting the organisation of digital classes in your school
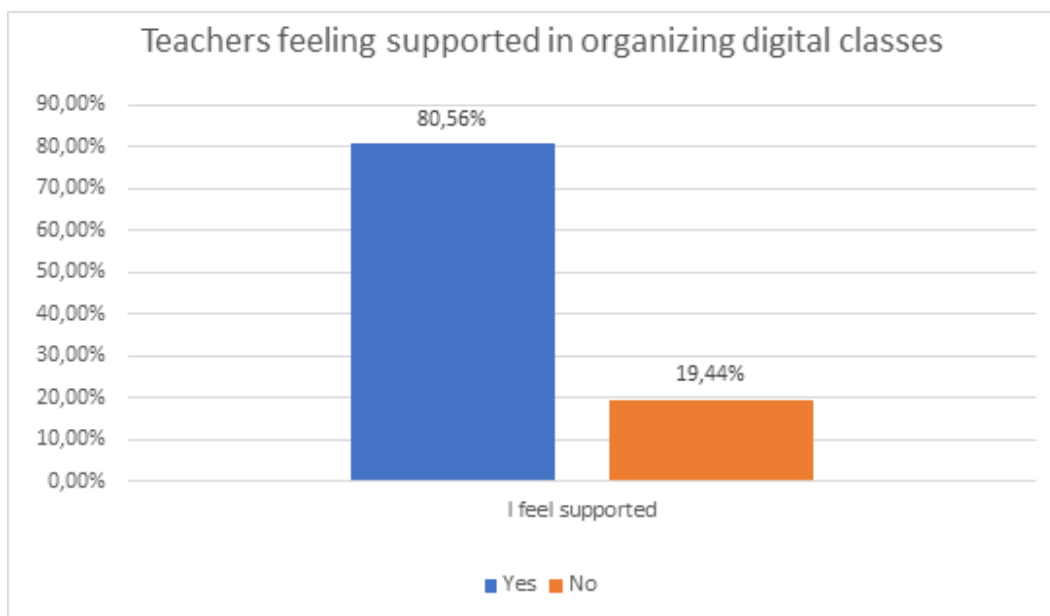
Most respondents feel they are supported in organising digital classes.

Person in charge of digital activities

Person in charge of digital activities
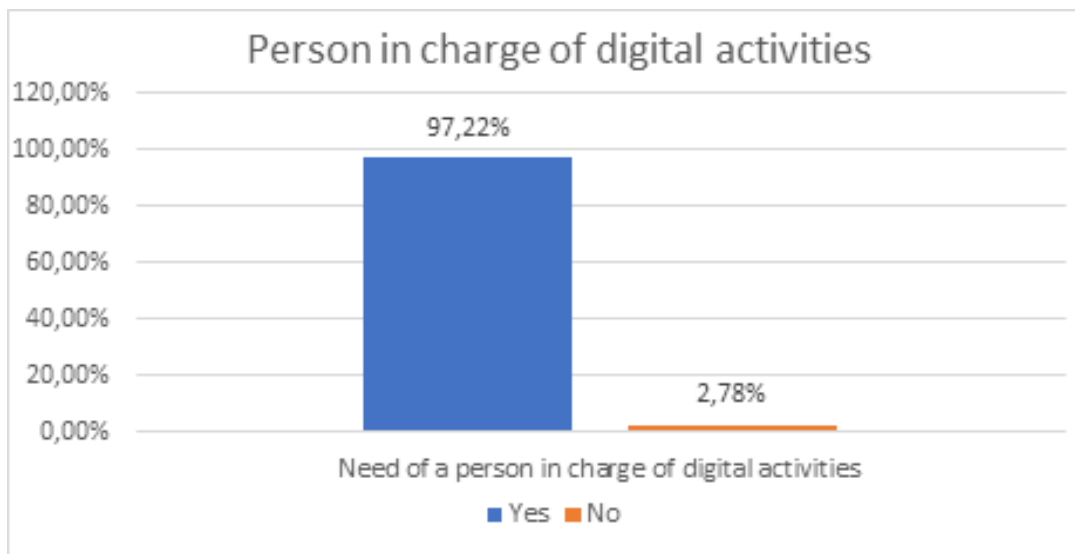
Most respondents feel there is a need for a person in charge of digital activities.

Digital problem what the teachers do

Actions taken when confronted with a digital problem
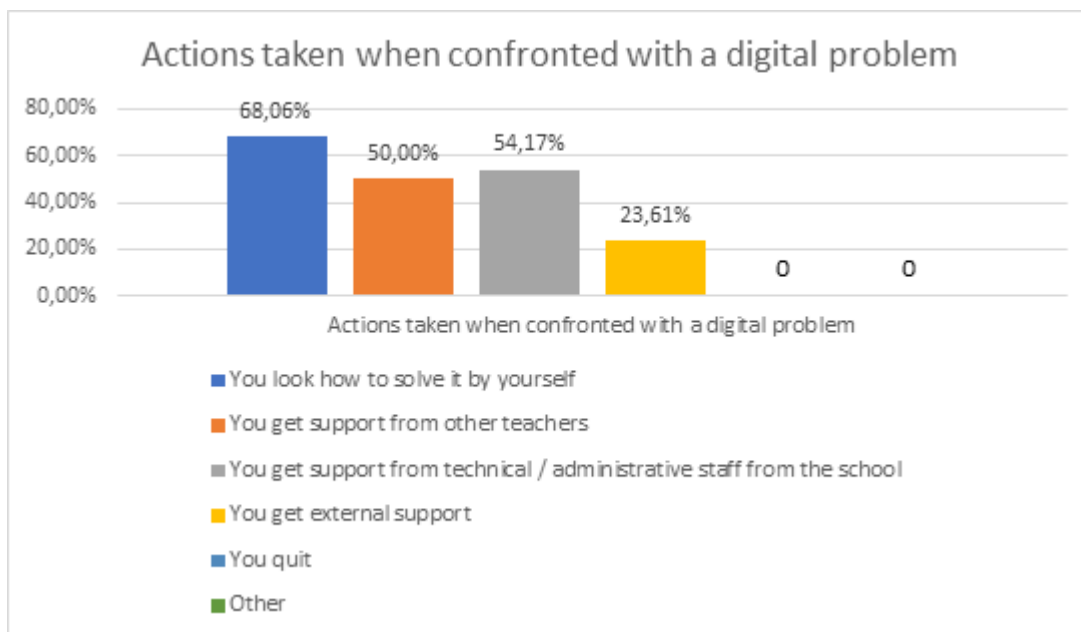
Most respondents look to solve a digital problem on their own or ask a fellow teacher.

Main functions of the digital duty manager
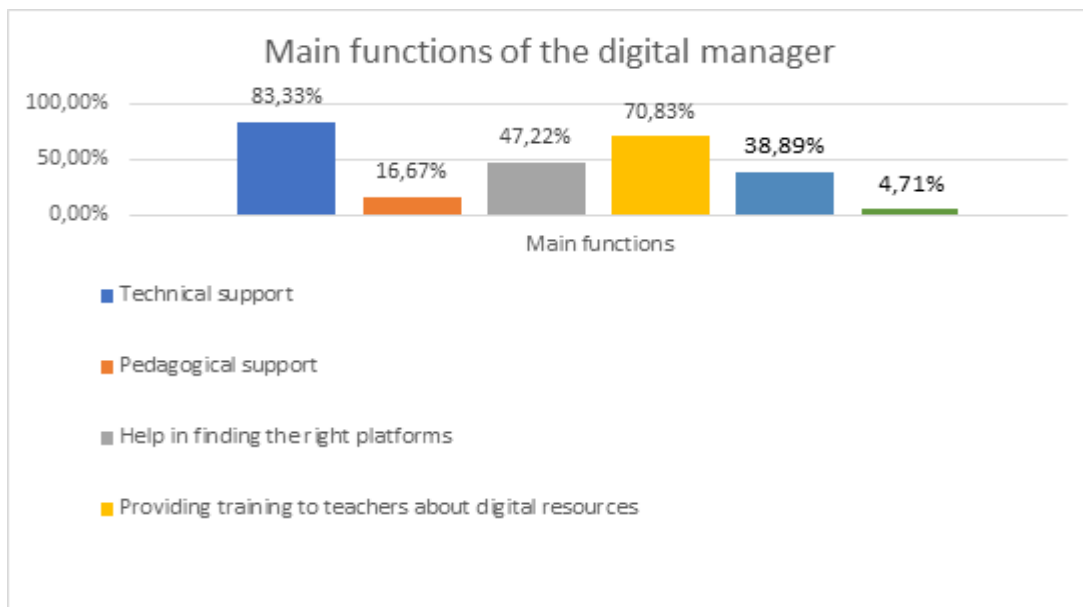
Most respondents feel the Digital Duty Manager should offer technical support and provide training for teachers.

Teachers' perception of the digital education

Level of digital competence of students
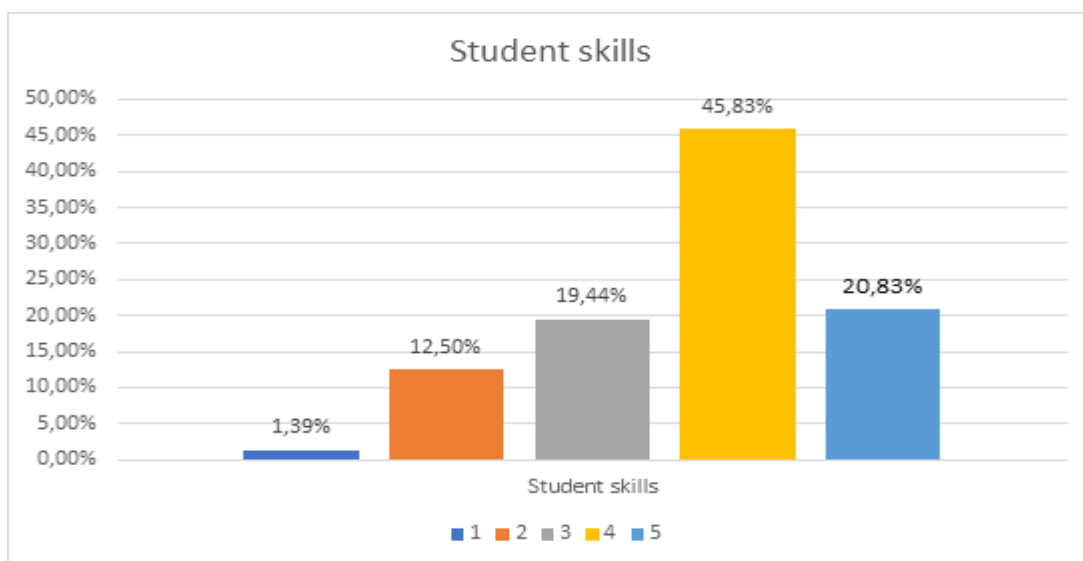
Student skills

Most respondents feel that students have a high level of digital skills.

Statements about digital education
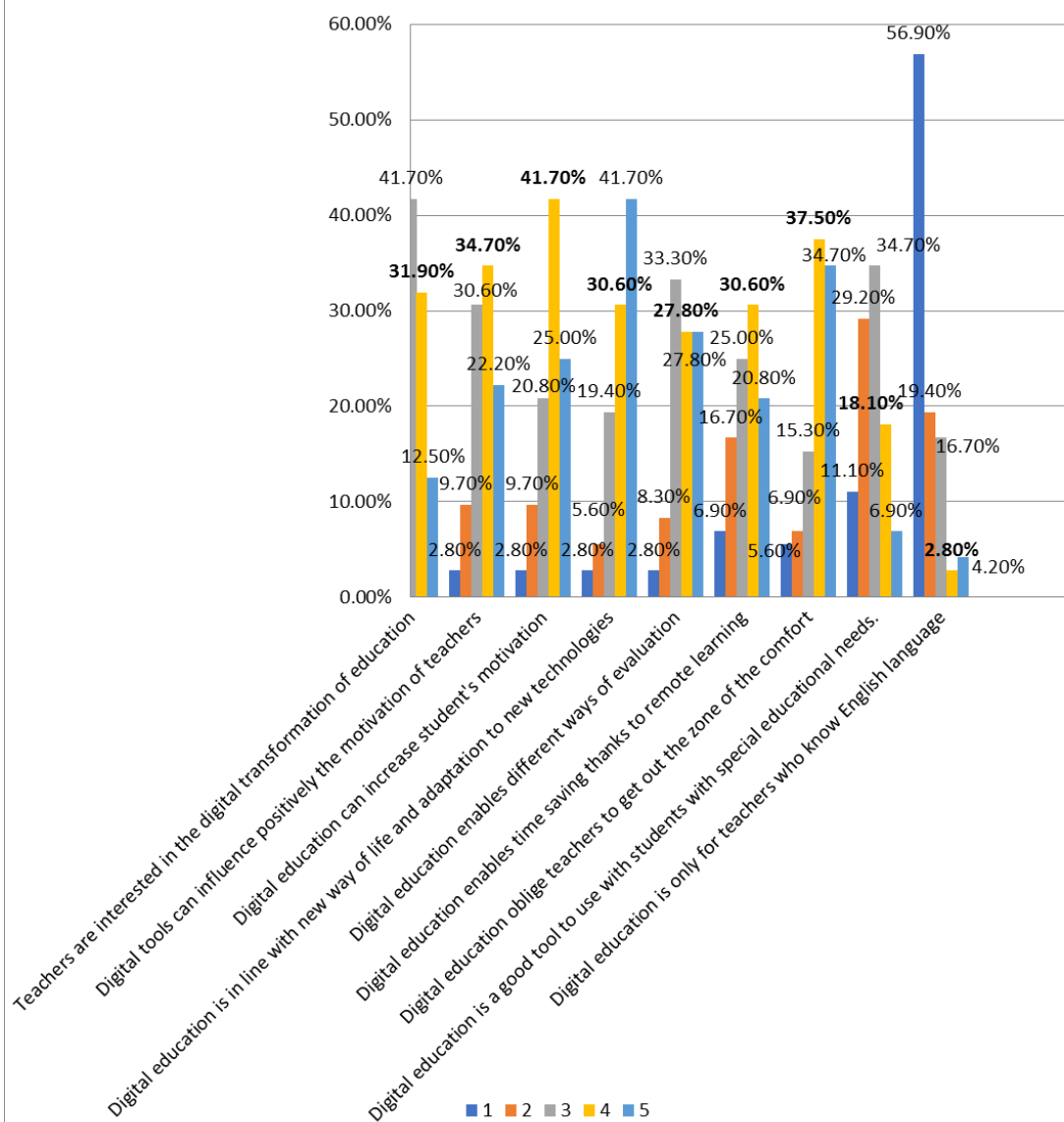
Most respondents have a favourable view of the positive effects of digital education

Research among non-teaching staff

Teachers face most while dealing with digital education

Difficulties chart showing difficulties faced by teachers with categories: Online communication - catching attention of students online, Managing technical problems with devices, Time management, Evaluation of students and dealing with students cheating, Management of hybrid lessons, Adaptation to different levels of knowledge, Conciliation with family life, Preparation of lessons. Legend: Major difficulty, From time to time, Not very relevant.

Most respondents say that the difficulties presented are only occasional.

Digital competencies
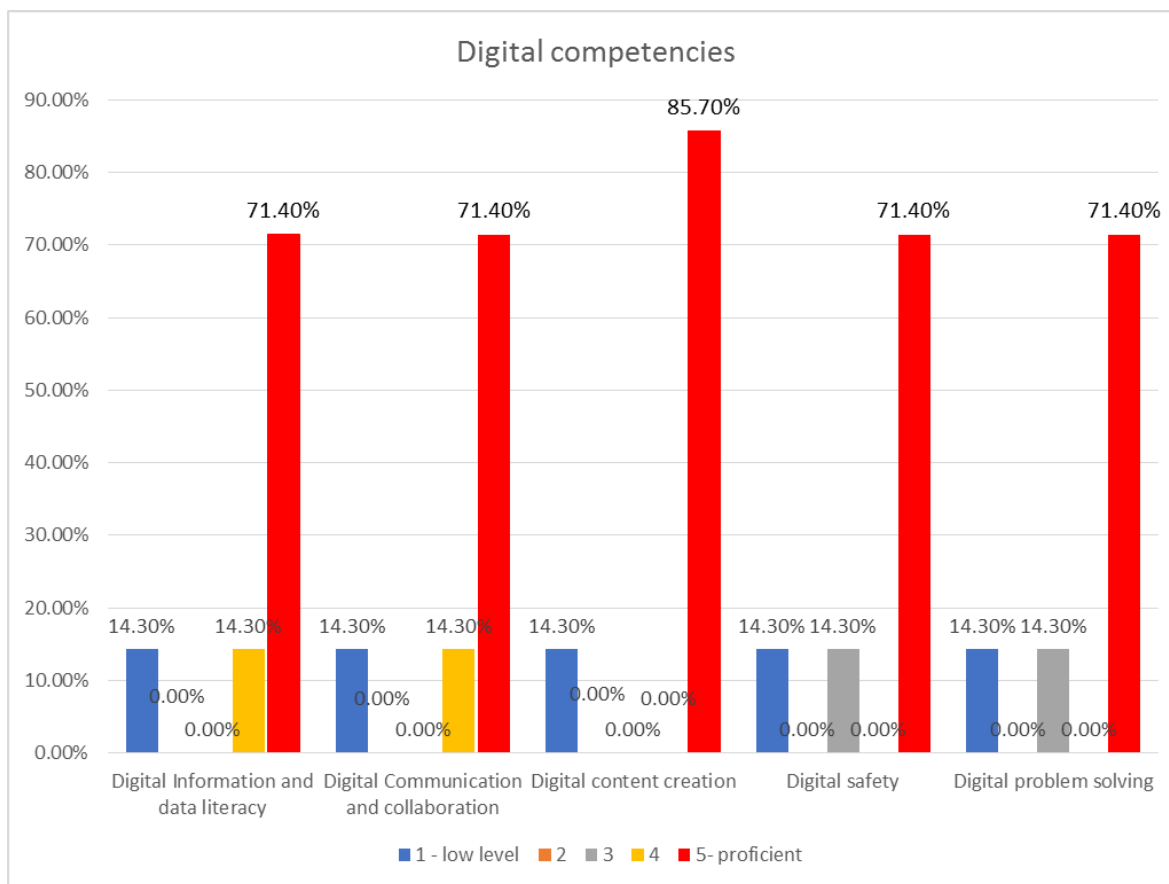
Most respondents think all of the competencies presented are necessary for teachers.

Evaluation of level of agreement with the following statements, 1 being the lowest level of agreement, and 5 the highest
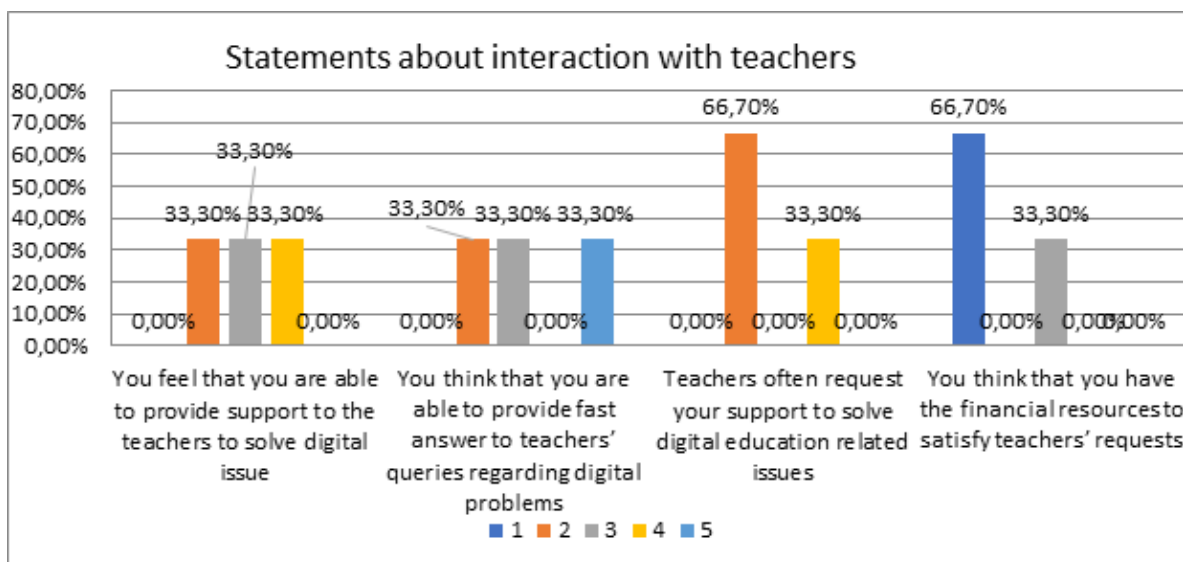
Most respondents feel they cannot offer help to teachers in digital matters and that there are not enough financial resources to satisfy the needs of the teachers.

Perception of the Digital Duty Manager profile needed

Do you think there is a need for a person in charge of digital duty management in your school?
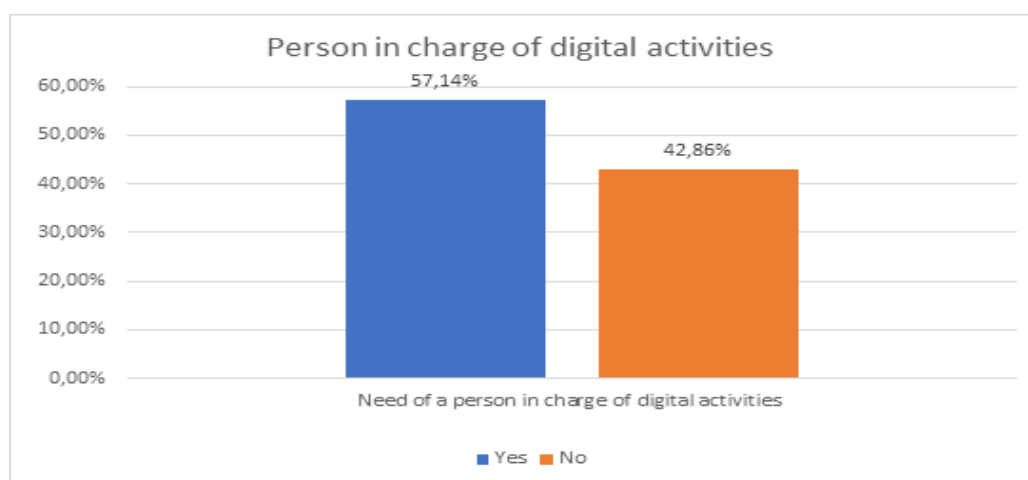
Most respondents consider there is a need for a digital duty manager.

What should the main functions of the digital duty manager be?

Main functions of the digital manager

Most respondents consider the digital duty manager should offer technical support and provide training to teachers about digital resources.

The level of competences of the digital duty manager be in the following area. 1 being the lowest level of competences and 5 the highest

Digital competencies of Digital Duty Manager
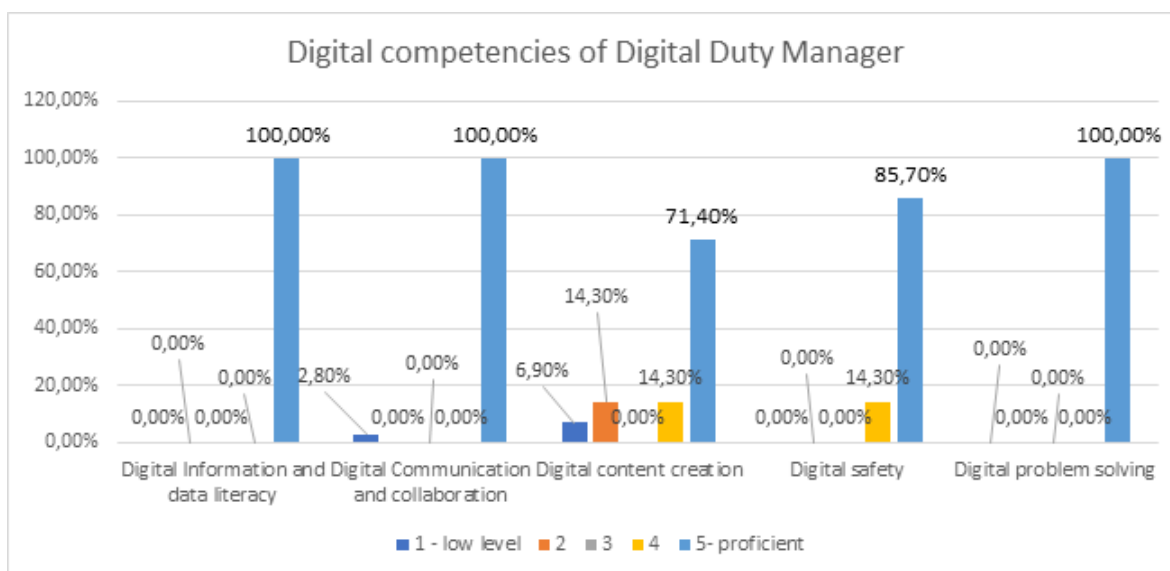
Most respondents consider the digital duty manager should be digital information proficient, as well as being proficient in all of the characteristics presented in the survey.

The Digital Duty Manager should be

The Digital Duty Manager should be
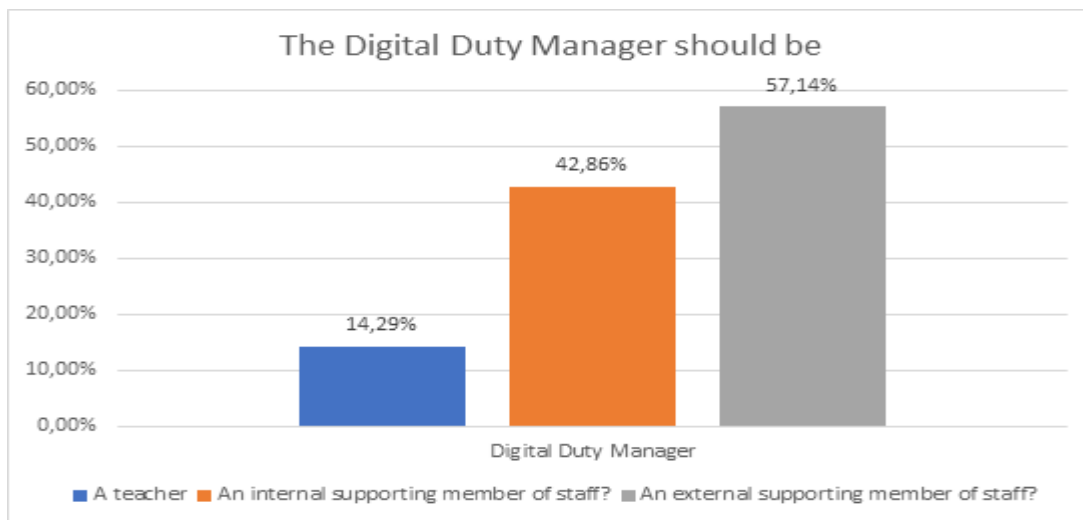
Most respondents consider the digital duty manager should not be a teacher, but either an internal or external member of staff.

Conclusion

The two surveys conducted on more than half of our teachers and almost all our non-teaching staff are similar in their findings. First of all most teaching and non-teaching staff are aged over 40, however most teachers responded that they have had digital training both initially and continuously. Most teachers regard themselves as competent (3 out of 5) in digital information and data literacy, digital communication and collaboration, digital content creation, safety and problem solving.

Out of the suggested difficulties that digital education might bring about, most teachers considered all of them to be of moderate influence on the educational process, apart from dealing with students cheating on their evaluation, which was seen as a major issue.

Most teachers use educational platforms such as G-suite in their digital teaching, however most of them also suggested that the most attractive tools for students were interactive platforms and games.

As for the creation of a Digital Duty Manager figure, both teaching and non-teaching staff agreed there is a need for such a person, as so far, the majority of teachers try to solve their digital problems on their own or with the help of colleagues. For teachers, the most important attributes

of the Digital Duty Manager would be offering technical support and providing training to teachers about digital resources.

Teachers consider their students to be skilled in using digital technologies, and teachers appear to have a favourable view of the advantages of digital education and know it is in line with the new way of life and adaptation to new technologies. Also most teachers would like to improve their digital skills through learning by doing and online classes.

What stands out in the survey among non-teaching staff, is that most of them do not communicate with teachers about problems related to digital education and the majority of the non-teaching staff consider teachers to be open to learning alone about digital challenges. Another find of the survey was that most non-teaching staff think the Digital Duty Manager should be either an internal or external support staff.

As a conclusion, school systems have coped with the need of implementing digital education due to the pandemic conditions, as best they could, however they feel the need for more support and they would like schools to have a Digital Duty Manager.

3.2 Survey data analysis: main conclusions over the 4 countries involved

Analysing the survey data, we find the largest number of responses coming from the group aged over 40. Most respondents (>55%) confirm that they have received digital training both initially and continuously. Most teachers regard themselves as competent (3 out of 5) in digital information and data literacy, digital communication and collaboration, digital content creation, safety and problem solving.

Training appears to be mainly autodidactic for both profiles (>50%) while for the technical/administrative profile, participation in training courses is also highlighted.

Out of the suggested difficulties that digital education might bring about, most teachers considered all of them to be of moderate influence on the educational process, apart from dealing with students cheating on their evaluation, which was seen as a major issue.

Most teachers use educational platforms such as G-suite in their digital teaching, however most of them also suggested that the most attractive tools for students were interactive platforms and games.

Regarding digital education in schools, the main elements that stand out are:

Technical/administrative staff

From the comparison of the results obtained in each country, overall, we can conclude that:

- Communicating and attracting the attention of students: more than 50% have serious difficulties;
- Managing technical issues of devices: more than 55% experience the problem;
- Time management: more than 45% encountered the problem with occasional difficulty;
- Evaluating students and managing the phenomenon of "cheating" (copying): more than 55% find the problem as relevant;
- 55% consider managing hybrid teaching as an occasional difficulty.

Teachers:

- As regards digital literacy and mastery 39% of responses are positive, as well as communication and collaboration through digital tools;
- The creation of digital content, on the other hand, stands at 34% as an intermediate point;
- IT security has an average value between sufficient and good;
- Problem solving, on the other hand, sees its score with 39% of positive answers.

The section dedicated to teachers on the difficulties encountered with digital teaching is interesting:

- >20% emphasise the difficulty in capturing students' attention online;
- >20% stress the difficulty with technical problems while 51% encounter this occasional difficulty;
- The 'cheating' phenomenon is considered for 45% as a relevant phenomenon while for 40% it is only occasional;
- The management of hybrid digital teaching is considered as relevant by >20% of the teachers, while >60% assess it as occasional.

The requirements of the professional figure of the Digital Duty Manager highlight the following points:

- Teachers feel supported by the school in organising digital lessons >60% and the professional figure of the Digital Duty Manager is needed >70%; this figure is also confirmed by the technical / administrative staff >80%.

Today teachers solve their digital problems independently >70% while >50% are helped by other teachers and 48% receive support from technical/administrative staff.

The perception of the students' digital competence by teachers stands at an average value with 54% of the answers, while analysing the rest of the answers received what emerges is the following:

- Teachers are interested in the digital transformation of education, >50% of the answers show an average data on the scale from 1 to 5;
- Digital tools can positively influence teachers' motivation, >40% of the answers show an average data on the scale from 1 to 5;
- Digital education can increase students' motivation, >30% of the answers show a medium and medium-high data on the scale from 1 to 5;
- Digital education is in line with the new lifestyle and adaptation to new technologies, >30% of the answers show an average data on the scale from 1 to 5;
- Digital education allows different ways of evaluating, for >30% of teachers the answer was affirmative;
- Digital education forces teachers to leave their comfort zone, for >20% of teachers this data is evaluated in a medium-high manner;
- Digital education is a valid tool to use with SEN students, on this statement the answers are equal in the range from 1 to 5;
- Digital education is not only useful for teachers who know English;

According to the teachers, digital skills should be improved through online lessons, learning by doing and face-to-face lessons.

The main characteristics of the Digital Duty Manager should be:

-        Support in training on the use of digital resources;
-        Technical support;
-        Support in training on the use of digital resources;
-        Analysing the technical or pedagogical problems that have emerged; looking for a solution with a team or with the Headmaster.

According to the technical / administrative staff, the people interviewed believe that information and data literacy are essential for teachers as well as communication and collaboration, security and problem solving. Unfortunately, the negative data is the lack of interactions on digital issues between the teachers and the technical/administrative staff (for instance in Italy, >60% do not communicate with teachers.

As for the creation of a Digital Duty Manager figure, both teaching and non-teaching staff agreed there is a need for such a person, as so far, the majority of teachers try to solve their digital problems on their own or with the help of colleagues. For teachers, the most important attributes of the Digital Duty Manager would be offering technical support and providing training to teachers about digital resources.

Moreover, looking at the Desk Research we can find a connection with the national surveys results. The training of teachers in didactic innovation, above all as the ability to convert the use of technology into a pedagogical and didactic sense, is considered a priority objective for all the countries divided into a series of actions such as the creation of a Digital Profile for each teacher; dedicated to in-service training for didactic and organisational innovation and therefore intended as a support measure for the continuous development of skills; aimed at strengthening initial training on didactic innovation.

Together with the activities for the development of digital competences of students and school staff, the National strategies also envisages that schools activate actions to strengthen network and connectivity infrastructures.

In the digitisation process, schools are accompanied by a dedicated system figure, identified by each school institution in the manner it deems most appropriate. Moreover, we have countries that are building national platforms for distant learning with teachers involved in a dissemination process.

3.3 Digital technologies

The spread of digital technologies affects various aspects of our lives: the way we communicate, work, spend our free time and the way we find the information and knowledge we need. Children and young people today are growing up in a world where technology is pervasive, ubiquitous. This does not mean, however, that they automatically possess the necessary skills to use digital technologies effectively and critically. Policies and strategies defined at European and national level recognise the need to provide all citizens with the support and opportunities they need to develop these skills for critical and creative use of technologies. The European Digital Competence Reference Framework[30]updated during 2016/17, aims to address this need by providing European citizens with a tool to better understand what it means to be digitally competent and to assess and improve their own digital competences.

In the educational field, several initiatives at European, national and regional level offer guidelines and guidance on how to foster the development of digital competences in young people, with a specific focus on critical thinking and digital citizenship skills. Most Member States have developed or revamped their compulsory school curricula to ensure that new generations are able to participate constructively, critically and productively in the digital society. At European, national and regional level, there is therefore a growing need and interest in also providing teachers with the appropriate skills to be able to use digital technologies effectively in teaching and learning processes. To this end, many countries have developed frameworks, self-assessment tools and refresher programmes for the professional development of teachers and trainers.

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[30] DigCompedu 2.1

04 Digital Duty Manager

The Digital Duty Manager is the new professional figure for school organisations. The figure is a conductor who harmoniously coordinates the activities of developing internal digital skills, helps in digital communication, technical aspects and digital pedagogy activities.

Schools need to push towards an acceleration path of digital transformation not only by the pandemic Covid-19 but by an intrinsic need for competitiveness. In this context, the Digital Duty Manager becomes the true strategist of digital growth because can combine soft skills in communication, problem solving, leadership and multitasking.

In coordination with the Headmaster, the Digital Duty Manager is responsible for improving the adoption of digital tools and promoting their evolution in the schools. The Digital Duty Manager carries out the analysis of the digitalization of the "end to end" processes, identifying and improving actions. This figure supports all the school departments by defining the best ways of presenting and implementing internal digital processes. The Digital Duty Manager can also be directly responsible for the new technologies implementation, always respecting the school's pedagogical activities.

The main responsibility and features can be resumed in 6 areas.

PE Professional Engagement

Digital Duty Manager is expressed in the capability to use digital technologies not only to enhance tutoring, but also for their professional relations with associates, learners, parents and other interested parties, for their individual professional development and for the collaborative good and nonstop invention in the organisation and the tutoring profession.

Professional Engagement

Organisational communication

To use digital technologies to improve organisational communication strategies.

Interaction

Interaction with colleagues and other interested parties

Individual development

To individually and collectively reflect on, educational community.

Digital Continuous Professional Development

To use digital sources and resources for continuous professional development.

DR Digital Resources

Digital Duty Manager must effectively determine the resources that best meet learning objectives, student clusters and teaching trends, structure the wealth of materials, establish connections and exchanges, and add and develop digital resources to support academic activity. At the equivalent time, they have to bear in mind the way to responsibly use and manage digital content. They need to respect copyright rules once mistreatment, modify and share resources, and defend sensitive content and knowledge, like digital exams or students' grades.

Digital resources

Identify resources

To fit their learning objectives, learner group and teaching style

Connections

Helping teachers establishing connections

Digital content

Responsibly use and manage digital content

Data protection

Respect copyright and sharing resource
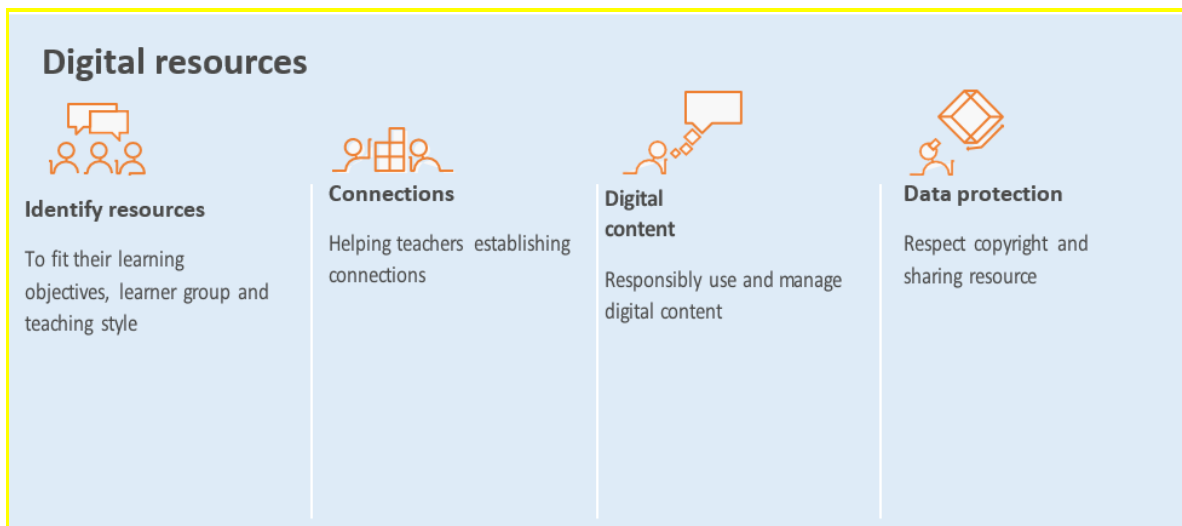
PM Planning and management

Digital Duty Manager needs to plan and manage its resources. He needs to collaborate with the Headmaster and the Head of Departments to implement digital activities and training. He has to adapt the classrooms to the digital environment through the support of class coordinators. Working closely with colleagues in technology and administration areas, collaborating with staff from across the school on a variety of web-related tasks. Support the digital elements of special events and initiatives as well as marketing campaigns.

Planning and management

Planning resources

The Digital Duty Manager has to work closely with the Headmaster and Head of Departments

Interaction

Adaption to the classrooms digital environment through the support of class coordinators

Other Areas

Working closely with colleagues in technology and administration areas, collaborating with staff from across the school on a variety of web-related tasks.

Digital Elements

Support the digital elements of special events and initiatives as well as marketing campaign.

DA Data Analysis

The use of digital technologies in education, whether or not for assessment, learning, body or alternative functions, leads to a large variety of knowledge being offered on every individual learner's learning behaviour. Analysing and decoding this information and victimising it to assist create choices is turning into additional and additional necessary – complemented by the analysis of typical proof on learner behaviour. At constant time, digital technologies will contribute to directly watching learner progress, to facilitating feedback and to permitting educators to assess and adapt their teaching methods.

Data Analysis

Organizational communication

To use digital technologies in education, whether for assessment, learning administrative or other purposes results in a wide range of data being available on each individual's learning.

Professional collaboration

Analysis and interpreting this data and using it to help make decisions is becoming more and more important.

Learner progress

Digital technologies can contribute to directly monitoring learner progress.

Assessment

Facilitating feedback and to allowing educators to assess and adapt their teaching strategies.

ETS Empowering Teachers and School Staff

Digital technologies can be used to facilitate teachers and staff's active engagement, e.g. when exploring a topic, experimenting with different options or solutions, understanding connections, and coming up with creative solutions. Digital technologies can furthermore contribute to supporting classroom differentiation and personalised education by offering learning activities adapted to each individual learner's level of competence, interests and learning needs. At the same time, however, care must be taken not to exacerbate existing inequalities (e.g. in access to digital technologies or digital skills) and to ensure accessibility for all learners, including those with special educational needs.

Empowering teachers and staff

Facilitate

Digital technologies can be used to facilitate teachers and staff active engagement, e.g. when exploring a topic, experimenting with different options or solutions, understanding connections, and coming up with creative solutions.

Support

Digital technologies can furthermore contribute to supporting class differentiation and personalized education.

Learning activities

Learning activities, adapting to each individual learner's level of competence, interests and learning needs.

Inequalities

Must be taken to avoid inequalities (e.g. in access to digital technologies or digital skills) and to ensure accessibility for all learners, including those with special educational needs.

TL Teaching and Learning

Digital technologies can enhance and improve teaching and learning strategies in many different ways. However, whatever pedagogic strategy or approach is chosen, the fundamental competence in this area is teaching. This competence refers to designing, planning and implementing the use of digital technologies in the different stages of the learning process. This competence by emphasising that the real potential of digital technologies lies in shifting the focus of the teaching process from teacher-led to learner-centred processes. Thus the role of a Digital Duty Manager is to be a mentor and guide.

Teaching and learning

Strategies

Digital technologies can enhance and improve teaching and learning strategies in many different ways

Support

Pedagogic strategy or approach chosen but the main competence is teaching

Planning and implementing

This competence refers to designing, planning and implementing the use of digital technologies in the different stages of the learning process.

Mentor

Shifting the focus of the teaching process from teacher-led to learner-centred processes. Thus the role of a Digital Duty Manager is to be a mentor and guide.

05 Learning Units

A – Selection of digital solutions

Online teaching begins with researching educational tools and selecting the ones that best fit a specific teacher, his students, the school he teaches in and the community they live in. This module sets out to develop the following competencies in teachers:

C1. Selecting appropriate online learning solutions for different educational scenarios.

This competence is relevant because not all learning solutions are the same, they differ in their degree of usefulness in different situations, their ease of use, the level at which they are used, when they are used during a lesson and so forth.

C2. Selecting a useful LMS for integrating different online learning strategies.

There are many Learning Management Systems (LMS) available, either provided for free by the school administrators, or available on a subscription option online and they all present specific advantages and disadvantages. For successful educational outcomes teachers have to know what the available options are, and what would be most useful to them.

C3. Blending synchronous and asynchronous solutions for optimal results.

Teaching in a synchronous environment has always been the classical way of educating students. The asynchronicity previously provided by giving students homework has been greatly improved upon the arrival of digital tools allowing students to learn at their own pace. It is crucial to incorporate in our teaching strategies useful tools for effective asynchronous learning.

A - Learning objectives

1. being able to research online for digital learning solutions

2. being able to differentiate between different digital learning solutions

3. being able to present advantages and disadvantages of different learning solutions

4. being able to apply the information given in this module to create a teacher account on multiple learning management systems

B – Planning and management of the digital learning solution

The COVID-19 pandemic created an urgent need for the use of digital tools to continue the teaching process. This led to a never before seen acceleration of online learning. Many commercial providers of educational platforms (ed-tech) have offered their support and "solutions", sometimes free of charge. This multitude of options proved at times overwhelming for the teaching staff, who in their majority were not used to integrating digital tools in their teaching. Rather than randomly using whatever is most common or most favoured by other teachers, each educator should plan and manage his digital tools according to the needs of his students and their technical possibilities and abilities. This module sets out to develop the following competencies in teachers:

C1. Planning appropriately how to develop personalised digital tools according to the needs of the students

This competence is relevant because not all learning solutions are the same and it is important to first think about what you need to do and then how you need to do it.

C2. Managing an array of digital tools to achieve the best possible educational results
Once a teacher or an entire organization knows what the needs of their students are, and what technological investments need to be made, they have to integrate the chosen solutions in practice and to make them work together.

B - Learning objectives

1. being able to assess the educational needs of the students
2. being able to choose different digital learning solutions to keep the students engaged
3. being able to integrate the chosen digital solutions in digital learning plan

C – Planning and management of the digital learning solution

For the digital duty manager it is important to know what online learning means and what types of online learning exist in order to choose the best fitting for the purpose. He will transfer the knowledge to the teachers and help them to choose the type of online learning.

The module has to provide basic of online learning, starting from definition, types of online learning, pros and cons online learning, benefits and basic things and tips you should know before choosing your management platform and tool for communication. Teachers should know opportunities for online communication, pros what to choose and cons to be aware of some unwanted consequences during online working. Teachers should know how to relax and take break away of the screen, also to recommend these basic practices to the students.

Practical activities will help DDMs or teachers to try the knowledge they gained from the units.

Example 1: If the teacher needs to upgrade the knowledge, he /she can only use online courses (massive or individual)

Example 2: If the teacher needs to communicate to the students for homework, where they can send their work or ask questions, then other type of platform is needed (Moodle, Google classroom…)

Example3: If the teacher needs opinion about something, he/she may open a forum discussion or a pool for students/colleagues/parents

C - Learning objectives

1. Elements of online learning
2. Arguments pro/cons of online learning
3. Choosing tools to fit best for your purpose
4. Tips and checklist for remote learning

D – Education With Digital Tools

-For the digital duty manager it is important to give directions to teachers on how to identify the right tool and how to manage working and developing these tools. Beside lessons, teachers should have skills of making online assessments in order to be able to grade students and their work, also to have as much cooperation as possible.

This module has to teach how to identify the right tool and how to manage working and developing these tools. Beside lessons, teachers should have skills of making online assessments in order to be able to grade students and their work, also to have as much cooperation as possible. Measuring a student's performance is an important element in order to track the progress of the student. Students with fewer opportunities should have a chance for personalised learning, depending on their abilities.

DDM will help teachers in choosing the most appropriate platform and learn how to manage it.

Example 1: If the teacher needs to grade students, he/she should be able to manage appropriate tools for giving feed- back of student's work

Example 2: There are guiding questions, which are essential for choosing which education platform to use

Example 3: If there are students with fewer opportunities, they should also be able to use the platform

D - Learning objectives

1. Establishing plan and identifying resources
2. Choosing the best educational platform
3. Assessment and grading issues
4. Recommendations for online learning

E – Adaptation of classrooms to the digital

Adapting the classroom to digital requires teachers to be able to know and use various platforms and tools to create, modify, manage and share content in different formats (text, image, audio, video, etc.) to be used in a classroom context with their students. It is also important to recognize intellectual property rights and licences to use content produced by others. In fact, more important than analysing the information is knowing how to interpret it critically. This will allow identifying needs and possible problems in a digital environment and devising strategies to solve them.

There are several reasons that justify the relevance of developing the teacher's digital capacity and, consequently, the adoption of a digital culture in schools. Among others, there is an increase in students' interest in their learning, as they are users of technology. However, the development of a digital culture also helps to optimise school management, namely the teaching and learning process itself. Digital culture has a great influence on the students' learning process and one of the strengths of this integration is the fact that it helps students become real protagonists of their learning. Among the reasons that lead to this more active participation is that technology helps in the development of communication and critical thinking. In addition, creativity tends to be more stimulated. This approach in schools is a way to also promote awareness of the correct use of technology and that when used correctly, they can contribute to improving the society where they live.

Some examples:

1. to prepare digital resources that allow students to develop and put into practice digital skills;
2. to identify resources and strategies that make use of digital to adapt teaching strategies to students' needs;

3. to prepare digital resources that allow students to be actively involved in the teaching-learning process;

4. to integrate digital resources in the planning and implementation of teaching and learning strategies;

5. to prepare digital resources that allow the analysis of evidence of students' learning as well as provide feedback on this evidence;

6. to develop skills in the use of digital technologies for formative and summative assessment.

E - Learning objectives

1. For the duty manager, being able to suggest ideas to the adaptation of classrooms to the digital environment through the support of class coordinators;

2. For the duty manager, being able to collaborate with the Head of Departments to implement digital activities and training;

3. For the duty manager, being able to support the teachers in planning and management of digital learning solutions;

4. To increase the knowledge about different digital resources;

5. To increase the use of digital resources adapting the to different teaching strategies;

6. To develop skills in the use of digital resources for formative and summative assessment.

F – Repository of digital activities

Given the amount of information and resources available in a school context, it is important to collect and organise the existing digital educational resources. The creation of a repository of digital activities at school emerges as a solution to this new challenge, to facilitate both the sharing of content and the teaching and learning process itself. However, the creation of a repository can be developed at several levels: in a more micro approach, at the classroom level, in a meso approach, at the level of curriculum Department and at the macro level, at the level of the school itself.

While at the classroom level, the repository may consist of the use of an application that allows students and teachers to store the different activities carried out/proposed at the meso and macro levels, the repository may constitute a more comprehensive collection of digital resources that can be classified, organised and indexed in order to facilitate search and provide access to your organisation's knowledge assets or output There is, therefore, a need to provide information that allows these processes of organisation and classification of digital resources to not only be created, but also used, in order to facilitate the operations of locating, identifying and selecting the most appropriate resources for the work to be carried out.

Some examples:

1. to prepare a digital repository as collection of digital resources of the school which helps to classify, catalogue, store, preserve, disseminate, and provide access to the knowledge assets or intellectual output of the organisation;
2. to integrate the repository of activities in the planning and implementation of teaching and learning strategies;
3. to develop the use of a repository of digital activities to support an independent learning style;
4. to develop skills in the creation and use of a repository of digital activities.

F - Learning objectives
1. For the duty manager, being able to support the creation of repositories of digital activities that can be carried out with students and teachers 2. For the duty manager, being able to work closely with colleagues and staff on a variety of web-related tasks 3. Increase the use of a repository of digital activities to promote an independent learning style of students 4. Incorporate a new organisational method, altering the teachers' work culture

G – Gamification

Commonly known as gamification, this approach consists of adding game elements such as storytelling, problem-solving, aesthetics, rules, positive competitive collaboration, and competition, reward systems, feedback, and learning through trial and error into non-game activity. Gamification has already experienced widespread implementation. It impacts the classroom through the integration of personal and social elements, creating an immersive learning environment.

Common gamification design principles include: goals and challenges, personalization, rapid feedback, visible feedback, freedom of choice, freedom to fail and social engagement. This method intensifies team effort and active participation. It fosters critical thinking about real world topics, prepares students to enter a technical workforce and provides solutions to help schools solve difficult motivation and engagement problems. Based on the concept of **active learning**, gamification techniques are an alternative to the passive classroom and a driver of student engagement. It is useful to distinguish between extrinsic and intrinsic motivation: the first one is when we are motivated to perform a behavior or engage in an activity because we want to earn a reward or avoid punishment. You probably will engage in behavior not because you enjoy it or because you find it satisfying, but because you expect to get something in return or avoid something unpleasant. The second one instead is when you engage in a behavior because you find it rewarding. You are performing an activity for its own sake rather than from the desire for some external reward. The behavior itself is its own reward. This second attitude is certainly more gratifying and useful in a learning process. That's why **gamify** .

Educators and students need to rethink the purpose and structure of education in order to meet the changing demands of the 21st century, and so transform the educational environment.

In 2002 while designing a game-like user interface for commercial electronic devices, ATMs, vending machines, mobile phones, Nick Pelling coined the word, **gamification**. With a name, the history of this new theory truly begins.

Gamification is defined as the use of game elements in non-game contexts to create an active learning environment by engaging students in the process of knowledge acquisition.

What are these game elements? They may include, but are not limited to, assigning levels, points, badges, leader boards, and checkpoints. Gamification includes the ability to complete tasks, concentrate deeply, have clear goals, receive immediate feedback, achieve effortless involvement and learn to control one's actions. It produces states of enjoyment represented by deep concentration on an activity that, based on a student's skill level, is sufficiently challenging. Feedback from the teacher or from the task itself is a predictor of progress toward goals. Self-assessment is important as well in the process.

Gaming should be purposeful, that means that it should be used for purposes other than mere entertainment. To achieve that, gamification needs strong teaching staff able to design effective assignments, grade students' work relatively quickly, and interact with students closely. Furthermore games and learning can be social activities. Gamification provides an opportunity to team up or compete with classmates to achieve new levels of mastery. While students are collecting points, leveling up, and competing against each other, the teachers can collect data, track progress, and tailor the rules, rewards, and quests to build positive class culture while pushing student achievement.

It is important to remember that there are some fundamental concepts:

1. you need to establish levels and give points
2. you should give tasks with increasing level of difficulty

3. you have to give feedback to students and trace their progress

4. you should reward according to the level of achievement

5. you have to create a plot (it is also possible to invent characters)

G - Learning objectives

1. how to introduce game elements in a non-game context

2. how to design effective assignments

3. grade students' work

H – Open space for peer learning

Emerging trends in higher education include a shift from traditional, teacher-oriented teaching towards student-centred learning (SCL) and SCL can be fruitfully exploited in online education. What do SCL teaching and learning approaches include? Active learning, project-based learning,problem-based learning, and learning by research.

One of the possible learning approaches to SCL is peer-to-peer learning. Pee-to-peer activity in learning means resource sharing, active communication, forming learning communities in shared information spaces and building trust and social relationships between peers. The cooperation is supported by the use of computers.

Focus on the learning process

The modern psychological and educational theoretical perspectives are based on the assumption that a learner is an ACTIVE contributor in the individual learning process. In addition, they need support and facilitation to find their capacity and empower themselves as learners. The concept of EMPOWERMENT is 'a synergistic interaction among individuals, which emphasizes cooperation and leads to expansion of power for the group' (Herrenkohl, Judson, Heffner. Defining and measuring employee empowerment. *Journal of Applied Behavioral Science*). The central idea is that learners need to think for themselves and take responsibility for their own learning in collaborative learning situations.

One of the most important learning goals today is to face the vast amount of information. The students are expected to be able to search, process and publish information, and be capable of critically evaluating published work. Which is the most relevant information for the assignment given? Which are the most relevant issues? What have I understood and/or misunderstood? A successful learning process needs critical thinking abilities and ways to evaluate critical thinking.

Empowerment is created and realized by individuals themselves, not given or handed down by someone else. The important psychological processes which lead towards empowerment are

self-regulation, self-determination and self-efficacy. What's more, social learning communities need the promotion of collaboration and knowledge creation in partnership with other learners.

Another essential concept to be taken into account is the idea of MEDIATED ACTIVITY. In mediated learning human interaction is fundamental to the ldearning process. the goal is to get students to monitor and regulate their own learning. teachers. tutors and peer learners are needed to increase students' understanding and self-criticism that leads to successful learning results.

H - Learning objectives

1. increase awareness of the importance of active learning in schools;
2. learn how to foster cooperation and peer learning in students

06 Digital Duty Manager selection profile

6.1. What the Digital Duty Manager does. Guidelines for a selection

- Communicate and being coordinate with the Headmaster to organise any new digital activities;
- responsibility to prioritise the technological infrastructure that enables an effective digital presence in the school;
- collaborate with the Head of Departments to implement digital activities and training;
- planning and management of digital learning solutions;
- notion in the development of online learning tools;
- support in educational gamification and other interactive educational methods;
- adaptation of classrooms to the digital environment through the support of class coordinators;
- supporting the creation of repositories of digital activities that can be carried out with students, such as training activities focused on journalism, game proposals, hackathons, etc.;
- responsibility for the messaging, content, and appearance of the school's core web properties including maintenance and operation;
- working closely with colleagues in technology and administration area, collaborating with staff from across the school on a variety of web-related tasks;
- Support the digital elements of special events and initiatives as well as marketing campaign;
- Ensure a quality web experience by regularly monitoring web activities, measuring content performance, and leveraging analytics and associated tools;
- Consistently evaluate digital communications technologies ensuring the most efficient and effective tools are being used;

Skills and training

- The Digital Duty Manager must demonstrate a high attitude and openness towards digital and the ability to guide and coordinate teams;

- must know all digital tools, from SEO to enterprise software products and programming languages, analytics products etc.;

- leadership and communication skills with the staff and all the people involved;

- multitasker because he must know how to manage several different projects at the same time and with several teams;

- Excellent organisational skills and strong attention to detail, which includes a high-level of attention to accuracy and clarity.

6.2. Digital Duty Manager In Brief

1 Comunicate and coordinate

The Digital Duty manager must communicate and being coordinate with the Headmaster to organise a new digital activities

2 Responsibility

Technological infrastructure that enables an effective digital presence in the school;

4 Support

support in educational gamification and other interactive educational methods;

3 Planning and management

planning and management of digital learning solutions; notion in the development of online learning tools

5 Adaptation

adaptation of classrooms to the digital environment through the support of class coordinators;

supporting the creation of repositories of digital activities that can be carried out with students, such as training activities focused on journalism, game proposals, hackathons, etc.;

6 Collaboration

working closely with colleagues in technology and administration area, collaborating with staff from across the school on a variety of web-related tasks;

8 Evaluation

Consistently evaluate digital communications technologies ensuring the most efficient and effective tools are being used;

7 Content

Support the digital elements of special events and initiatives as well as marketing campaign; Ensure a quality web experience by regularly monitoring web activities, measuring content performance, and leveraging analytics and associated tools;

6.3. DIgital manager's level of competence needed for each level of school

Education level	Digital Duty Manager competences	Level of competence		
		basic	standard	proficient
Primary school	Technical skills - knowledge of software and hardware used in schools, including management of devices such as laptop, tablet, projectors, webcams;		x	
	Problem solving skills		x	
	Communication abilities			x
	Organisational skills		x	
	Ability to work in a team		x	
	Ability to use e-learning platforms and to discover new ones, the most appropriate ones to use in a class			x
	Knowledge of teaching methods in order to adapt them to online learning			x
Secondary school	Technical skills - knowledge of software and hardware used in schools, including management of devices such as laptop, tablet, projectors, webcams;		x	
	Problem solving skills		x	
	Communication abilities			x
	Organisational skills			x
	Ability to work in a team			x
	Ability to use e-learning platforms and to discover new ones, the most appropriate ones to use in a class			x
	Knowledge of teaching methods in order			x

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	to adapt them to online learning			
High school	Technical skills - knowledge of software and hardware used in schools, including management of devices such as laptop, tablet, projectors, webcams;			x
	Problem solving skills			x
	Communication abilities			x
	Organisational skills			x
	Ability to work in a team			x
	Ability to use e-learning platforms and to discover new ones, the most appropriate ones to use in a class			x
	Knowledge of teaching methods in order to adapt them to online learning			x