Analysis of the state of the art on the digitalisation of VET in France, Italy, Portugal and Hungary

Project Nr. 2022-1-FR01-KA220-VET-000086996

Co-funded by the European Union

Project Infosheet

Project acronym: Di-struct!

Title: Di-struct! - Restructuring subjects by digitalising VET

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Implementation period: Start 01/12/2022 - End 31/05/2025

Duration: 30 Months

Budget: 250.000 €

Partners:

1. Chambre De Metiers Et De L'artisanat De Région Auvergne Rhône Alpes - *Lyon, France*
2. ENSINUS - Estudos Técnicos e Profissionais SA - *Lisbon, Portugal*
3. Magyar Digitális Oktatásért Egyesület - *Budapest, Hungary*
4. Fondazione Golinelli - *Bologna, Italy*
5. Uniser Soc. Coop. Onlus - *Bologna, Italy*

Objectives and expected results

The general objective of this project proposal is to increase the level of digitalisation of VET schools by:

Specific Objective	Expected results
Improving the digital skills of teachers in active learning methodologies based on the use if ICTs;	1.1 - Improved understanding in VET staff of the digital tools and approaches available. 1.2 - Improved digital skills in teachers, in terms of content creation. 1.3 - Creation of an E-Learning on the digitalisation of VET education.
Creating more digital, interactive and attractive content for students.	2.1 - Production of digital classes to be put in practice during a testing phase. 2.2 - Production of instructions to develop digital content dedicated to the different subjects of the curricula. 2.3 - Increased use of digital tools in support of internationalisation (virtual, blended and physical mobility). 2.4 - Increased attractiveness of education.

Work Packages

1. Project Management
2. Screening Of Practises And Development Of Training Modules
3. Content Creation And Testing
4. Subject-Based Guidelines For Digitisation
5. Dissemination And Valorisation

Introduction

The survey presented below was designed to support the development of the eight teacher training MOOC modules to be developed as the outcomes of the Erasmus+ KA220-VET project called Di-Struct. The projects aim is to promote the use of digital tools and content in vocational education and training in Europe. The initial goal of the project was to establish the development of MOOC courses based on the result of the SELFIE self-evaluation questionnaire. But after assessing the complexity and time-consuming nature of the SELFIE 360-degree self-evaluation questionnaire, the partners decided to develop a more specific system, with the involvement and agreement of the French National Agency, which will:

- directly support the design of the courses,
- address the questions about the SEFIE for School system (such as the development path of the institutional digital strategy, digital applications used on a strategic level, LMS systems, etc.)
- integrate the SELFIE for Teachers to assess the digital competences of teachers, digital tools used in classroom, digital tools for knowledge assessment, digital learning competences of students
- assess the active learning knowledge and experiences of the teachers;
- assess VET teachers knowledge concerning digital tools/applications and their experience in using said tools in a classroom environment.

The result of the study is used to define the content that is recommended to VET teachers. Based on it, the following main themes have been identified:

1. CONTENT CREATION - Tools for teachers and students for developing digital content;
2. ONLINE LEARNING PLATFORMS - Online platforms to support the teaching and learning process;
3. GAMIFICATION - As a pedagogical approach that allows the introduction of game-like mechanisms into teaching. Gamification should always include rules and rewards, an opportunity for immediate feedback, the possibility to learn from the mistakes that have been made, while maintaining an educational purpose
4. VET-ORIENTED DIGITAL EDUCATIONAL RESOURCES - Online materials useful for the professional development of teachers or as tools to promote active learning during digital interactive activities in a classroom setting;
5. INTERACTIVE EXCERCISES - Tools to develop an interactive digital experience, guided by rules defined by the teachers focused on specific skills to develop;
6. ONLINE BOARDS - Collaborative tools for interaction, involvement and collaboration, the ability to visually share and organize ideas, illustrate, present results visually, consolidate knowledge, these can be used in either a synchronous or asynchronous way;

7. INTERACTIVE APPROACH - Interactive approach to teaching and learning through presentations: involvement of students;
8. ONLINE COLLABORATION - As a pedagogical approach with the main goal of actively involving the student in the learning process.

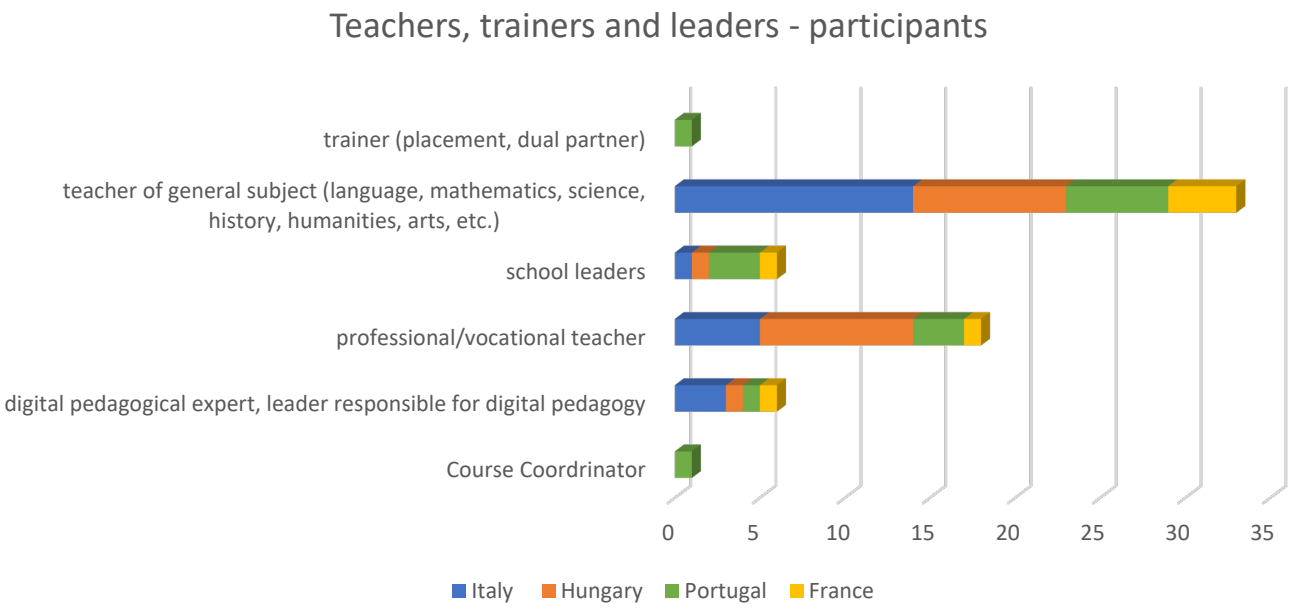
In the next section, the main findings of the analysis are contextualised and presented. The questionnaire can be found in Annex 1.

The main findings of the survey

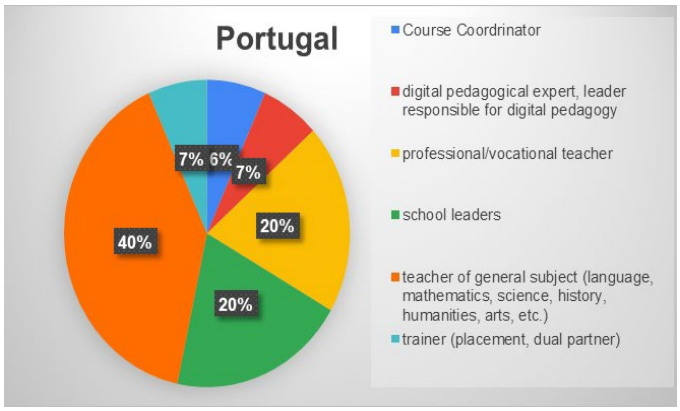
The survey presented in this document has three main parts. The first part gives an overview on the state of schools according to the SELFIE survey, the second part focuses on two issues: (i) the active learning knowledge and experiences of VET teachers and trainers, (ii) digital tools, which are commonly used and how these digital educational tools are able to use for support and enhance the active learning and students involvement in classroom and home learning. The third and final part of the report discusses SELFIE from the perspective of the teachers. This report will provide a short summary of the findings of the survey. This document serves as an extension to the power point presentation, which was created at the end of the project.

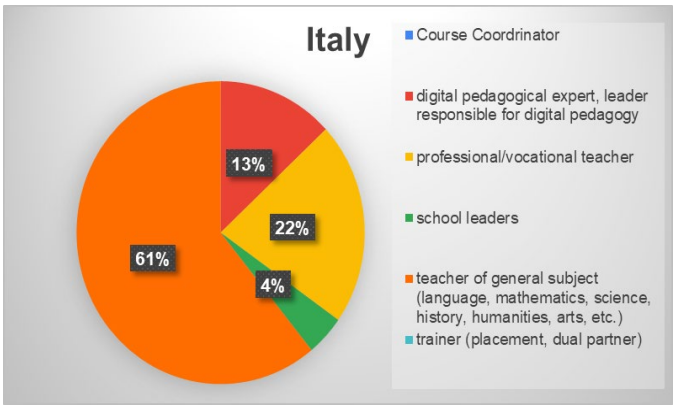
1. Statistics

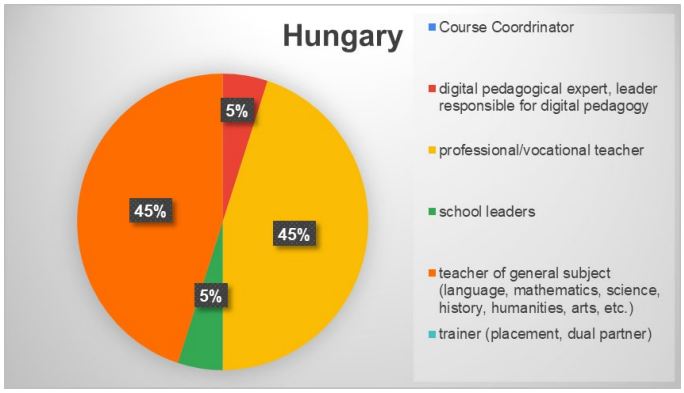
There were 4 countries involved in the survey Italy (23), Hungary (20), Portugal (15) and France (7). The majority of the participants were either classified as a professional/vocational teacher or a teacher of a general subject.

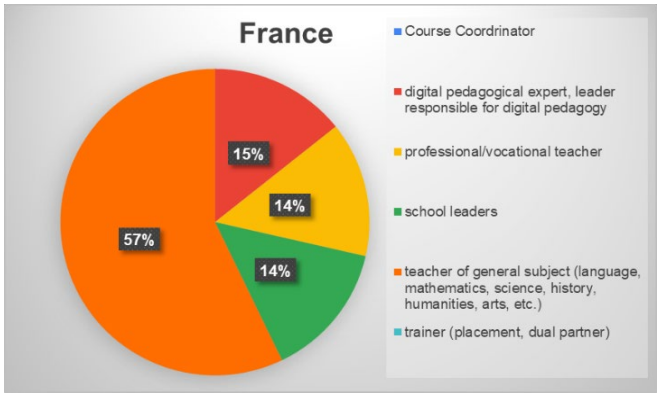


The following diagrams provide a more in-depth view of the occupation of the participants, based on countries. See diagram below for more details.









2. Findings of the SELFIE for School based overview questions

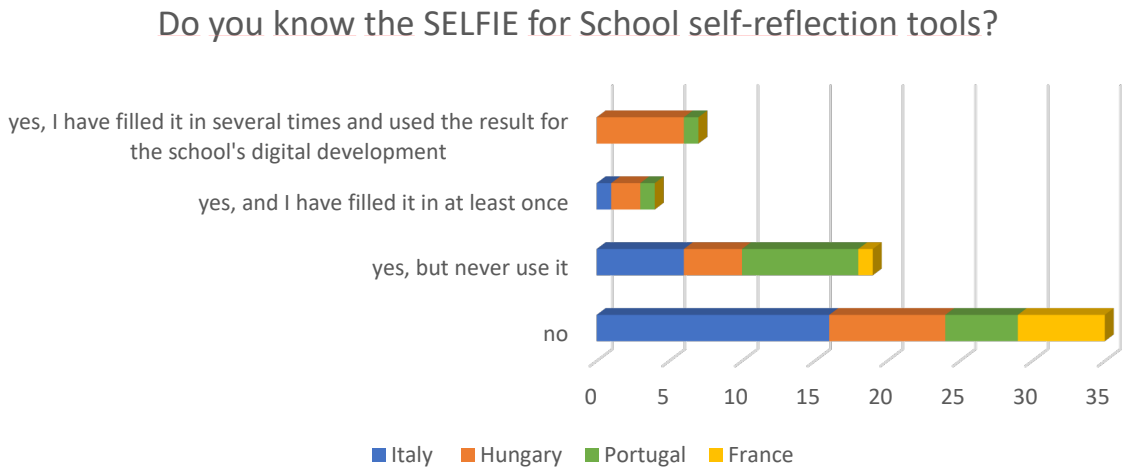
The SELFIE for School self-assessment focuses on the following features of the digital institutional strategy and readiness:

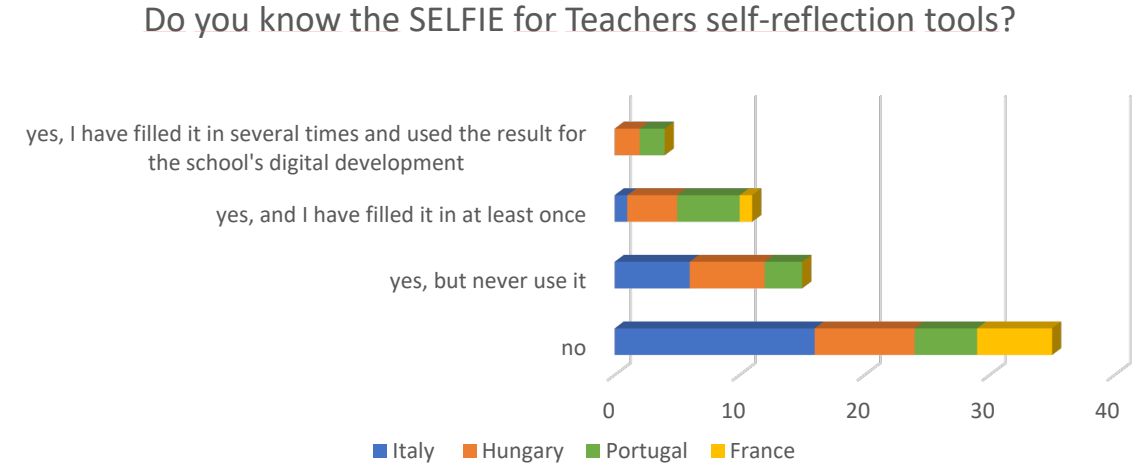
- Leadership
- Infrastructure and equipment
- Professional development
- Implementation in the classroom
- Assessment practices
- Students digital competence
- Network & collaboration
- Support & resources

Because of the complexity of the self-assessment, we only focus on and examine the following topics:

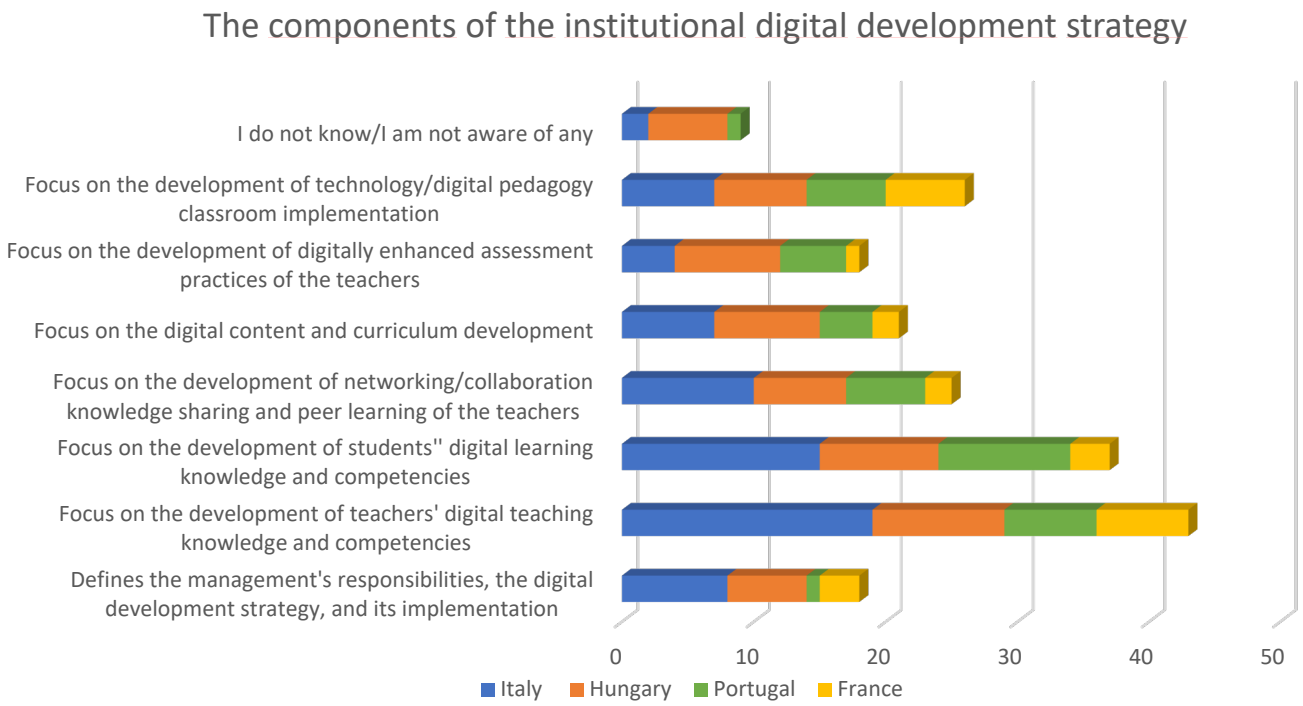
- Awareness of SELFIE self-reflection surveys
- Do the schools, involved in the study, have an e-learning/digital education strategy approved by their management?
- Do the schools, involved in the study, have an e-learning/digital education manager (the person in charge of coordinating the implementation of the strategy)?
- What are the components of the institutional digital development strategy?
- To what extent do students and school leaders require teachers to use digital tools in their teaching?
- How strong is the commitment of the teachers to use digital tools, and technology in teaching/learning
- How do the teachers interviewed evaluate their own school's digital readiness in the 8 areas surveyed by SELFIE for School?

1) It is clearly visible that the participants either do not know about the SELFIE tools both for School, and for Teacher self-reflection or they know about it, but they are not actively using it. Only a few participants have used it at least once and a minuscule number of participants use SELFIE on a regular basis.

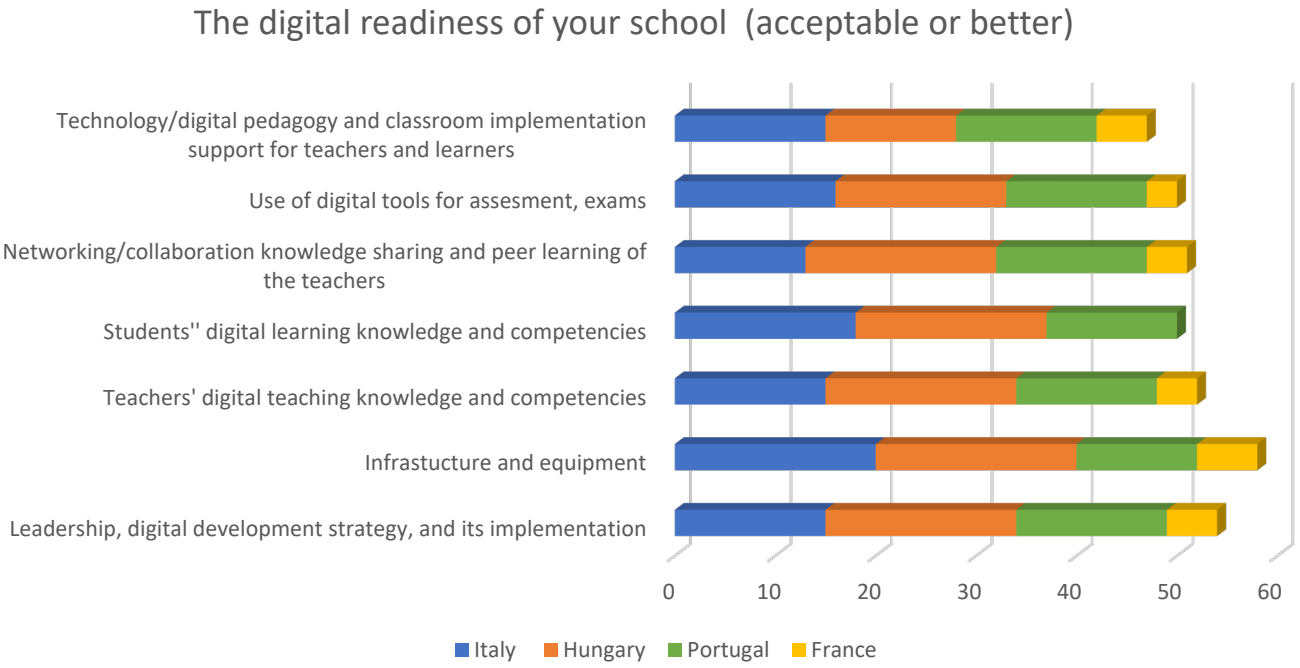




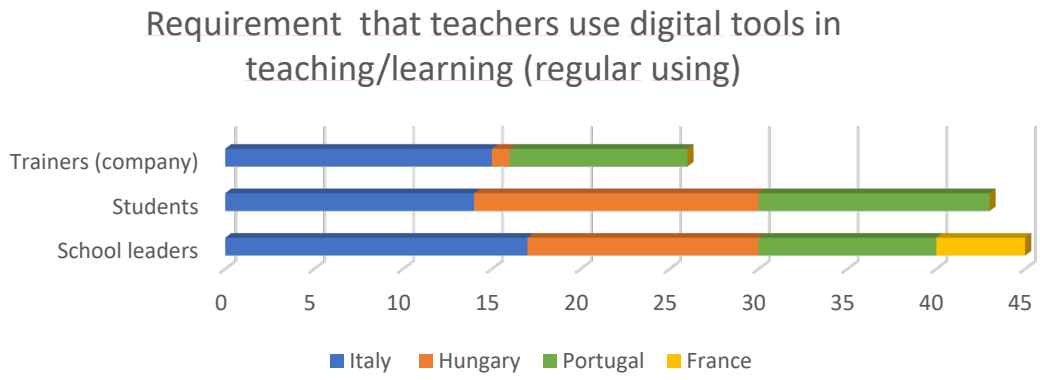
2) Regarding the institutional development strategy, the participants reported that they are aware of such strategies being in place, with only 9 of them reporting that they are not aware of any digital development strategies in their schools.



The area that received the most focus according to the survey was the "Focus on the development of teachers digital teaching knowledge and competencies". 43 people reported that their school focuses on the development of this strategy. The second highest reported was similar to the previous strategy namely: "Focus on the development of students digital learning knowledge and competencies" with 37 participants selecting this option. The third answer that received the most responses, namely 26 was "Focus on the development of technology/digital pedagogy classroom implementation". It is clear from these responses that the schools already have digital development strategies in place for both teachers and the students, but the effect of these strategies is not visible yet.3) The next question focused on whether the digital readiness of the schools is sufficient enough or is it hindering the implementation of digital tools for education. The results clearly indicate that the schools that the respondents are employed by are well prepared regarding digital tools. The only significant issue reported was by the French participants, who have stated that the Students, Teachers digital learning/teaching competencies are lacking, with the digital learning competencies of students not even hitting the acceptable level. (7-8)



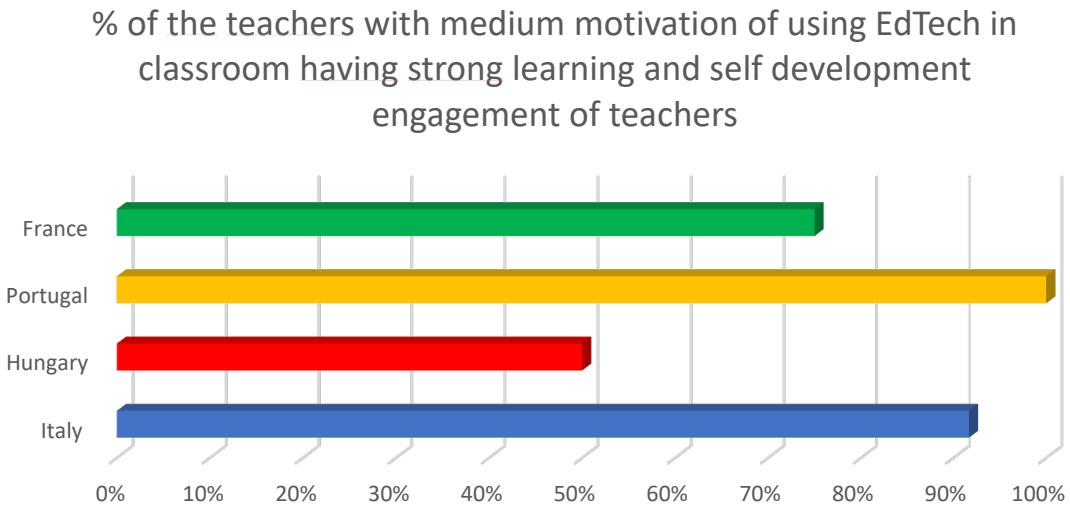
4) The following questions investigated whether or not there is a requirement by the schools to use digital tools in both teaching and learning on a regular basis. Participants from the four countries have reported that they are required to use digital tools on a regular basis. The only exception was France, as French participants have reported that their trainers and students are not required to use digital tools on a regular basis, only the school leaders have this requirement.



This is also clearly illustrated by the fact that the French responders reported that the "Commitment of teachers to use digital tools, and technology in teaching/learning" is only medium at best, additionally development and support is needed in this area. The most committed to using digital tools is Portugal, they were also the ones who reported the lowest need for support and development. The commitment of the participants of Hungary and Italy ranged from 22% to 40% with participants of both countries reporting a strong need (above 50%) for needed

support, development regarding the use of digital tools in learning and teaching. (9-10)

5) All of the participants reported above 50% in their motivation being above medium for using EdTech in the classroom, and having strong learning, self-development engagement. The highest being Portugal with 100%, and the lowest being Hungary with 50%. (11)



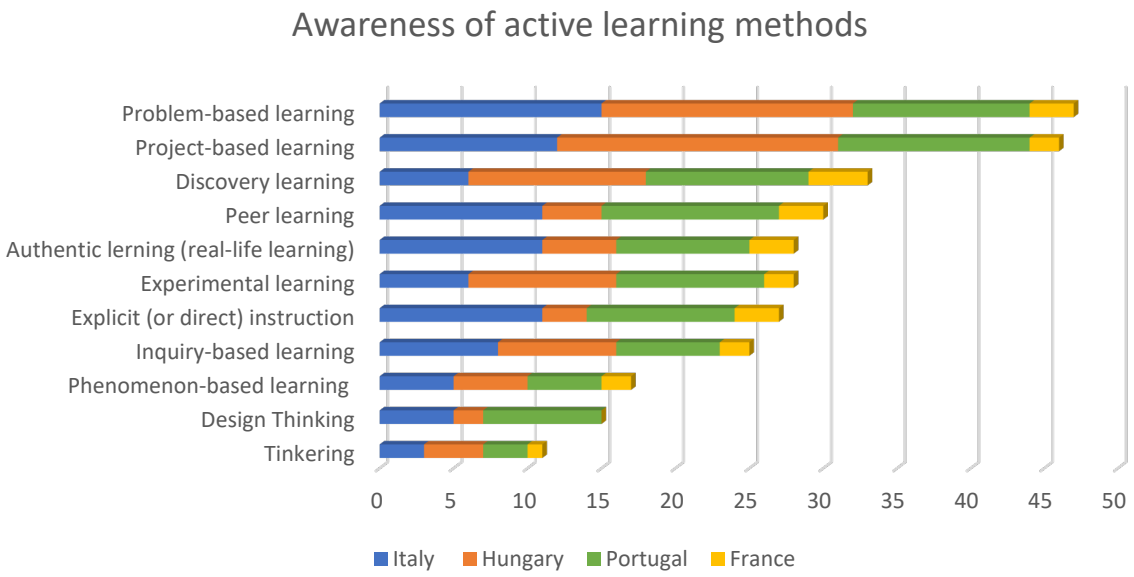
3. Findings of the recognition of active learning and innovative pedagogy

This part of the survey examined teachers' awareness and classroom practice of active learning, focusing on the following three issues:

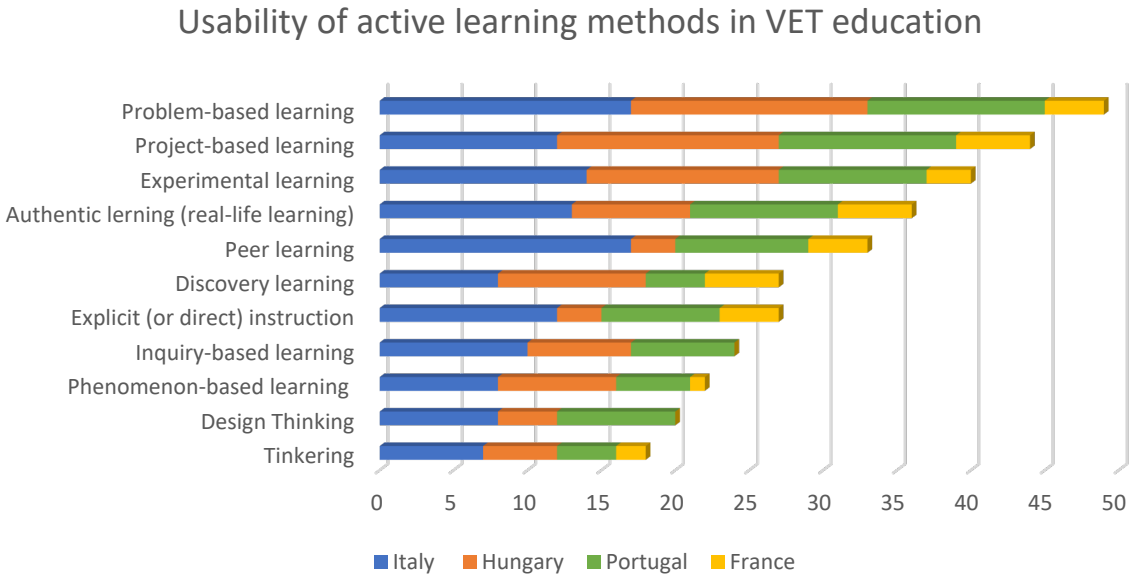
1. active learning as an approach
2. tools and technics for active learning in the classroom
3. digital tools/applications/software to enrich the classroom use of active learning tools

1) Teachers' awareness and classroom practice of active learning as an approach

All of the participants reported being aware of the eleven active learning methods listed in the survey, with Problem-based and Project-based learning being most known, and Design Thinking, and Tinkering the least. (13)

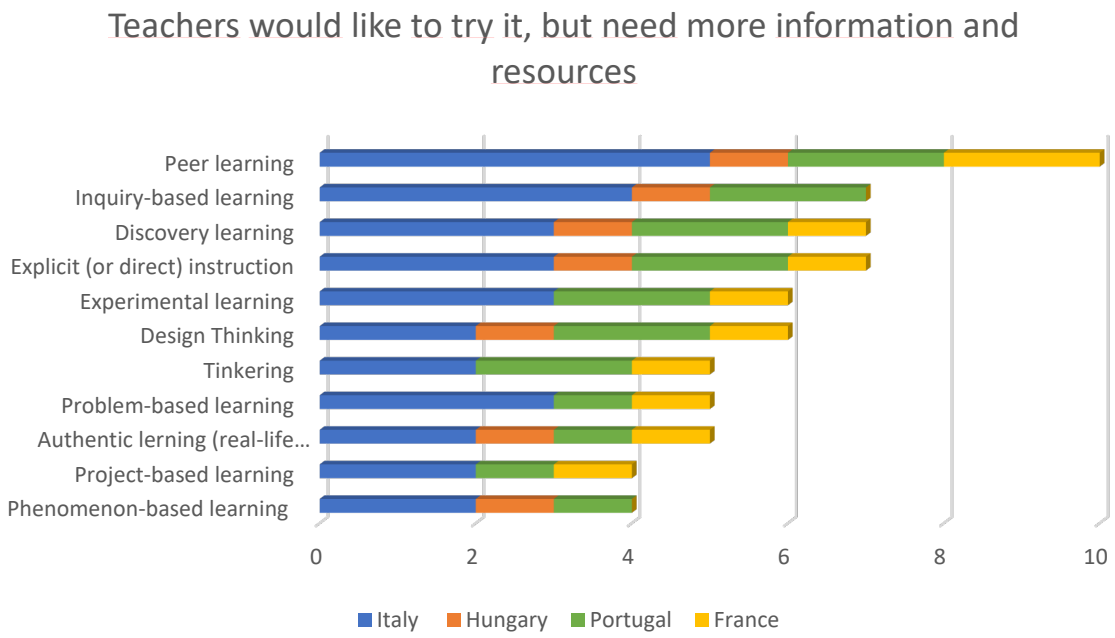


When asked about the usability of the previously listed active learning methods the results show a strong correlation to the awareness of the learning tools. Participants classified Problem-based and Project-based learning as being the most usable, and Design Thinking and Tinkering as the leas usable. (14)



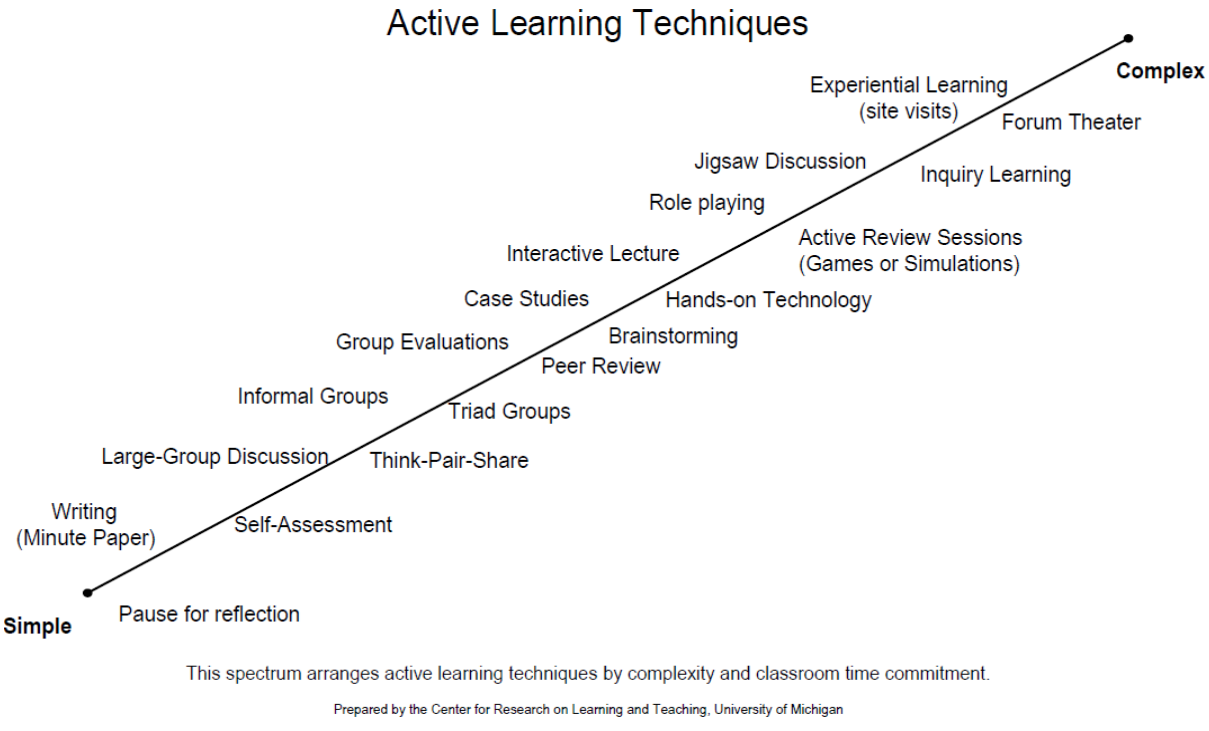
The final question discussing the active learning methods was aimed at determining which methods would the participants like to try, even if they would need more information about it to use it effectively in a classroom setting. The top two methods that the participants want to try were Peer Learning and Inquiry-based learning. This is interesting as these two methods did not score very high on the usability scale, still the participants would prefer to try it out in a real-world setting. Project-based, Phenomenon-based learning scored the lowest. This could be due to the fact that both methods are well known by the participants, and they also regard them as very

effective, meaning that they might already be using them, have sufficient information about these methods. (15)

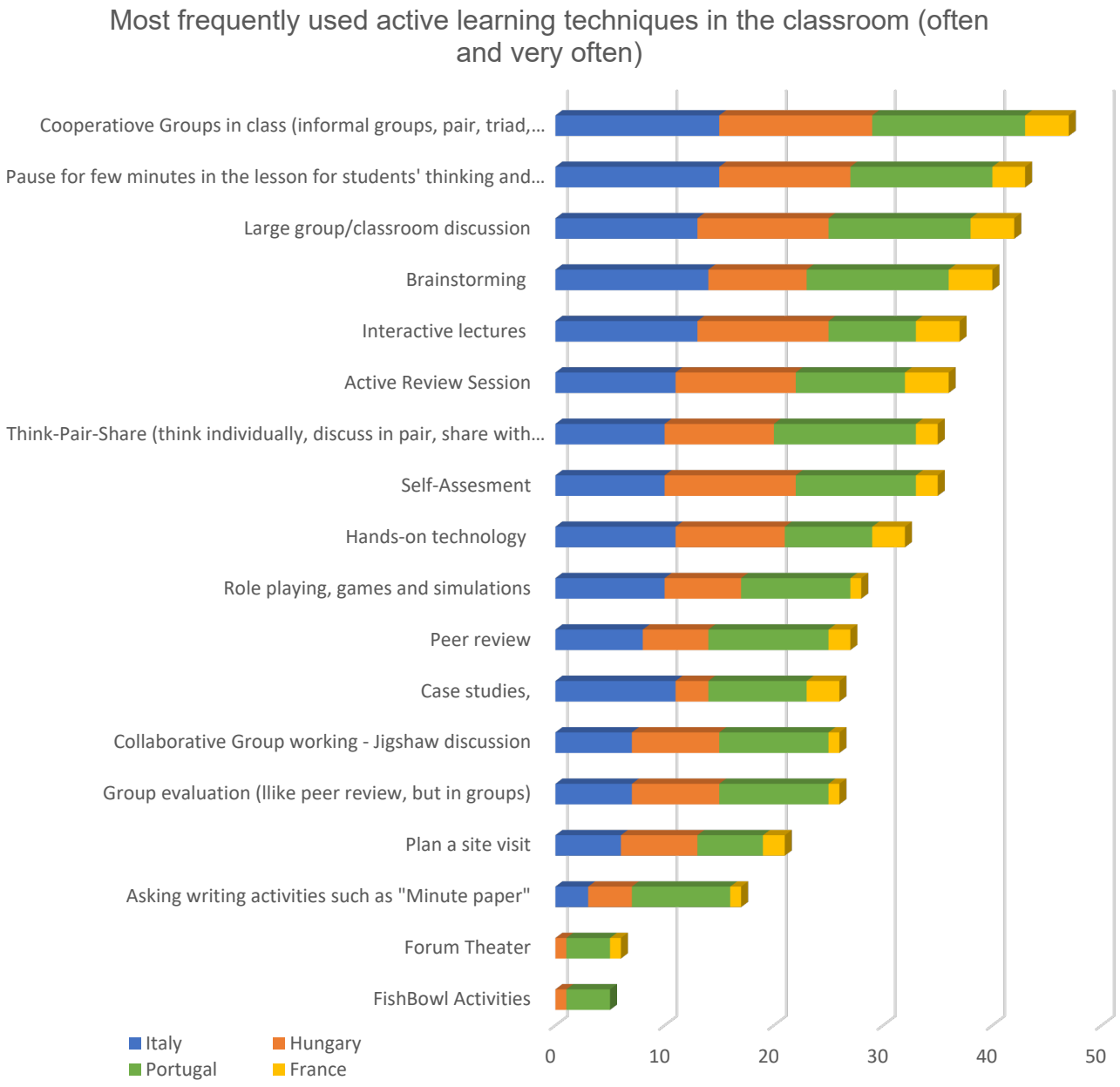


2) Teachers' awareness and classroom practice of tools and technics for active learning

In this part we introduce the active learning tools and techniques based on the research of Centre for Research on Learning and Teaching, University of Michigan, and asked the teachers for evaluate their awareness of these tools.

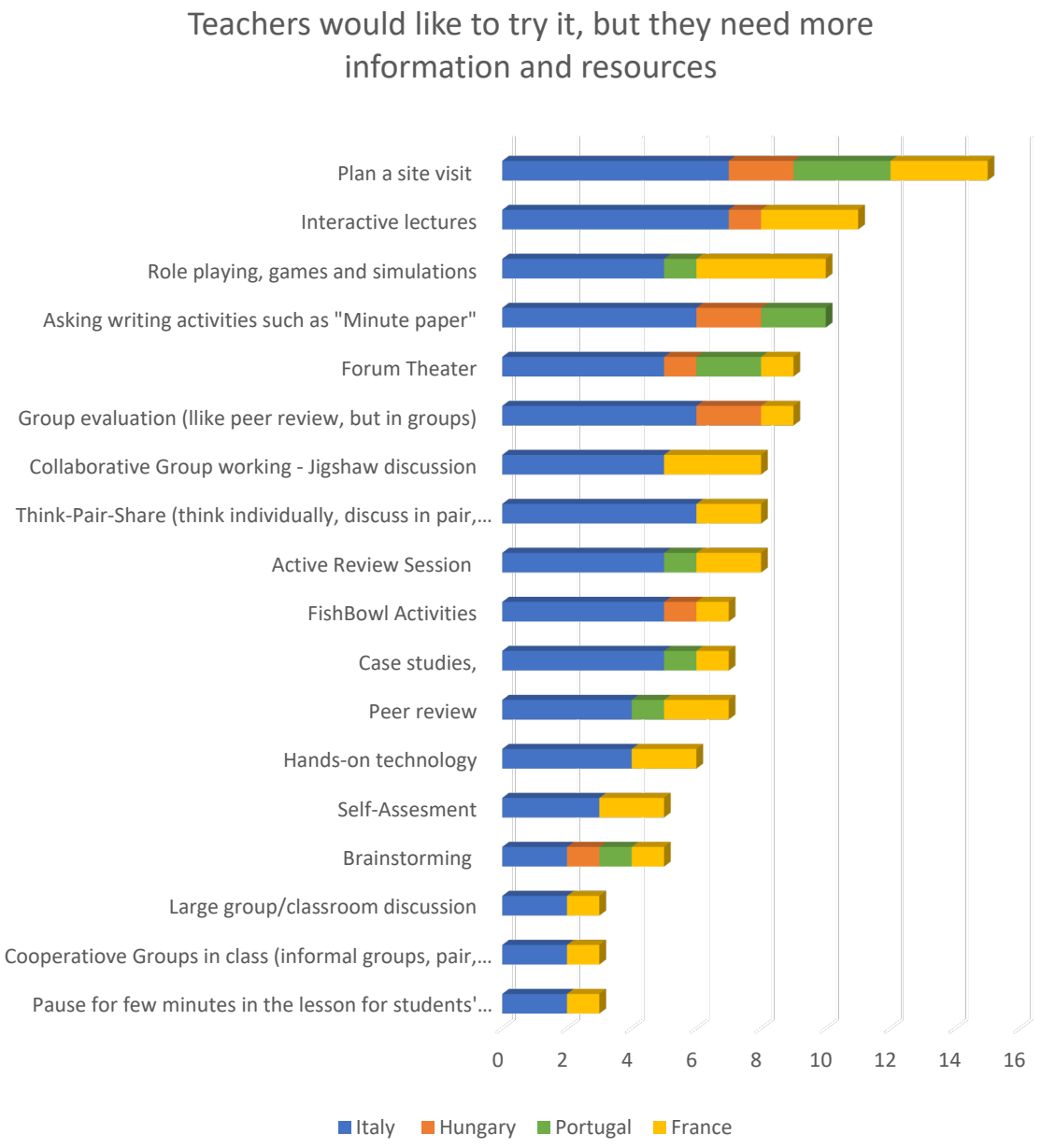


Few questions were related to the use of active learning tools in classroom teaching. The participants reported cooperative groups in class (47 participants using it), pause for a few minutes during the lesson to give students time to think and reflect (43 participants using it), and finally large group/classroom discussions were the most frequently used active learning techniques. The least used techniques were the Forum Theatre (6 participants using it) and Fishbowl Activities (5 participants using it). (17)



From the responses it is clear (but not understandable) that the participants do not want to use learning techniques such as Case studies, Collaborative Group Working and Forum theatre (10, 8, 7 participants responding). (18)

Finally, the participants were asked if there are any active learning techniques that they would want to use, but they would require additional information and resources to effectively implement them. The activity generating the highest interest was Plan a site visit with 15 participants reporting on the desire to try it. Interactive lectures were also very popular with 11 participants wanting to try it in the future. The third most popular option with a draw was role playing, games and simulations, and asking writing activities such as "Minute paper", both receiving 10 responses. The leas popular option was Large group/classroom discussion, Cooperative Groups in class, Pause for few minutes in the lessons for students thinking and reflection (3 participants reporting these activities). These activities might be on last place as they are as the previous question suggests popular, thus the participants either already using them, or they are knowledgeable in the topic, not in need for further information or resources. (19)



3) Teachers' awareness and classroom practice of digital tools/applications/software to enrich the classroom use of active learning tools

Participants were asked to report their knowledge on applications intended to digitally enhance educational areas. For each category the most popular suggestions will be discussed, apps that have received 4 or more mentions. Furthermore, the percentage of participants who had no idea which application could be used for that specific use case will be also listed. (20)

For gamification the applications were Kahoot with 21 responses, Quizizz with 5 responses and Genially with 4 responses. 29% of the participants were not aware of any digital tools that could be used for gamification.

For interactive approach the most known applications were Paddlet with 6 responses, Kahoot with 5 responses, Moodle with 4 responses. 23% of participants were not aware of any tools that could aid the interactive approach.

Tools for online collaboration were Google docs with 9 answers, Teams and Google Classroom with 8, Zoom with 7, Google Meet and Padlet with 5 and last but not least Google Drive and G-suite for education with 4. 15% of total respondents were not aware of any digital tools supporting online collaboration.

For Interactive exercises and activities Kahoot with 10 responses and Moodle with 8 responses were listed. 18% of participants did not know any applications with this use case. The most well-known digital tools for online knowledge assessment were Google forms with 12, Kahoot with 10, Quizizz with 8, Moodle test with 7, and Google classroom with 4 responses. 20% of participants did not know any digital tools for this purpose.

The question of digital tools **for VET-oriented digital educational resources**, open content did not have any tools that were mentioned at least four times or more by the participants. Also 43% of respondents did not know of any application that could support this. It is clear that there is a lack of teacher education in this department, and or there are not enough applications/digital tools available that could aid this area.

For online teaching and learning the most well-known tools are Google Classroom with 12 both Moodle and Teams with 9, Google Suite educational and Google Meets with 6 and Zoom with 4 responses. 18% of participants did not know any tools for this purpose.

For Content development/creation the tools mentioned were Canva with 16, Prezi with 7, Genially with 6 and Padlet with 4 responses. 24% of participants were not aware of any tools for this purpose.

4. Evaluation of skills and competencies regarding the use of digital tools and environments for teaching and learning

Finally, the last section of the survey focused on teachers and their ability to create digital tools to be used in a classroom setting. In this section, we asked several questions about the teachers' knowledge, skills, and competencies regarding using digitally enhanced teaching and learning. These questions were selected from the SELFIE for SCHOOLS and SELFIE for TEACHERS self-reflection tools on digital competencies developed by European Commission Joint Research Centre, and we fine-tuned them to meet the goals and objectives of this survey. The key areas of our survey were:

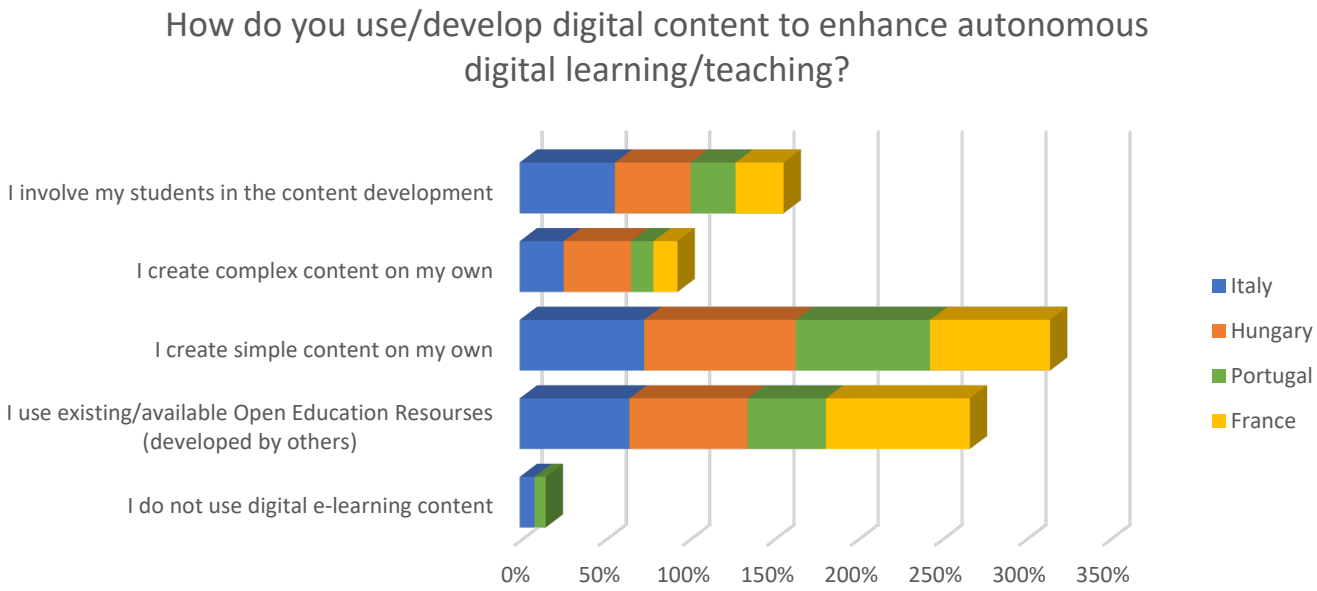
a) **Searching, modifying, and creating DIGITAL RESOURCES** - "Teachers have potentially a wide range of digital resources available to them. It is important for them to effectively identify resources that best fit their needs, their teaching style, and their learners. They may also need to learn how to modify and adapt resources to meet their exact requirements or create new ones. At the same time, they need to learn how to share digital resources responsibly, protect sensitive data, and manage content ethically and respect copyright rules." SELFIE for TEACHERS Toolkit page 53.

b) **TEACHING with digital tools and technology and supporting the digital learning process of the students** - "Digital technologies can enhance and improve teaching and learning practice in a number of ways. A key skill of teachers is to design learning with the use of digital technologies to help students to engage actively in authentic learning experiences. A shift from teacher-led to learner-centred activities is highly expected." SELFIE for TEACHERS Toolkit page 55.

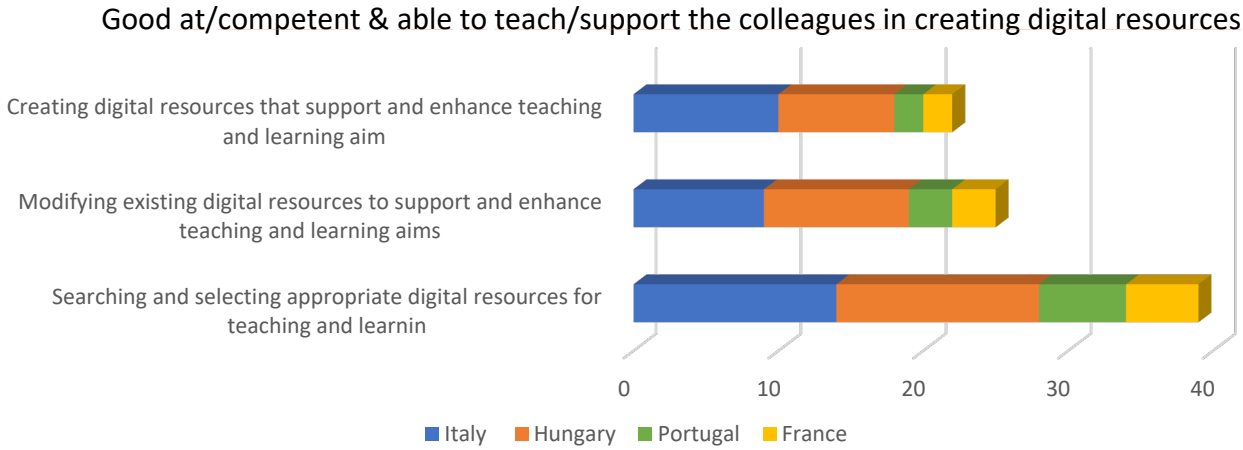
c) **ASSESSMENT PRACTICES** - Teachers can use digital technologies to collect data to better support and assess learners, while enabling them to reflect and adapt their teaching practice. "This area relates to measures that schools may consider in order to gradually shift the balance from traditional assessment towards a more comprehensive repertoire of practices. This repertoire could include technology-enabled assessment practices that are student-centred, personalised and authentic." SELFIE for SCHOOL Toolkit page 42.

d) **FACILITATING LEARNERS' DIGITAL COMPETENCE** – The digital competence of teachers' is important in order support and facilitate the development of their learners' digital competence

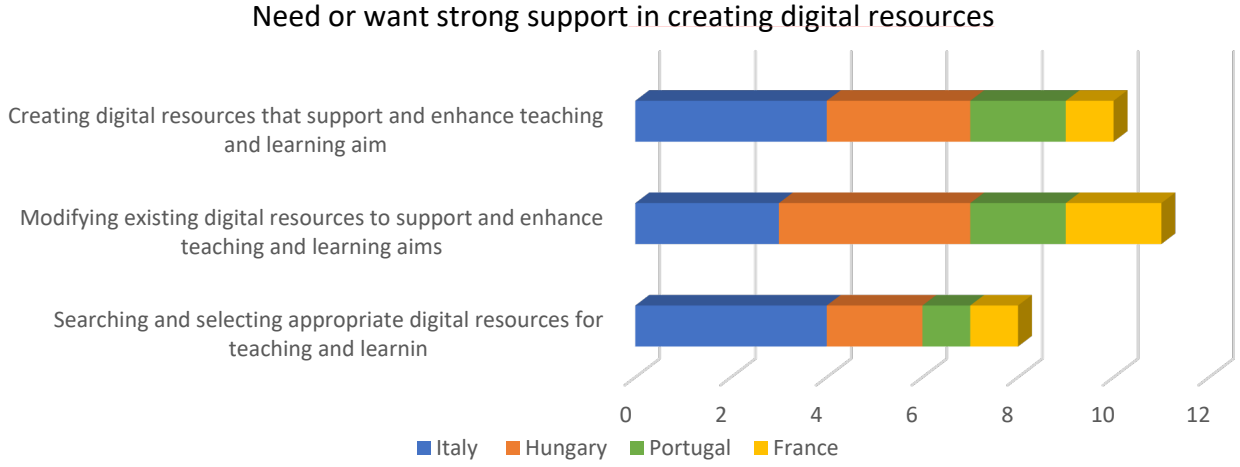
Participants from all countries involve their students in the development of content. the highest being Italy with 57% and the lowest Portugal with 27%. Participants from all countries create complex content on their own with the highest being Hungary with 40% and the lowest Portugal with 13%. People from all four countries create simple content on their own, with a significantly higher percentage, than complex content. The highest percentage being Hungary with 90% and the lowest being France with 71%. Participants from all four countries have reported using existing/available Open Educational Resources with the highest being France with 86% and the lowest being Portugal with 47%. Only 9% of the Italian and 7% of the Portugal respondents do not use any digital e-learning content. (31)



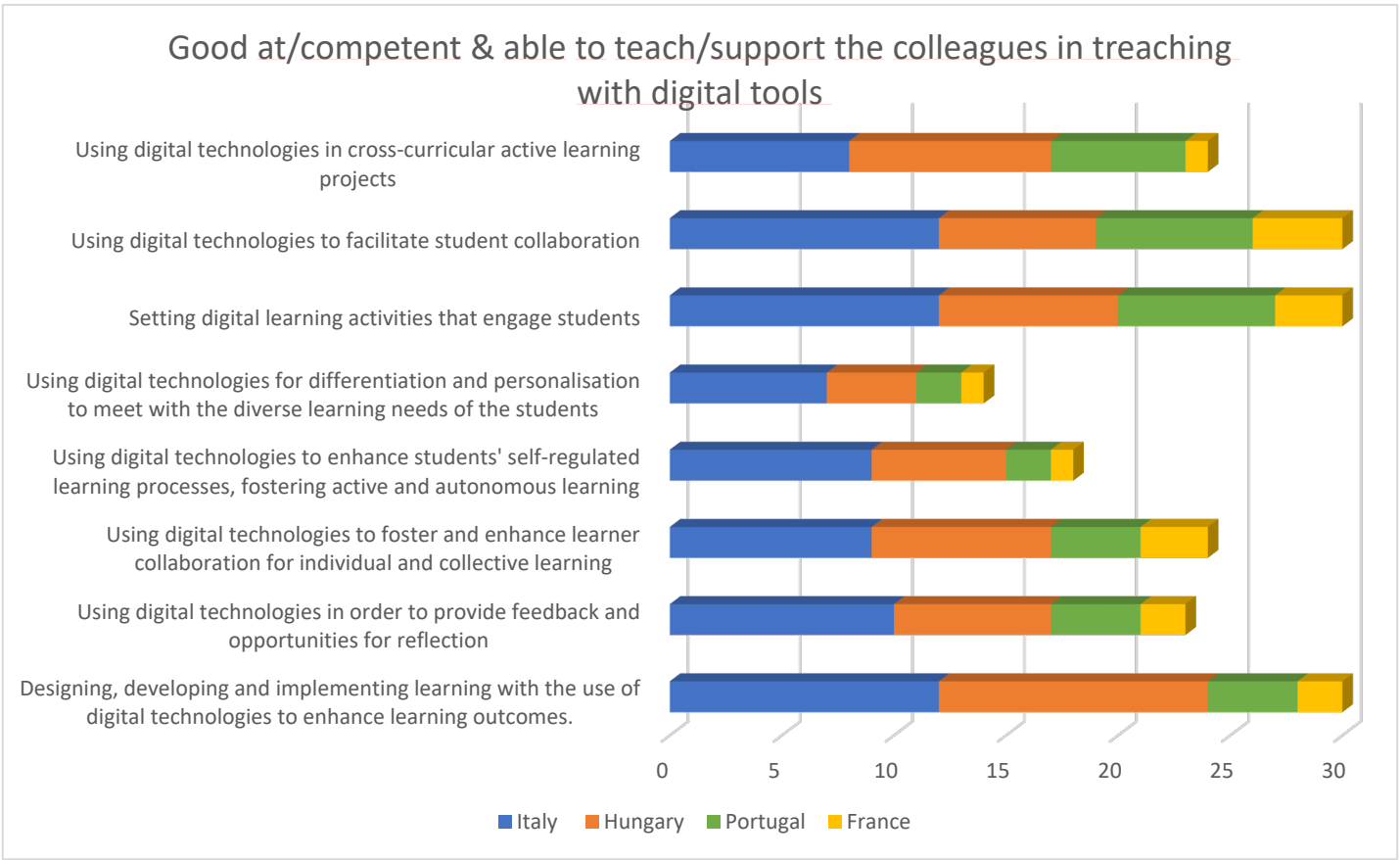
The following question was meant to evaluate the **skills and competencies in searching, modifying, and creating digital resources and to** determine how many participants feel like being good/competent or need strong support. 22 participants felt adequate at creating digital resources, 15 at modifying existing digital resources and 39 at searching and selecting appropriate digital tools. (32)



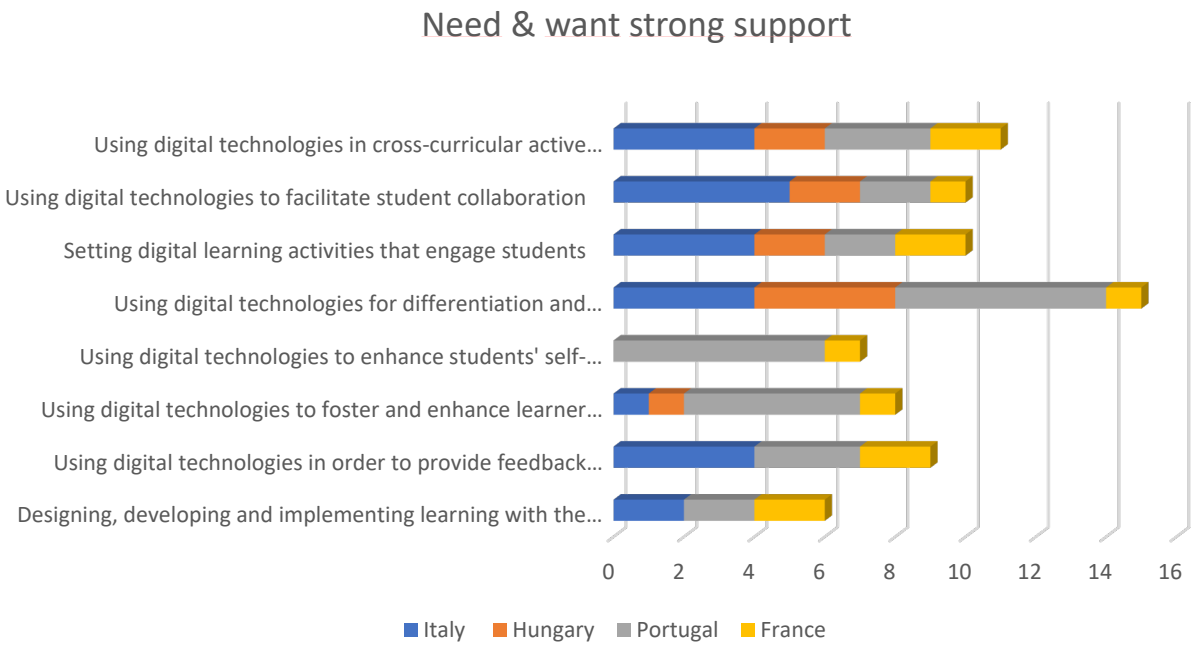
In the following the participants who need or want strong support in the aforementioned areas are listed. 10 people need and want support in creating digital resources, 11 people in modifying existing digital resources and 8 people in searching and selecting appropriate digital resources. (33)



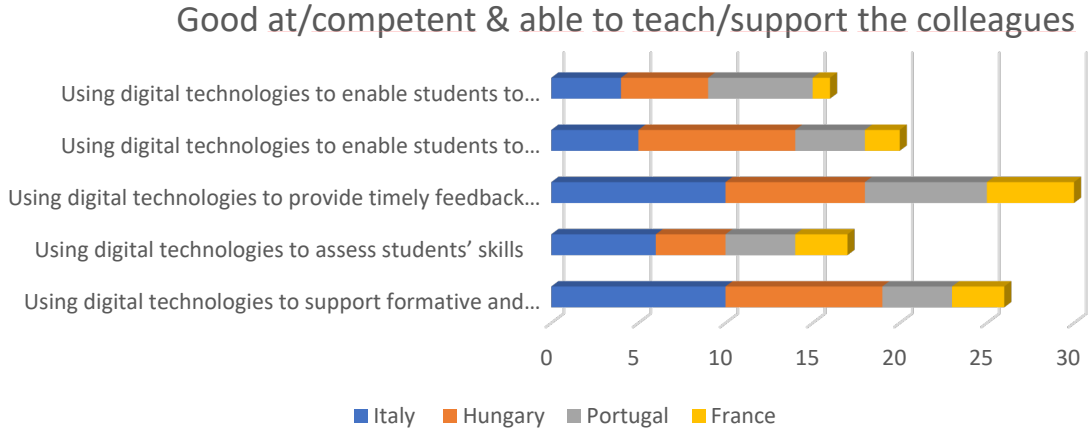
Evaluation of teachers'competencies for **teaching with digital tools and supporting the learning process:** the teachers who have completed the questionnaire, felt the most confident in their ability to "Use digital technologies to facilitate student collaboration" and in "Setting digital learning activities that engage students" with both receiving 30 responses, The ability of "Designing, developing and implementing learning with the use of digital technologies to enhance learning outcomes." received with 20 the second highest number of responses, clearly indicating that teachers are skilled in the aforementioned ability. The teachers felt the most incompetent in "Using digital technologies for differentiation and personalisation to meet the diverse learning needs of the students". This was expected as based on the observation made using the data from the previous question, as it showed that the respondents require the most support in the aforementioned area.



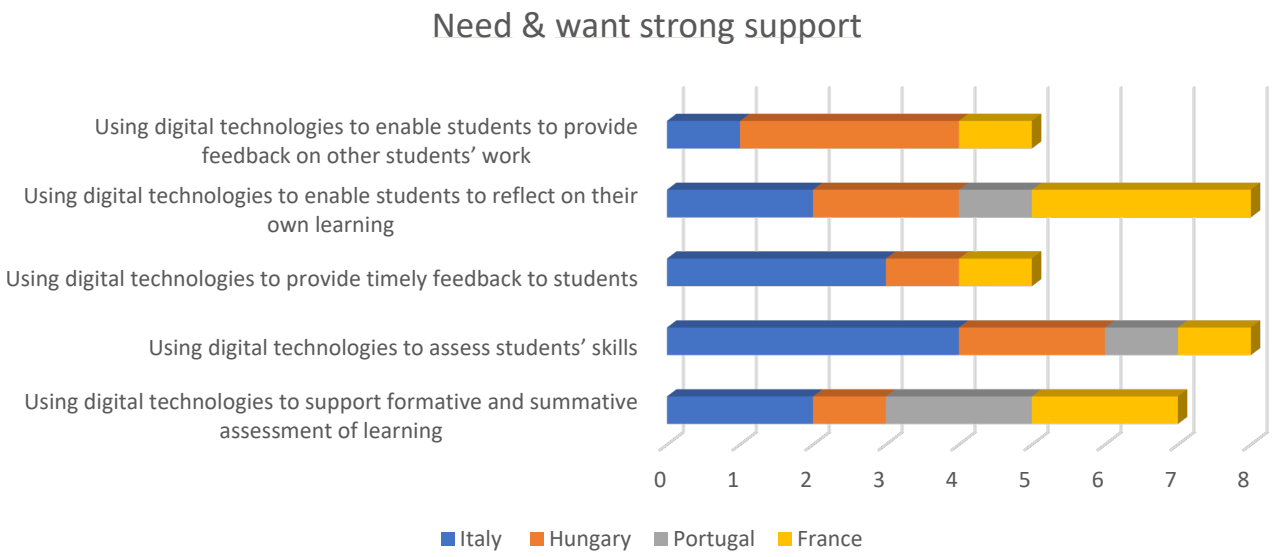
The participants who need or want strong support in teaching with digital tools and supporting the learning process gave the following feedback. The area that the participants of the questionnaire would require, need the most help with 15 responses is the "Use of digital technologies for differentiation and personalisation to meet the diverse learning needs of the students". It is important to note that all of the possible choice options received about the same number of responses, with no significant difference. The number of responses were between eight and eleven. The respondents would require/need the least amount of support in "Designing, developing and implementing learning with the use of digital technologies to enhance learning outcomes." (34,35)



Finally, we asked the participants for evaluating their competencies for their **digitally enhanced assessment practices.** The participants reported being good/competent at "Using digital technologies to provide timely feedback to students, using digital technologies to support formative and summative assessment of learning and using digital technologies to enable students to reflect on their own learning".



On the other hand, some participants feel like they still want strong support in "Using digital technologies to enable students to reflect on their own learning, using digital technologies to assess students skills and using digital technologies to support formative and summative assessment of learning".



Conclusion

From this survey it is clearly visible that the teachers still need training to effectively use the already available tools in a classroom setting, but they are already making immense effort to acquire this knowledge and they are also interested in using digital tools as an aid, and not only because it is required from their school that they work in, but because they have realised the potential that these new digital tools hold, and they see how helpful these could be for both them and the students.