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TRANSIt - TRANSversal key competences for lifelong learning: TraIning teachers in competency based education

D2.1 “Needs Analysis Report”

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0.1 About this document

This document concerns the needs analysis of educational stakeholders in Europe with regard to competence based learning and teaching. The report will serve as a basis for the training framework developed in WP3.

0.2 Version

Version	Date / Contributor	Summary of Changes
0.1	Wouter Vollenbroek	First draft version
0.2	Partners	Feedback
0.3	Wouter Vollenbroek	First version
0.4	Partners	Input from partners
1.0	Wouter Vollenbroek, Sjoerd de Vries, Nico van Loo, Katerina Riviou	Final version

0.3 Table of Contents

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Executive Summary

This document shows the results of a needs analysis regarding competence based learning and teaching. Within the six (6) countries of the consortium (Greece, The Netherlands, Ireland, Spain, France and Austria), Delphi-studies, a survey and a SWOT analysis have been conducted. **The aim of this survey was to identify, classify and analyse the needs of European educational staff regarding competence based teaching.** Within the needs analysis we identify user training needs in terms of educational theories, models and frameworks, ICT tools and other learning design processes that may prove useful to teachers. The results of this survey will be used for the development of the TRANSIt training framework to improve teachers' capacity on competence oriented education.

In the online survey **1.078** respondents participated, the majority of them had a Greek background. The results show that teachers are generally open and positive towards teaching in a competence based way. The only problem is the lack of knowledge and ability to do so. The respondents expect that courses and workshops can help them to expand their knowledge about how to teach in a competence based way and how to assess the possible acquired competences. Despite the lack of knowledge and ability, the respondents appoint themselves as experienced in teaching four of the five transversal competences (digital competences, learning to learn, social and civic competences, sense of initiative and entrepreneurship and cultural awareness and expression) that are included in this study. Respondents mostly indicate that there is a lack of experience in teaching the competence about sense of initiative and entrepreneurship. In contrast, the stimulation of student's cultural awareness is a structural component of education policy in the six countries. The didactics and teaching methods that were used in the different countries are mostly discussion and debating and the sub-group activities, while the story line and interviewing experts, peers or others were used seldom. A striking result from the survey is the fact that respondents see themselves as enthusiastic in the use of ICT for educational purposes, but that they rarely use the existing ICT-tools for teaching and assessment purposes. The use of the traditional methods still dominates the educational landscape.

The results show that there is a high need for training in themes applied throughout competences, i.e. critical thinking, problem solving, decision taking etc. Beside that they need more training in teaching methods fostering competence based learning, like project based learning, action based learning etc. They also have a high need for training in the assessment of competencies. They have insufficient knowledge and skills in the specific tools for assessing competencies and the different approaches and objectives related to competencies assessment. To fulfil these needs, it is important to account for giving best practices in the field of competency-based curriculum.

Concluding, based on the results of the survey the training framework has to address the following needs for teachers: (1) how to get the knowledge and abilities to practice competence based teaching, (2) how to acquire the necessary teaching skills for competence based teaching and required teachers' skills in competence based teaching. In addition, there is the need to assist head teachers when creating a work and learning environment for teachers to support them in developing competence based teaching skills and help them to promote competence based teaching among teaching staff. These four needs are important to add to the training framework.

1 Introduction

1.1 Scope

This deliverable presents the training needs of European educational stakeholders concerning the development and implementation of competency based learning approaches.

The TRANSIt training needs report provides the basis for the training modules in WP3.

1.2 Audience

This report is addressed to all the consortium partners, the European Commission and to public in general.

1.3 Definition

“Competence means the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development” (Grün, Tritscher-Archan & Weiss, 2009, p. 3). Competence based learning implies according to Biemans et al (2005) the creation of opportunities for students and workers, close to their world of experience in a meaningful learning environment (preferably professional practice) where the learner can develop integrated, performance-oriented capabilities for handling the core problems in practice.

1.4 Structure

Chapter 1: Gives an overview of this document, providing its scope, the definitions used and its structure.

Chapter 2: Provides the methodology to identify the User Needs regarding Competence Based learning

Chapter 3: An overview of the targeted audience of this project

Chapter 4: Report on the questionnaire results of all consortium partners

Chapter 5: Report on the Workshops conducted

Chapter 6: Report on the Delphi study results

Chapter 7: SWOT-analysis

Chapter 8: Conclusions/Contributions to the TRANSIt Training Framework

Chapter 9: References

Annex A: Questionnaire form

Annex B: Delphi Study questions

Annex C: Delphi Interviews conducted

2 TRANSIt: User Needs Analysis Goals and Methodology

The goal of the present needs analysis is to identify user training needs in terms of educational theories, models and frameworks, ICT tools and other learning design processes that may prove useful to teachers regarding competence based education. Fig. 1 shows the process of reaching the final products and the place of analysis in it.

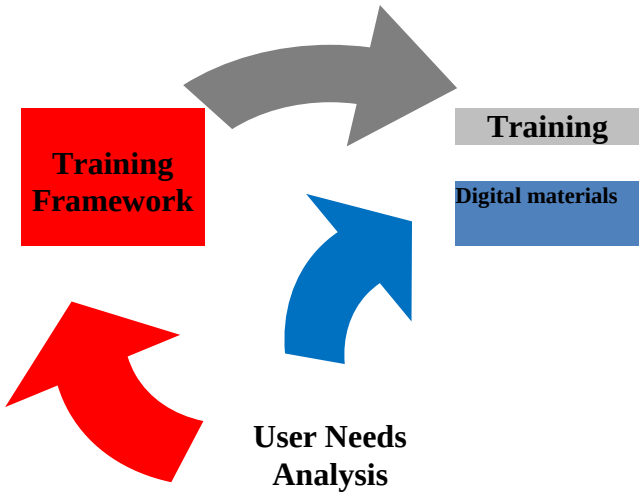

Fig. 1 User Needs Operating Framework

To identify the training needs of the teaching staff in Europe, we used a mixed study design. The mixed study design is based on four different techniques. All countries had to conduct a questionnaire/needs analysis survey (**Questionnaire for needs analysis on competency based learning and education**). The original idea was to organise workshops in partner countries in order to conduct the survey. In some countries, workshops organization was complicated. The questionnaire survey was therefore conducted in several ways: among participants after respective workshops on paper, or it was directly sent to participants via e-mail or notified through newsletter. Results of the questionnaire were interpreted quantitatively through software, as well as qualitatively by means of SWOT analysis. Besides that, some of the partners conducted a Delphi study based on the questionnaire. More information about Delphi interviews conducted is presented in Annex C. The following subsections describe the techniques used.

2.1 Questionnaire

In order to identify the training needs of teachers around competency-based education in partner countries, a multilingual questionnaire survey was devised and administered online through Limesurvey to teachers of primary and secondary schools, teacher trainers/pre-school teachers, curriculum developers and school leaders. The partner countries are Greece, Spain, France, Ireland, Austria and The Netherlands (Chapter **Error! Reference source not found.**).

The questionnaire included a short introduction and 33 questions divided into 4 sections. These sections are:

- General background information
- Current implementation of didactic and assessment of key competencies
- Training needs
- Availability to participate in the project

The average duration required to complete the questionnaire was around 20 minutes. The majority of the questionnaire items – except for the sections about factual background information, open questions to clarify answers and availability to participate in the project – were five-points Likert scale questions. Data collection started in February 2013 and was planned to last until the end of the school year (July 2013). However, during the recruitment of respondents many problems arose. One of the main reasons for these problems was the lack of awareness in competency-based education by the educators. Most educators did not have sufficient knowledge and experience with competence-based teaching.

The link for the survey was disseminated and in the case of Greece was made available through the eTwinning mailing list by the National Contact Service, CTI Diophantus. The analysis of the project's target groups' questionnaires was carried out by the use of descriptive statistical analysis (tables and graphical visualization). For the statistical analysis and the creation of the graphs SPSS was used, as well as the functions available in the open source software LimeSurvey.

2.2 Delphi-study

A Delphi method is qualitative of nature and is a technique for gathering data that is similar to focus groups. The main difference between a focus group and Delphi is that experts do not meet each other physically, with the advantage of not influencing each other. Linstone and Turoff (1975, p. 3) note "*Delphi may be characterised as a method for structuring a group communication process, so that the process is effective in allowing a group of individuals, as a whole, to deal with complex problems".* Furthermore, the goal of a Delphi method is to generate qualitative data and is facilitating consensus among individuals who are experts into the field of expertise. Usually a Delphi study consists of two or more rounds. The first round provides input for the second round and in the second round experts have the opportunity to react on the input of the first round.

The goal of the Delphi study is to find consensus about:

1. What the users' needs regarding competency based learning approaches are
2. What the training needs regarding competency based teaching approaches are.

The Delphi method has proven a popular tool in research for identifying and prioritizing issues for managerial decision-making (Okoli & Pawlowski, 2004). In this version of the Delphi method, the experts are answering questions in two or more rounds. According to Skulmoski et al. (2007), a Delphi study is conducted online, by telephone, and sometimes by personal interviews. In this study is chosen for a personal interview with teachers and student teachers, in the first round. This is because of the complexity of the subject. In addition, it could be necessary to give additional explanations about the questions. During this interview the experts came up with ten open questions. The participants answered the questions in their own language. The interview takes approximately 45 minutes to an hour. The goal of the open questions is to provide answers about which experiences and related needs the professionals have related to competency based learning and teaching approaches.

In the second round, the intention is to gain consensus on the various giving answers by the participants in the first round. The questions in the second round will be held in form of closed

questions, the participants are able to answer the questions on different scales. By doing so, the experts are able to revise their first answer by comparing it with other experts' answers from the panel. Rowe and Wright (1999) note "*It is believed that during this process the range of the answers will decrease and the group will converge towards the "correct" answer"*. In case of this Delphi study it is important to find consensus in the most important training needs regarding competency based learning and teaching approaches. If no consensus is achieved between the experts, a third round belongs to the possibilities. In general, the Delphi study consists of seven steps:

1. Selection of the "expert" panel.
2. The preparation of the first questionnaire for the interviews.
3. The interviews with the experts (**Error! Reference source not found.** open questions).
4. Compare and categorise the answers and develop the questions/statements for Round 2.
5. Distribute the questionnaire with questions/statements for the second round (Annex A: Questionnaire Form).
6. Compare and categorize the answers and process results with the goal of reaching consensus.
    a. If there is no consensus a third round is a possibility
7. The findings and results have to apply in the descriptive model.

2.3 Workshops

To identify the training needs in a qualitative manner in some partner countries a Delphi study was conducted and in other countries workshops were organised (Chapter 5). The structure of the workshop was for 60% based on introducing the project and explaining its main topics, the other part was focused on the discussion with participants and the collection of input regarding the training needs of the users. The materials used were:

a) Common general material:
    a. The objectives and approaches of the TRANSIt project and how it aims to help teachers;
    b. An introduction to basic topics and terms;
    c. A short section about EU policies and initiatives that are relevant to the TRANSIt ideas;
    d. The envisaged benefits of using competence based approaches in school classroom.
b) Specialised, national material:
    a. Demonstration of characteristics TRANSIt ideas at a national, regional and sectorial level;
    b. Posing the questions that the workshops aims to answer: Do teachers know about the presented ideas, have they ever used them, what are the reasons for not using them, what kind of training would they consider useful for this purpose, etc.
c) Questionnaires:
    a. Demographics
    b. Identification of training needs (in terms of how the participant feels about proposed training forms/methods, topics, duration, and other very specific attributes that are defined in order to get very specific feedback).

2.4 SWOT-analysis

The SWOT analysis is used to identify the Strengths, Weaknesses, Opportunities, and Threats related to the needs analysis. The SWOT analysis is a direct result of the questionnaire. The results in the questionnaire were analysed based on the strengths, weaknesses, opportunities and threats. Setting the objective of the training framework should be done after the SWOT analysis has been performed. This would allow achievable goals or objectives to be set for the framework. The structure of a SWOT analysis is as follows:

- **S**trengths: Characteristics of the project that give it an advantage over others.
- **W**eaknesses: Characteristics that lace the team as a disadvantage over others.
- **O**pportunities: Elements that the project could exploit to its advantage.
- **T**hreats: Elements in the environment that could cause trouble for the business or project.

The SWOT analysis may be used in any decision-making situation when a desired end-state (objective) has been defined.

3 Description of Target Groups and Potential Participants in TRANSIt Project Research and Training Activities

The network of participating teachers consists of:

Greece:

- Teachers from EA.
- Teachers' communities of Open Discovery Space (ODS), LD-Skills, METASCHOOL, OSR, and Natural Europe projects (from Greece).
- Educational policy makers in Greece
- Teachers' trainers in Greece
- Teacher students/Pre-service teachers in Greece
- Teachers in primary and secondary education in Greece
- School leaders in Greece

The Netherlands:

- Teachers in primary and secondary educations in the Netherlands
- Teachers' communities of ODS (from Netherlands)
- Teachers' trainers in the Netherlands
- Teachers from universities in the Netherlands
- Curriculum project coordinators and developers in the Netherlands
- Teachers' trainers in the Netherlands

Ireland:

- Teachers in primary and secondary education in Ireland
- Teachers' communities of ODS (from Ireland)
- Curriculum project coordinators and developers in Ireland
- Educational policy makers in Ireland
- Teachers' trainers in Ireland
- School leaders in Ireland
- Teacher student/Pre-service teacher in Ireland

France:

- Teachers in primary and secondary education in Poitiers (France)
- Educational policy makers in France
- Teachers' trainers in France

Austria:

- Teachers in primary and secondary education in Austria
- Educational policy makers in Austria
- Teachers' trainers in Austria

Spain:

- Partner schools in Spain
- Schools in Barcelona

- Education professionals who belong to the telematic network of education of Catalonia, the official college of graduates in arts and sciences network and the "Didactics, innovation and Multimedia" network, amongst other similar educational networks.
- Teachers, trainers and educational staff in touch with their public local centres of resources
- Teachers who use public centres for resources in science, language or mathematics, amongst other subjects.
- Teachers' trainers
- Teachers from primary and secondary education

The conducted workshops and the number of respondents in the needs analysis show that the interest in the project topic is large and the envisaged number of participants will increase.

4 Report on the Questionnaire Results

4.1 Greece

4.1.1 User profile

From the total of 648 stakeholders that participated in the online survey from Greece, 196 (30%) were men and 452 (70%) were women with the majority in the age range of 41 to 55 years old (57,14%). All participants were related to the field of Education. The majority of respondents are teachers in secondary education (74,80%) and teachers in primary education (48,60%). The next group of participants with highest representation are School leaders (11%), Teachers' trainers (10,40%), Pre-service Teachers with percentage of 3,60%, Curriculum developers and Educational Policy Makers (1%), each, whereas other roles were 3,40%. Among them persons responsible for environmental centres, responsible of counselling centres for students, career counsellors, adult trainers or researchers/PhD candidates).

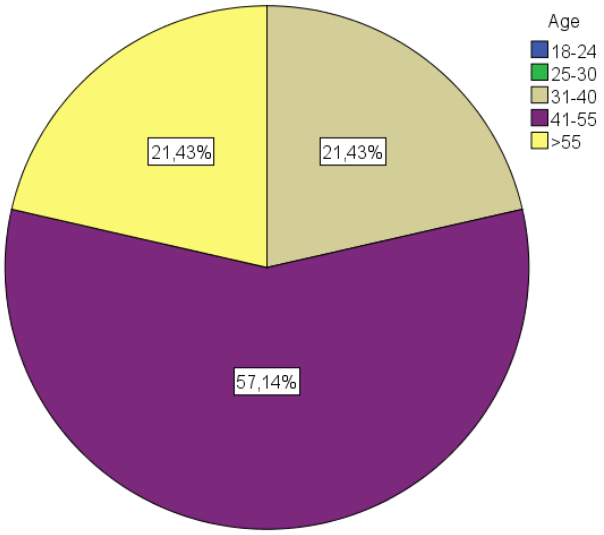

Fig. 2 Age distribution of Greek respondents

The majority of respondents have a more than 15 years' experience in their profession (43,83%). The qualification of respondents is Degree (50,31%), Masters (41,67%) and PhD (7,10%). Only 0,93% had just the teaching qualification. Regarding usage of ICT, the highest percentage defines themselves to be Enthusiastic on the use of ICT (56,64%) while those claiming to have taken part in continuing professional development (CPD) activities on the theme of competence acquisition was (55,25%). Reviewing the descriptions provided on these training activities, there is of a wide and varied spectrum, but mostly around technology enhanced learning. Training varies from Level 1 ICT training program- "In-Service Training of Primary and Secondary School Teachers on Information and Communication Technology (ICT). Basic Skills in Education", Level 2 ICT training program - "Teachers' Training in the Use and the Exploitation of ICT in the Educational Teaching Process", creative writing/thinking in class, use of Web2.0/social media tools, training for implementing projects, creative drama activities/creativity techniques and in-service training

activities. In the training special needs is also mentioned, and there are respondents who feel that the available training opportunities are not enough, especially for the regional parts of the country.

4.1.2 Current implementation of didactic and assessment of key competences

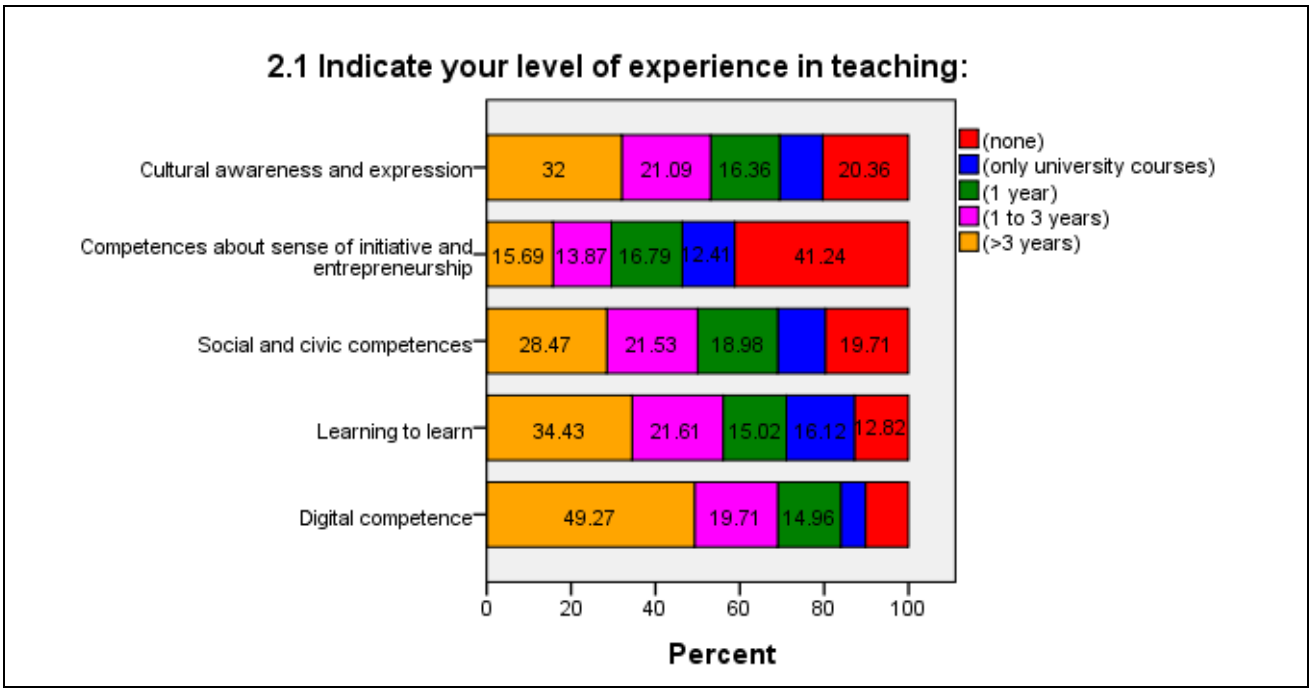

Fig. 3 Distribution of the answers to the question 2.2 of Greek participants

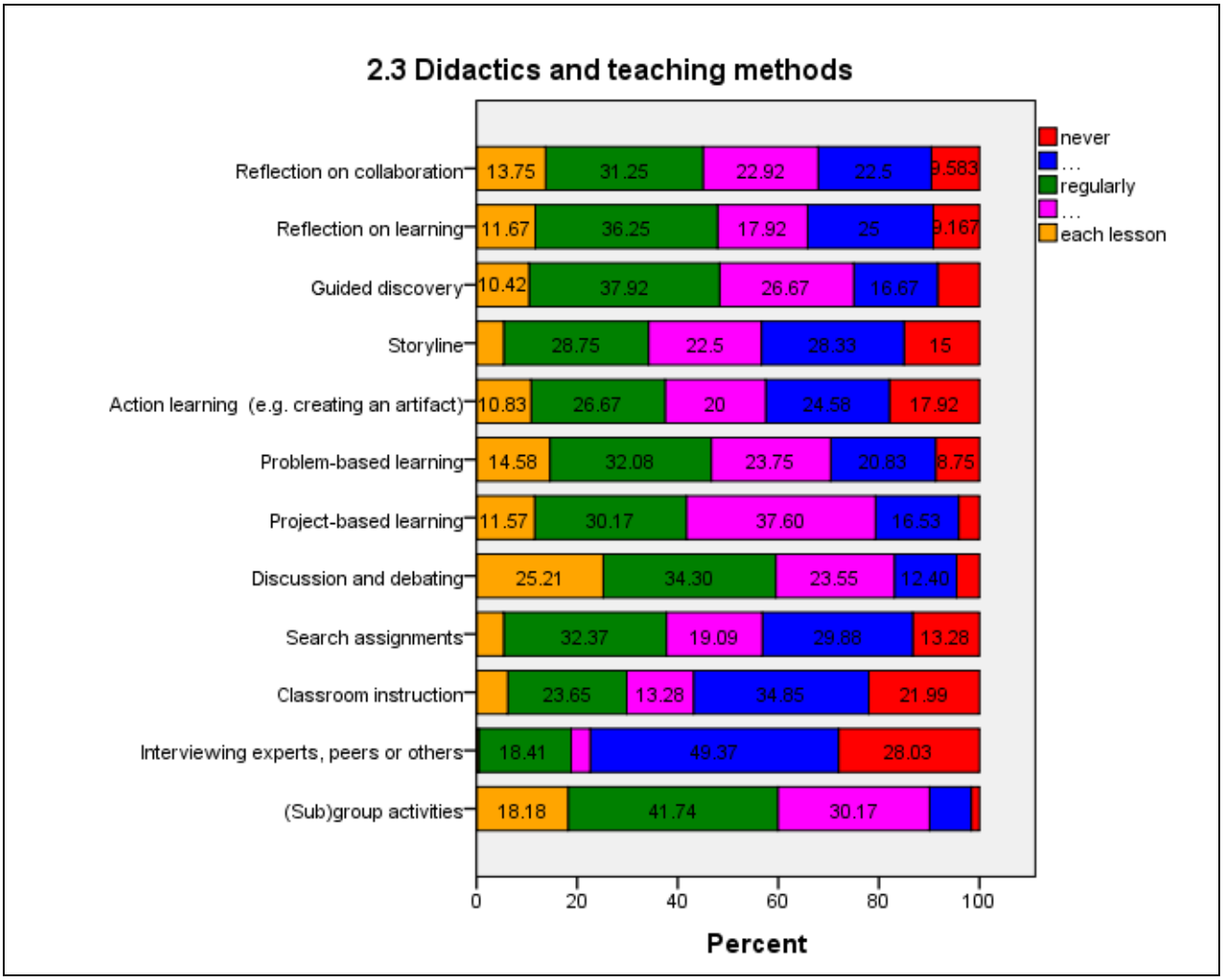

Fig. 4 Distribution of the answers to the question 2.3 of Greek participants

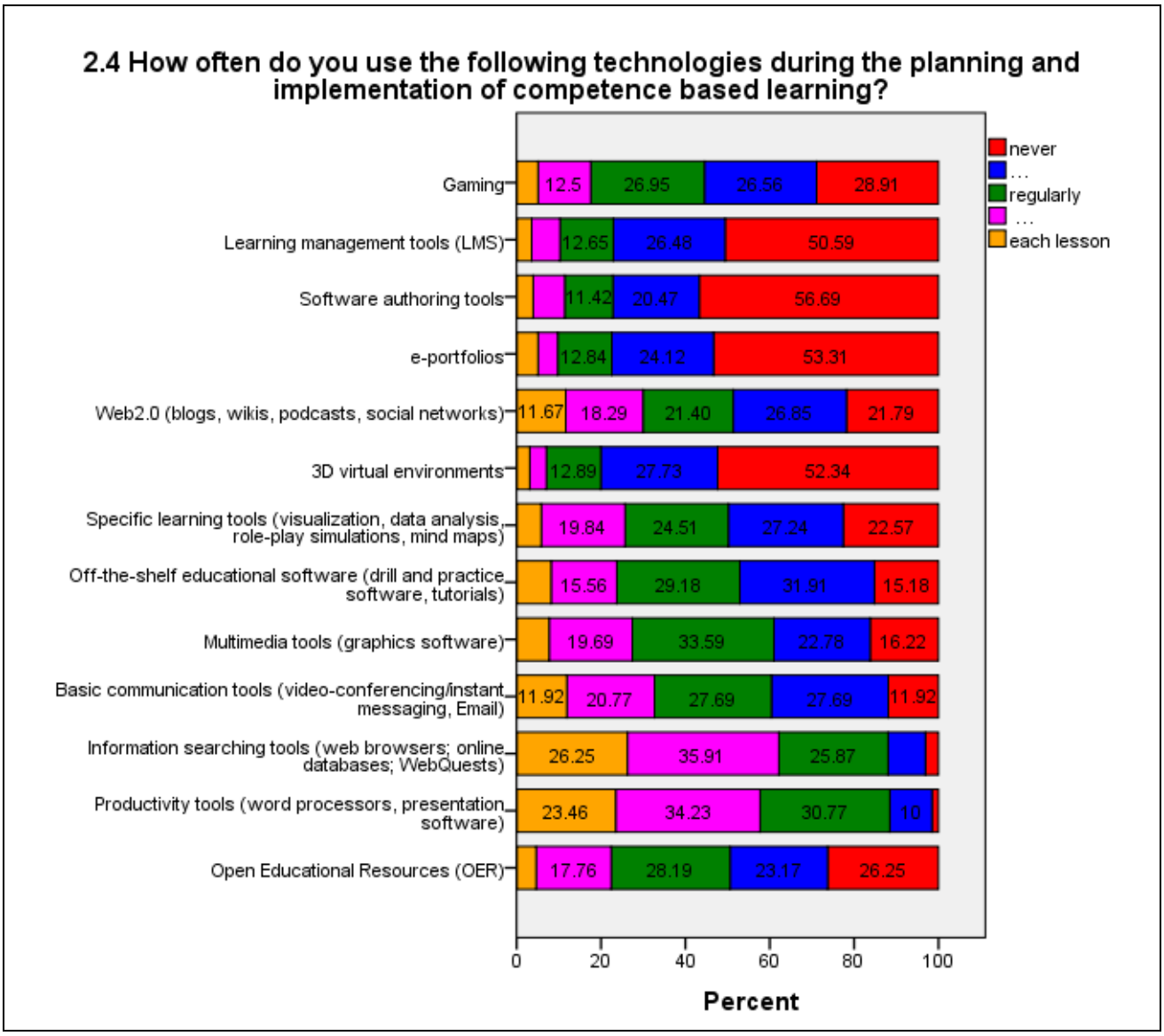

Fig. 5: Distribution of the answers to the question 2.4 of Greek participants

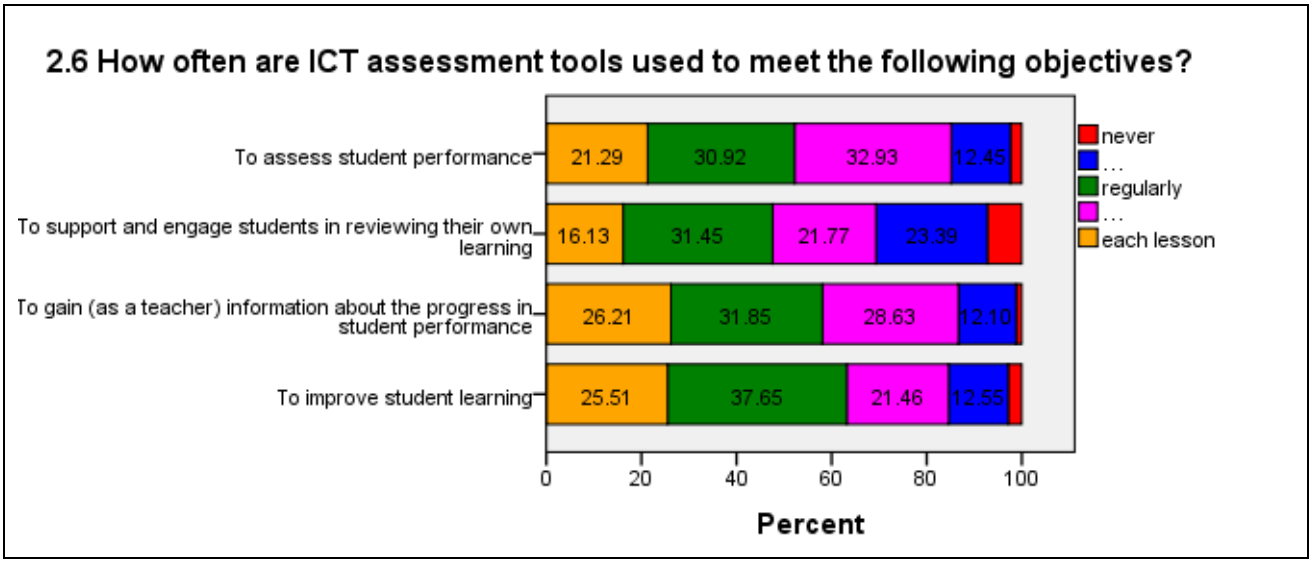

Fig. 6: Distribution of the answers to the question 2.6 of Greek participants

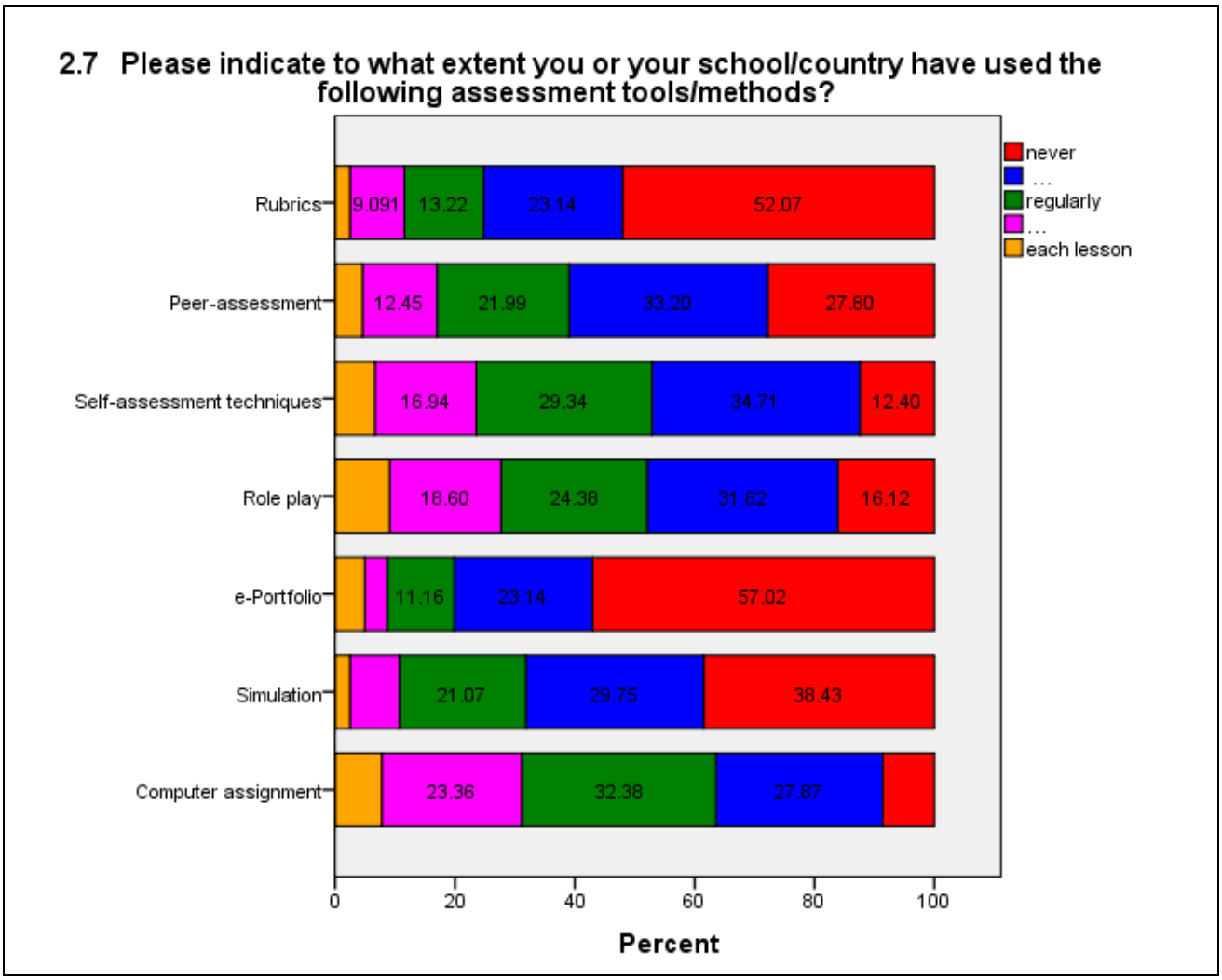

Fig. 7: Distribution of the answers to the question 2.7 of Greek participants

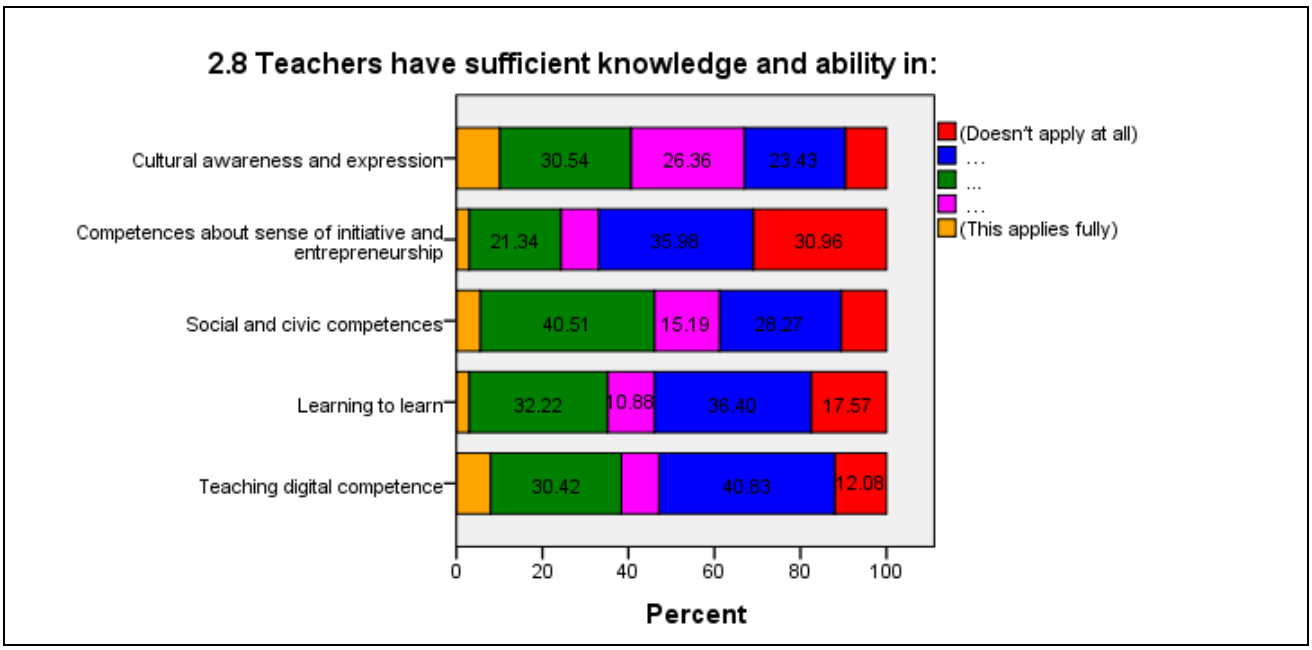

Fig. 8: Distribution of the answers to the question 2.8 of Greek participants

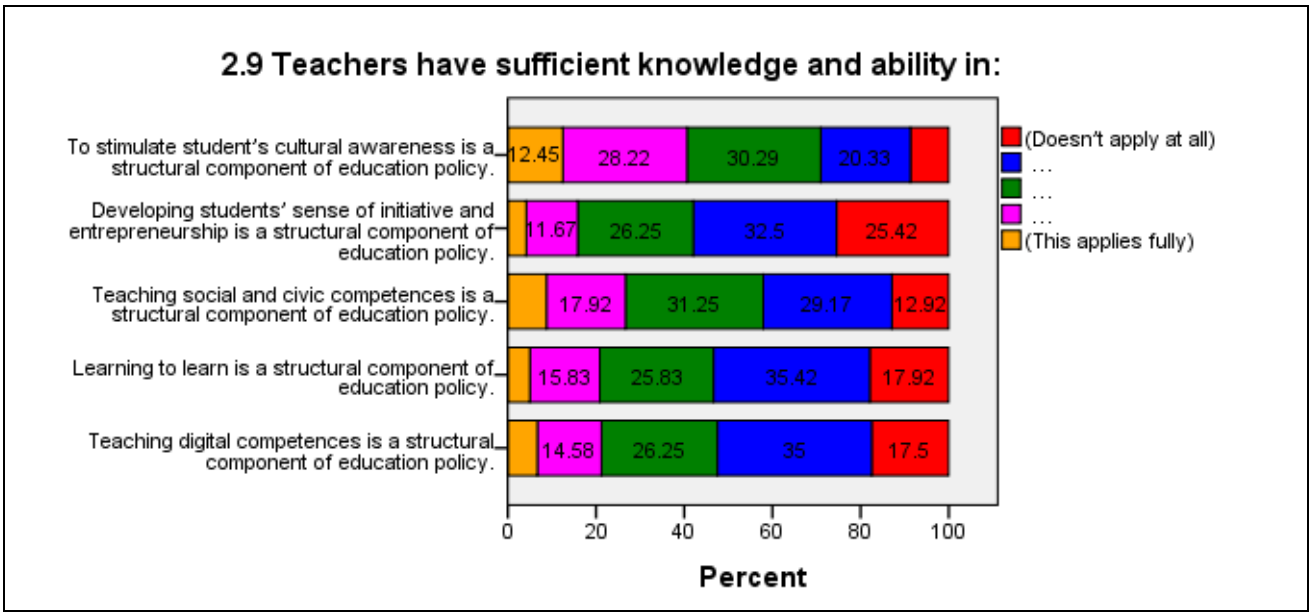

Fig. 9: Distribution of the answers to the question 2.9 of Greek participants

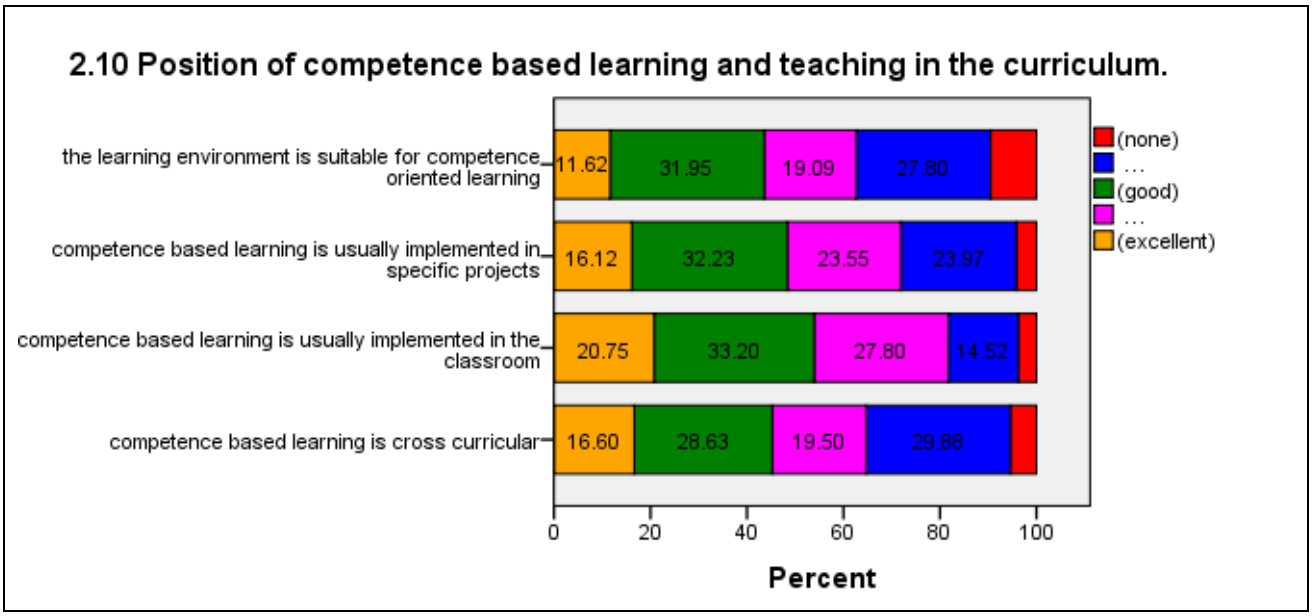

Fig. 10: Distribution of the answers to the question 2.10 of Greek participants

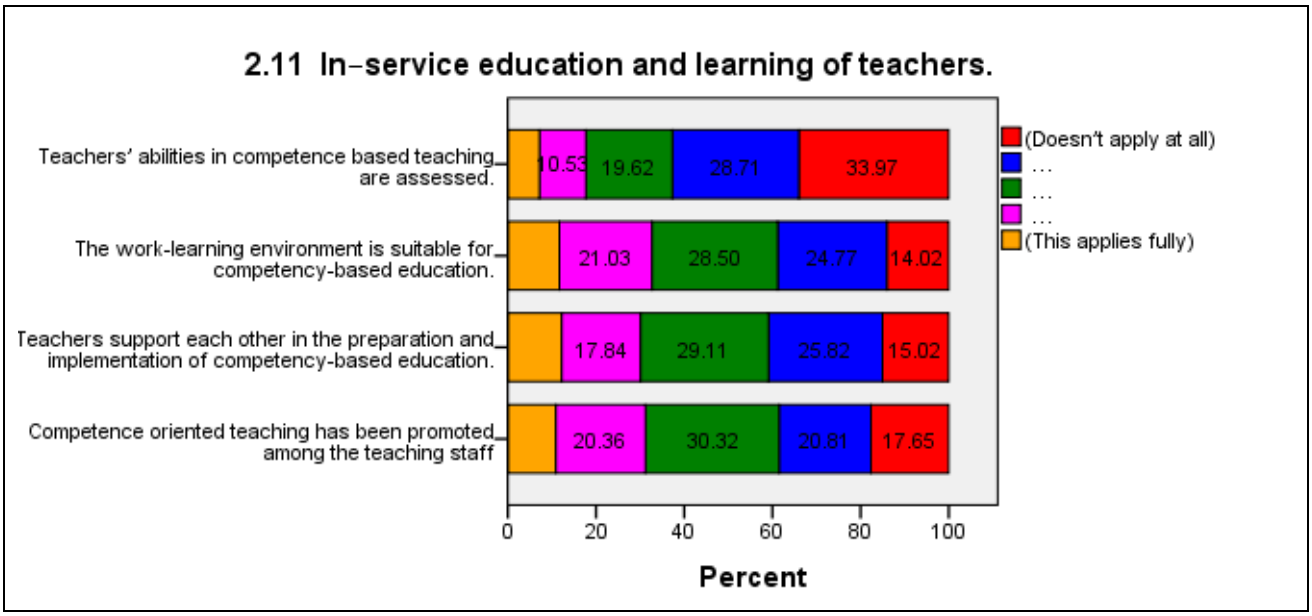

Fig. 11. Distribution of the answers to the question 2.11 of Greek participants

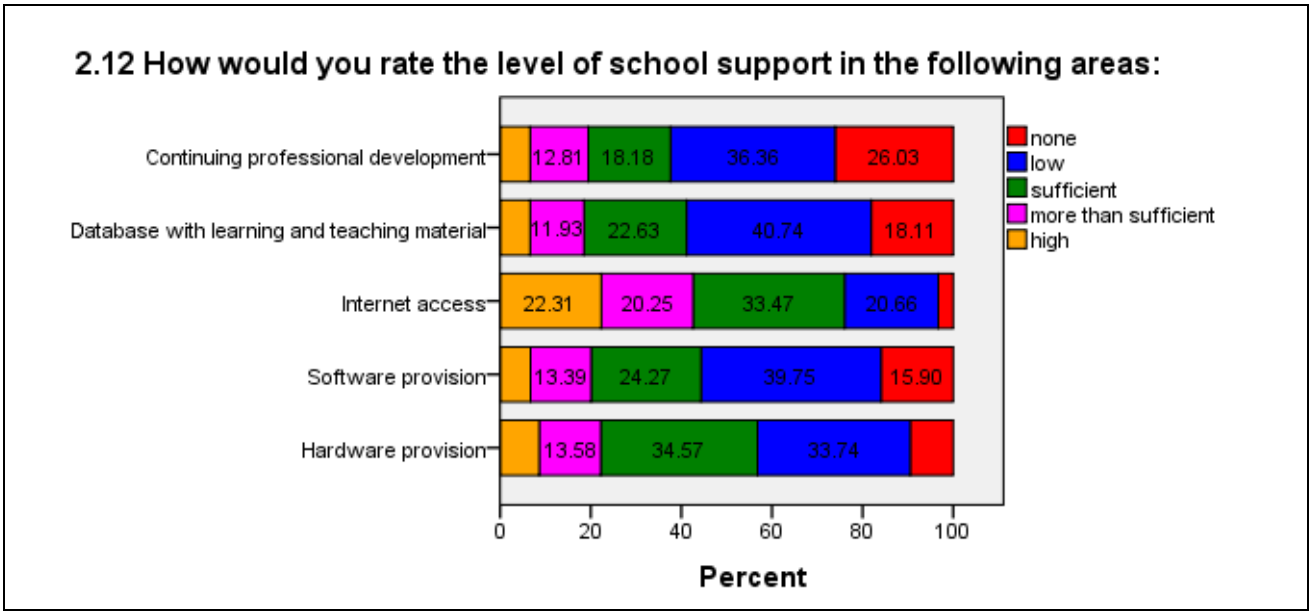

Fig. 12: Distribution of the answers to the question 2.12 of Greek participants

Requirements: The respondents from Greece indicate that they mostly have experience with teaching digital competencies. Almost 50% have more than three years of experience, almost 35% indicate that they have more than 3 years of experience in teaching learning to learn and 32% have more than 3 years of experience in teaching cultural awareness and expression. Especially discussion and debating and (sub)group activities are important didactics and teaching methods within the Greek education. Information searching tools and productivity tools are the two most used technologies during the planning and implementation of competency based learning. The majority of the respondents mentioned that they use these tools to assess student performances and to gain (as a teacher) information about the progress in student performance. However, despite the use of new technologies for teaching and evaluation in competency based learning, the assessment within education is mostly based on paper and pencil tests and to a lesser extent the use of computer assignments. The amount of knowledge and ability is according to the respondents sufficient in the stimulation of student's cultural awareness as a structural component of education policy. However, the knowledge and ability about learning to learn and teaching digital competencies is only resent to

a limited extent. Nevertheless, CBL is usually implemented in the classroom and implemented in specific projects. Finally, the level of support within Greek schools is insufficient for continuing professional development. Most respondents also mentioned that there is no or insufficient databases with learning and teaching materials.

Open question 2.2: Please briefly describe what general steps you take when you plan a cross-curricular lesson that promotes key competency acquisition for your students.
Regarding the description of general steps that respondents take when planning a cross-curricular lesson that promotes key competency acquisition for their students, a high percentage (71,5%) provided answers to the open question. A common pattern was that teachers try to elicit the level of their students and their individual interests, define in collaboration with them the subject that they will work on, the educational aims, the students' teams and then they assign the tasks. Teams are guided and facilitated by the teacher and as final step results are composed, evaluated and presented in class. A great percentage of participants refer to collaboration with colleagues for the design and implementation of cross-curricular projects, showing its importance.

Open question 2.5: Do you experience constraints when planning competency based teaching? If yes, please describe these constraints (e.g. constraints relating to resources, class size, time, knowledge and experience, not a priority in my school)?
Participants spot several constraints to the systematic implementation of transversal CBL activities. They feel their working schedule doesn't allow for the educational innovation they would like, the most frequent answer being time constraints. The low availability of resources such as a computer room and a very limited flexibility to use them has also been mentioned among the biggest barriers encountered. Other constraints are: class size, knowledge, priority, flexibility and experience.

4.1.3 Training needs

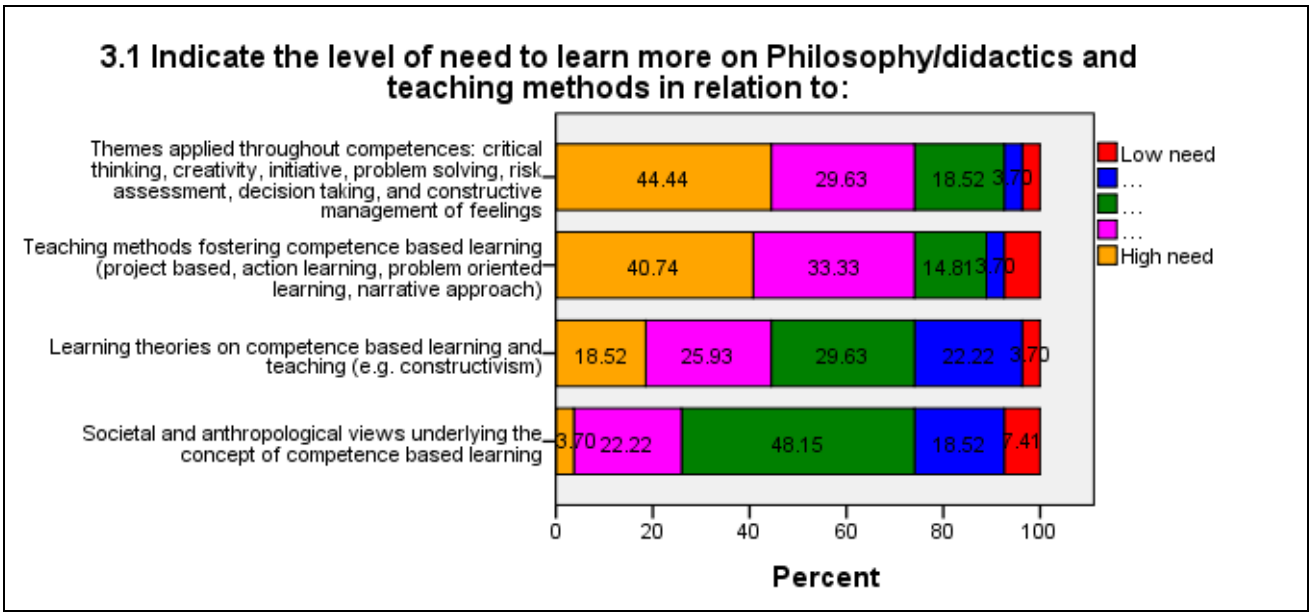

Fig. 13: Distribution of the answers to the question 3.1 of Greek participants

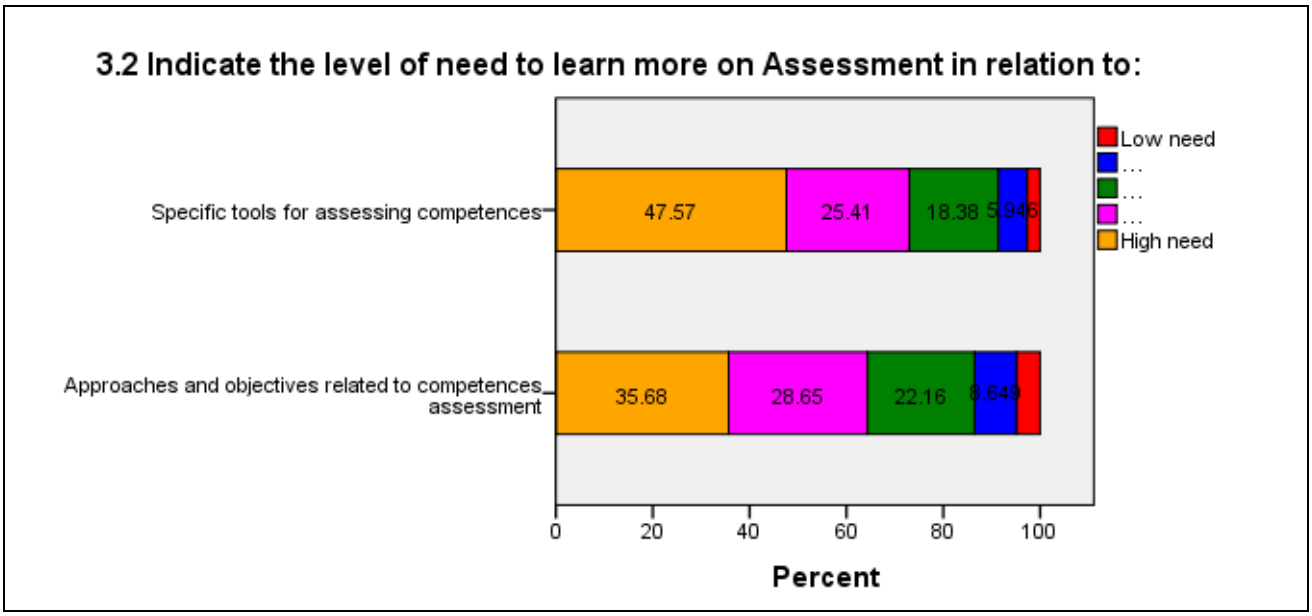

Fig. 14: Distribution of the answers to the question 3.2 of Greek participants

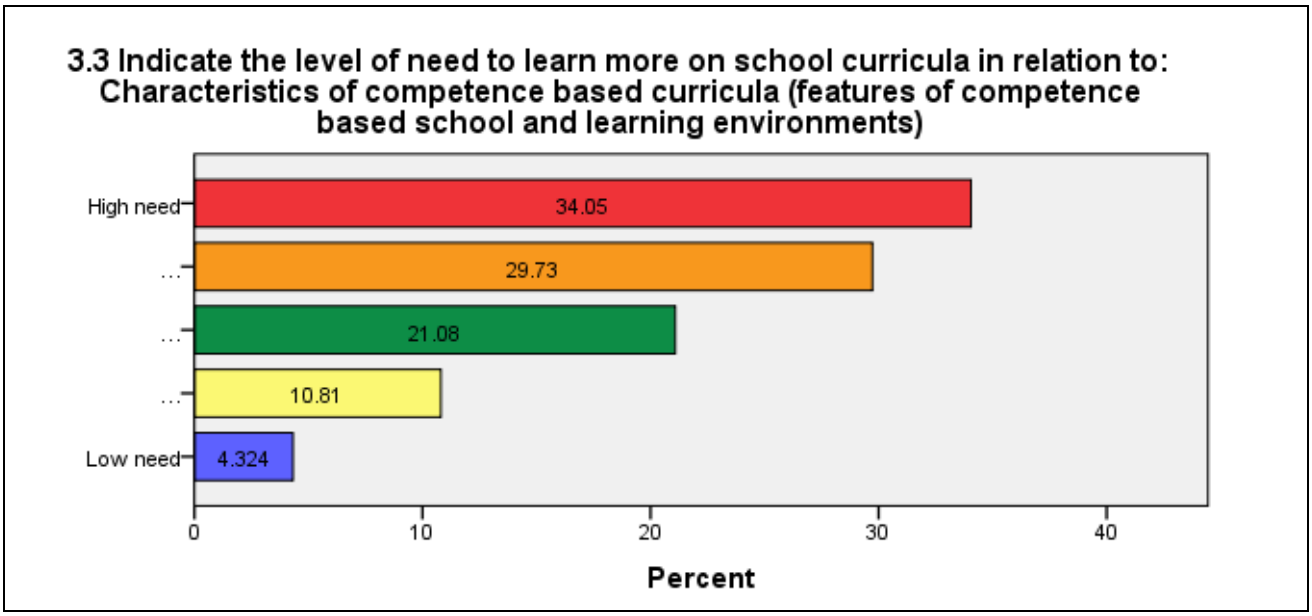

Fig. 15: Distribution of the answers to the question 3.3 of Greek participants

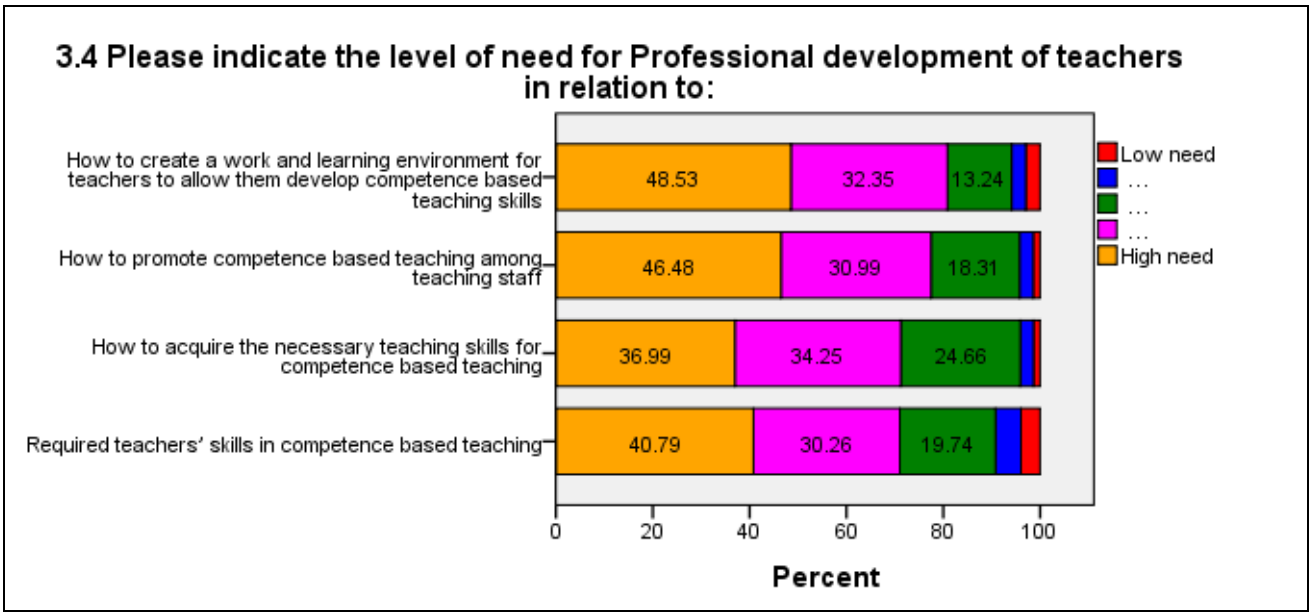

Fig. 16: Distribution of the answers to the question 3.4 of Greek participants

Training requirements: The results show that the participants in this survey have a high need for themes applied throughout competencies, for example in critical thinking creativity, initiative etc. Beside that they want to learn more about teaching methods fostering competency based learning. In case of learning how to assess competencies, the Greek respondents want to learn more about specific tools for assessing competencies and approaches and objectives related to the assessment. The result of question 3.3 show that the respondents have a high need to learn more on school curricula in relation to the characteristics of competence based curricula (features of competence based school and learning environments). The results of question 3.4 indicate that the professional development of teachers in Greece is on a low level, the need for professional development is high. They want to learn how to create a work and learning environment for teachers to allow them develop competence based teaching skills, how to promote competence based teaching among teaching staff, how to acquire the necessary teaching skills for competence based teaching and the required teachers' skills in competence based teaching.

4.1.4 Availability to participate in the project

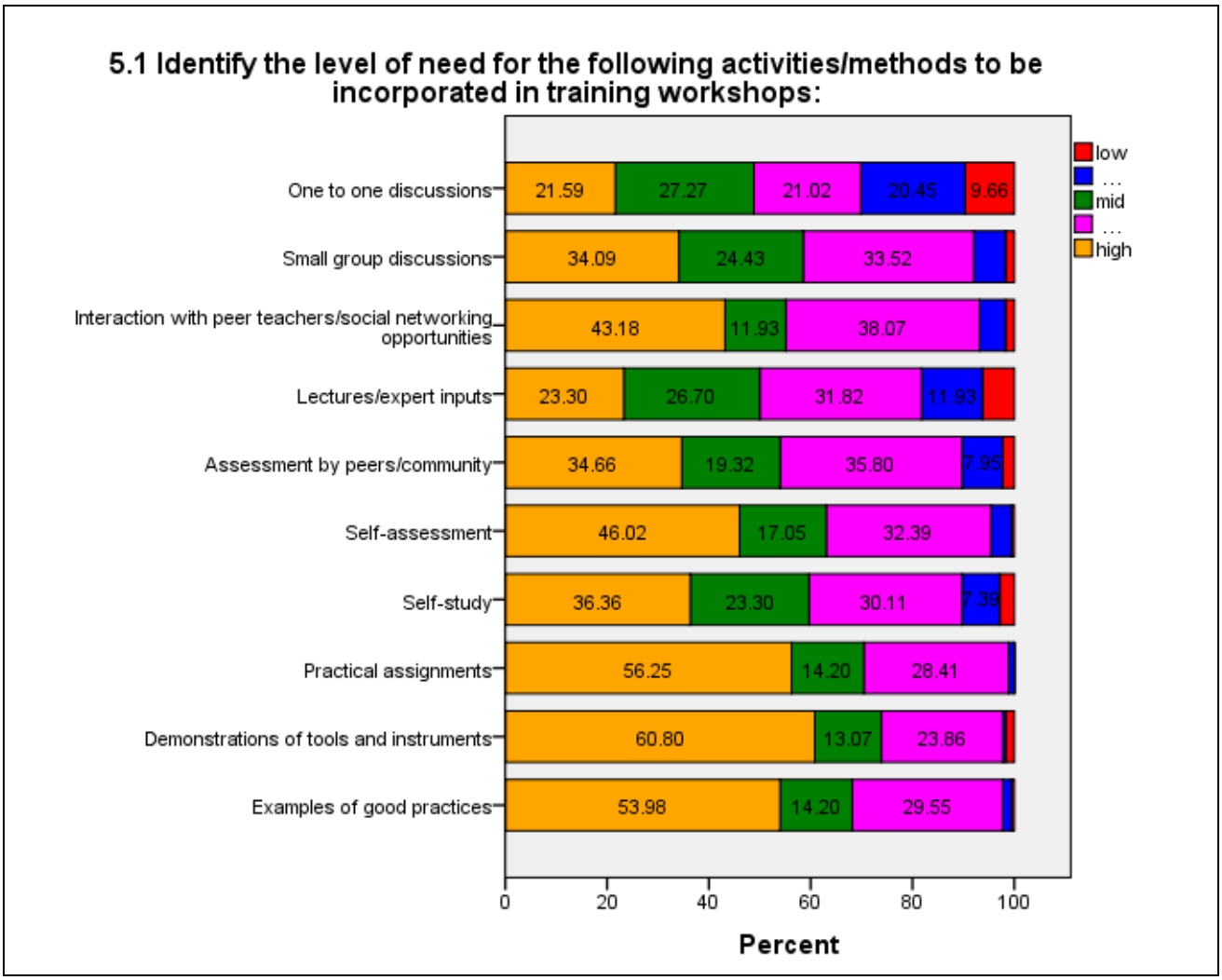

Fig. 17: Distribution of the answers to the question 5.1 of Greek participants

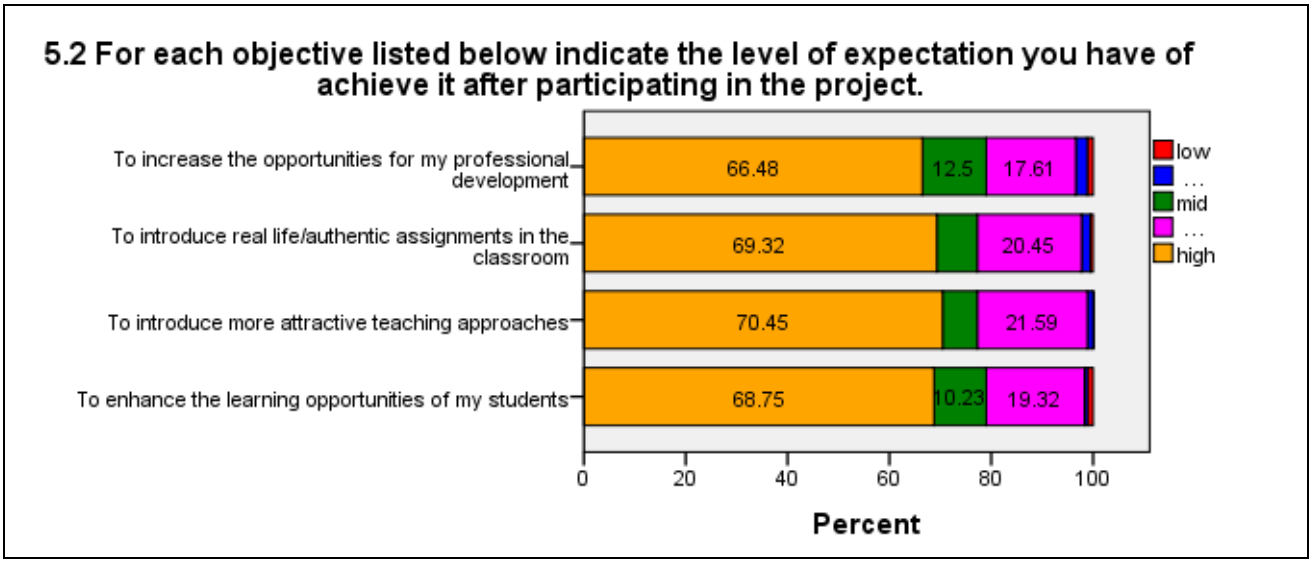

Fig. 18: Distribution of the answers to the question 5.2 of Greek participants

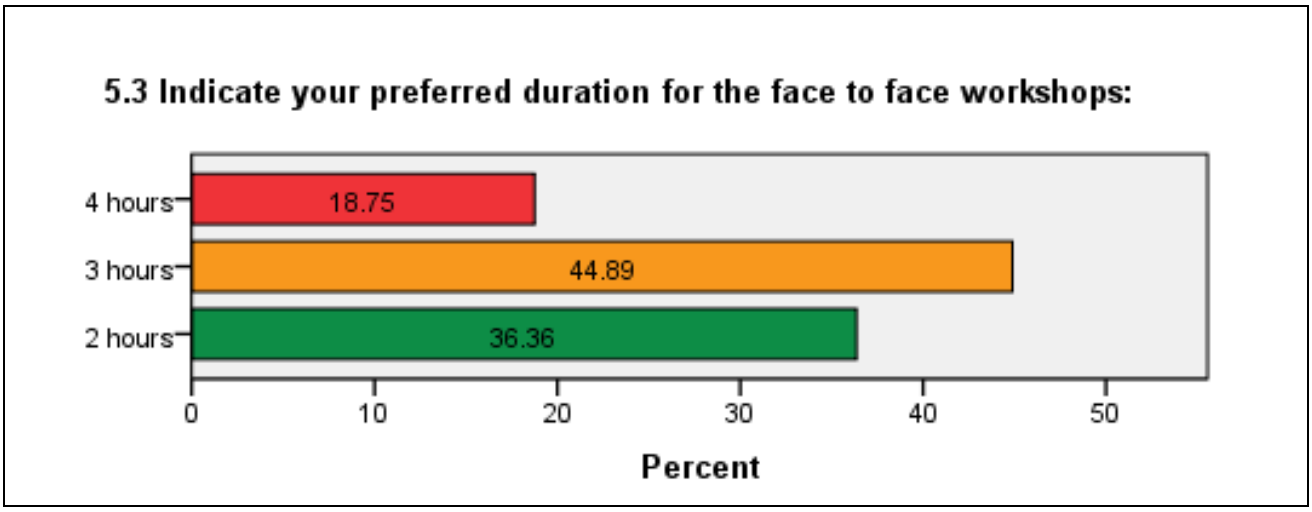

Fig. 19: Distribution of the answers to the question 5.3 of Greek participants

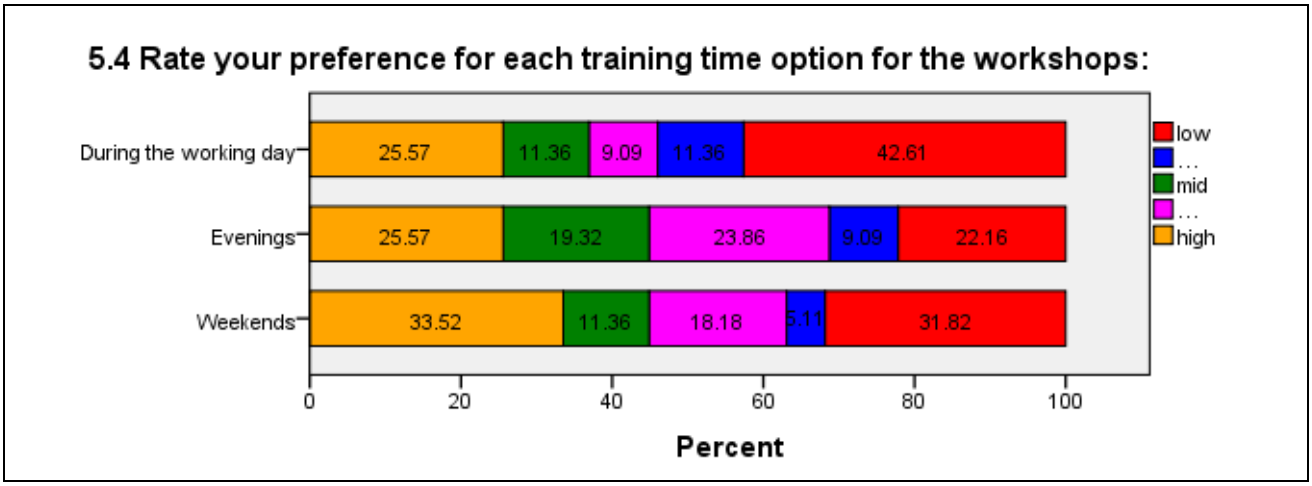

Fig. 20: Distribution of the answers to the question 5.4 of Greek participants

Requirements: The Greek CBL training workshops should consist of interaction with peer teachers/social networking opportunities, practical assignments, demonstrations of tools and instruments and examples of good practices. By following a workshop the participants expect to achieve an increase of opportunities for professional development, an introduction to real life/authentic assignments in the classroom, an introduction of more attractive teaching approaches and to enhance the learning opportunities of the students. This means that the expectations of the students considering the workshop are high.

Preferred time and duration of the workshop: The Greek respondents prefer to participate in training workshops during the evening or weekends. The preferred duration of the workshop is three hours.

4.2 The Netherlands

4.2.1 User profile

In the Netherlands 16 respondents participated in the survey research. The majority of these respondents in the questionnaire were female (62,5%). The ages of these respondents were mostly older than 31 (see Figure 21).

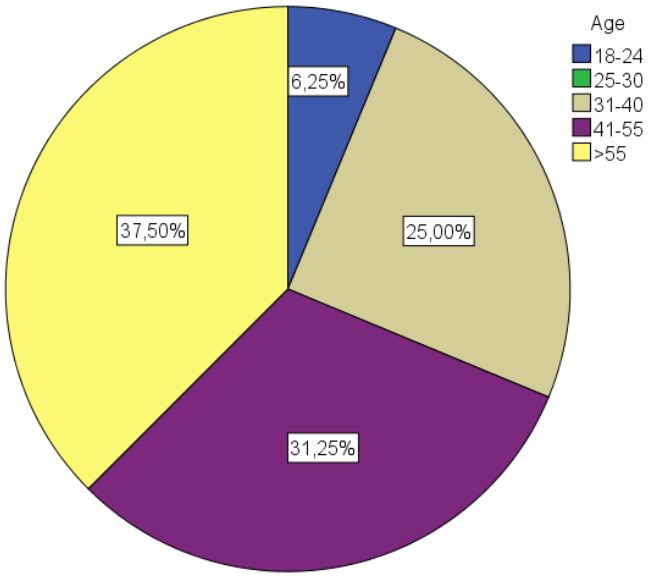

Fig. 21: Age distribution of Dutch respondents.

Most Dutch respondents have different professions within education. Some are teacher in primary or secondary education and some are curriculum developer. The highest amount of respondents (43,8%) has a masters' degree, while 25 percent has a teaching qualification. 56,3 percent of these educational staff have more than 15 years of experience within their profession. The Dutch respondents will mainly characterize themselves as enthusiastic in the use of ICT for educational purposes, 75% uses ICT when they can.

4.2.2 Current implementation of didactic and assessment of key competencies

One of the main reasons the concept of competency is popular in Dutch educational settings, is the expectation by many stakeholders that the gap between the labour market and education can be reduced through competency-based education. In the Netherlands, teachers are not fully convinced of their knowledge and skills to give competency-based education. However, the participants expect that the knowledge and skills are most present in vocational and higher education and lesser within primary and secondary education. But some participants also suspect that almost all Dutch teachers and policy makers need additional training in giving competency-based education.

The participants use different assessment methods, both formative and summative approaches. Some tools to assess the competencies of the students. Assignment, projects, performance assessments, counselling interviews, (e)Portfolios.

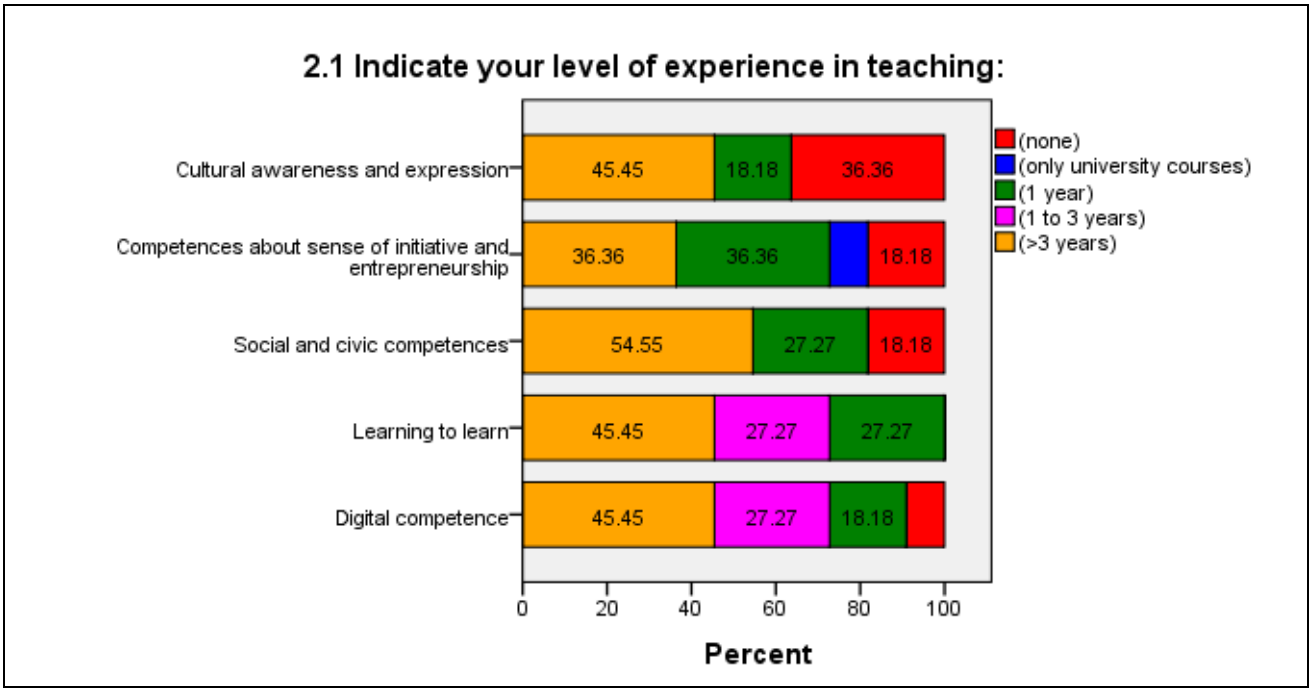

Fig. 22: Distribution of the answers to the question 2.1 of Dutch participants

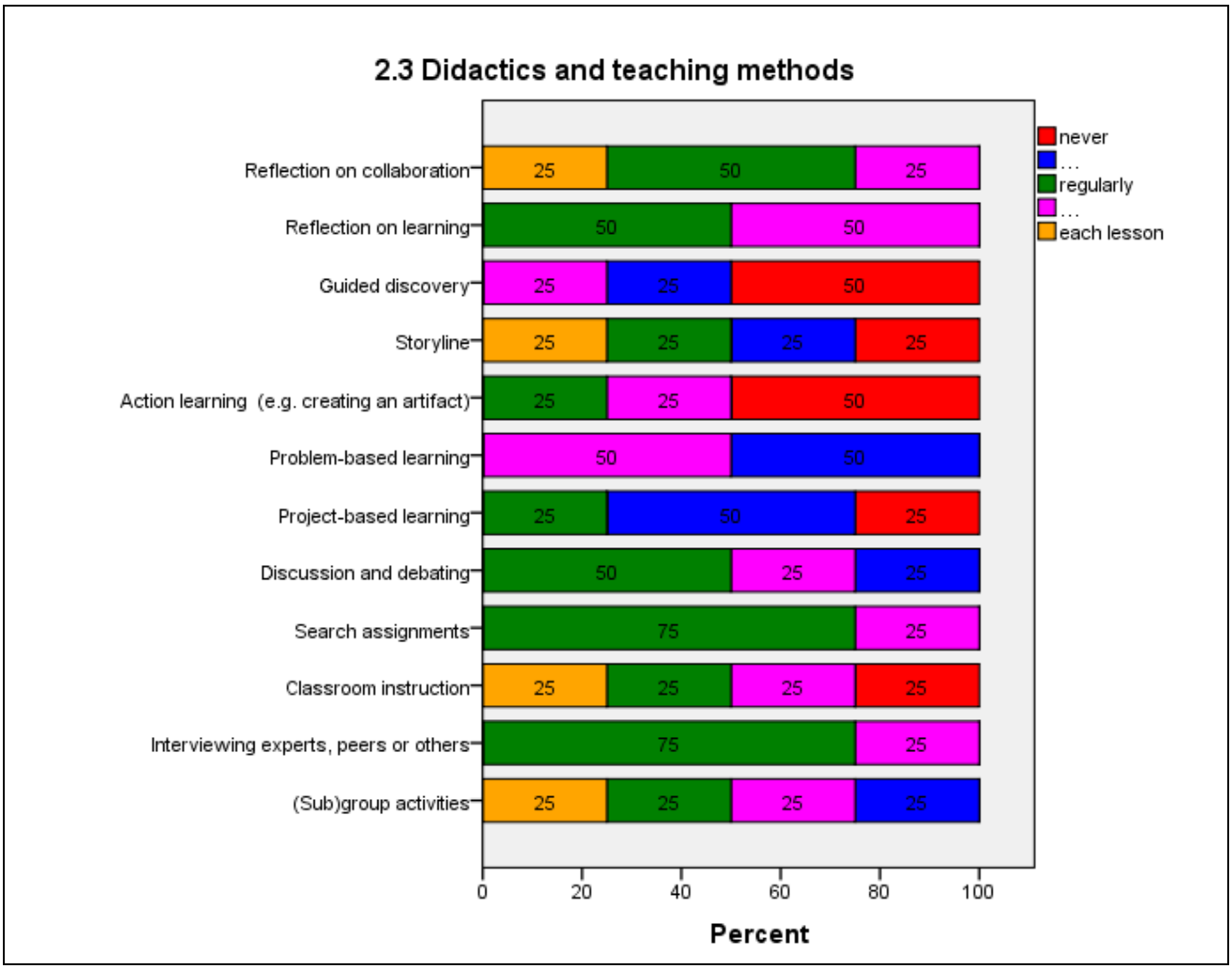

Fig. 23: Distribution of the answers to the question 2.3 of Dutch participants

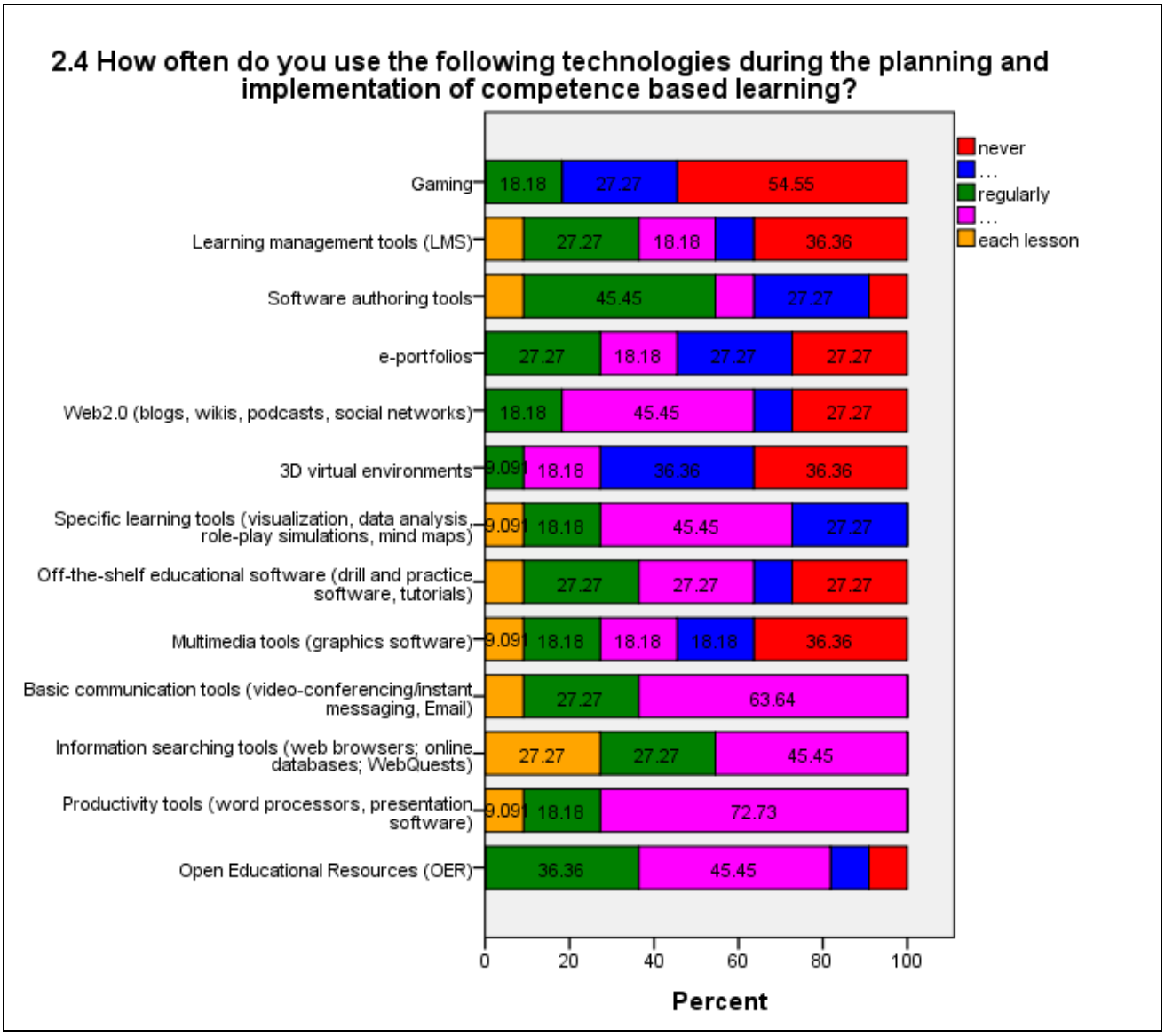

Fig. 24: Distribution of the answers to the question 2.4 of Dutch participants

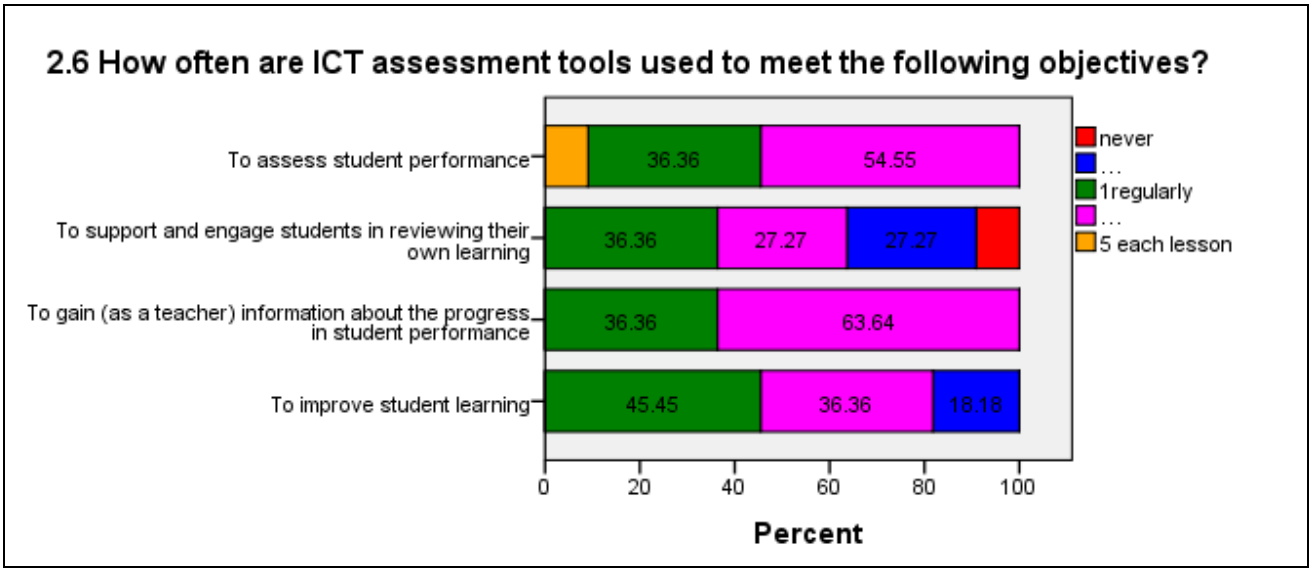

Fig. 25: Distribution of the answers to the question 2.6 of Dutch participants

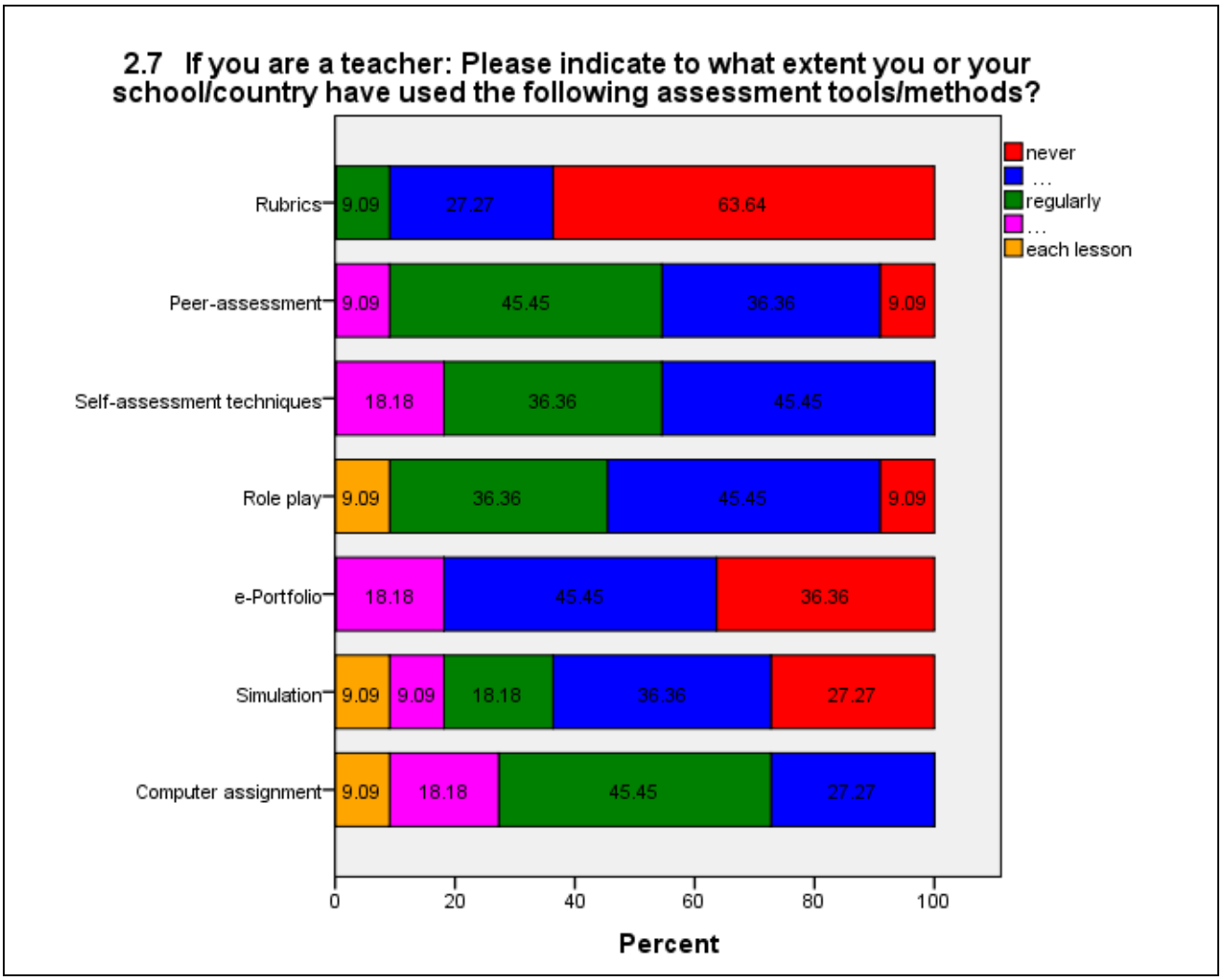

Fig. 26: Distribution of the answers to the question 2.7 of Dutch participants

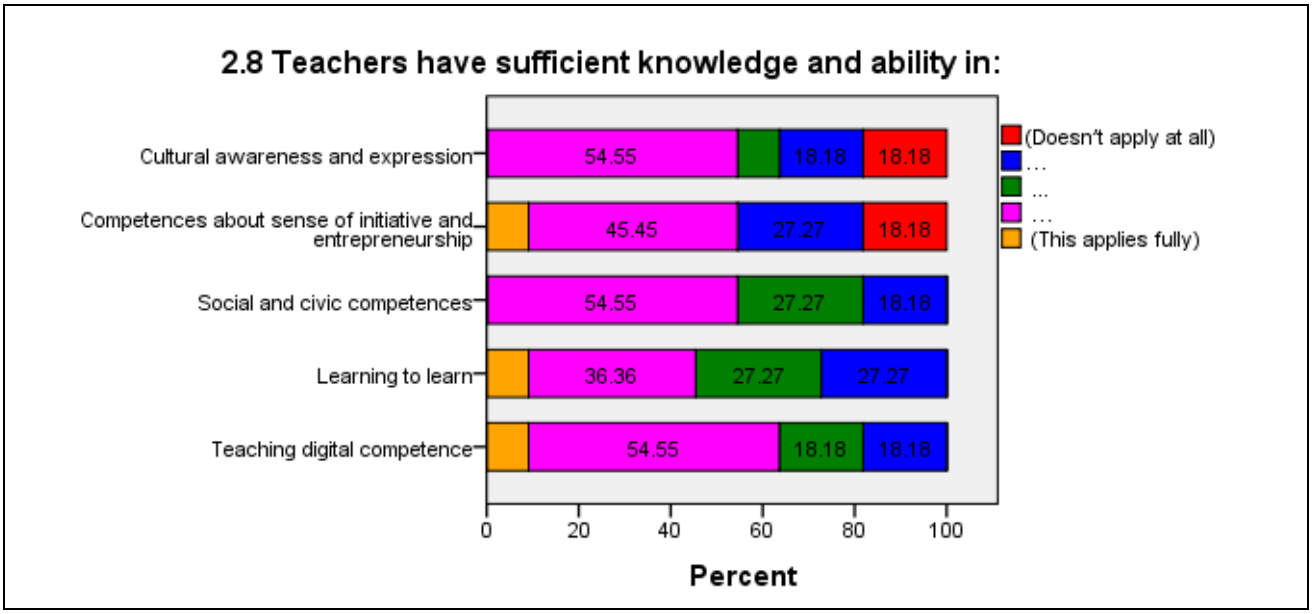

Fig. 27: Distribution of the answers to the question 2.8 of Dutch participants

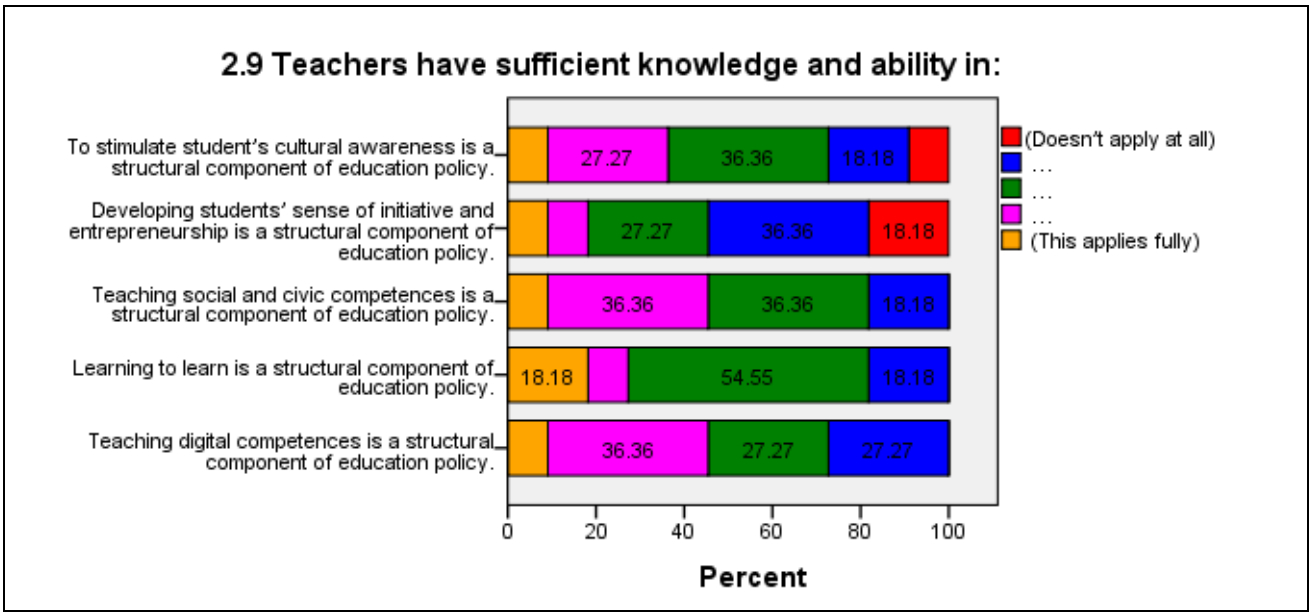

Fig. 28: Distribution of the answers to the question 2.9 of Dutch participants

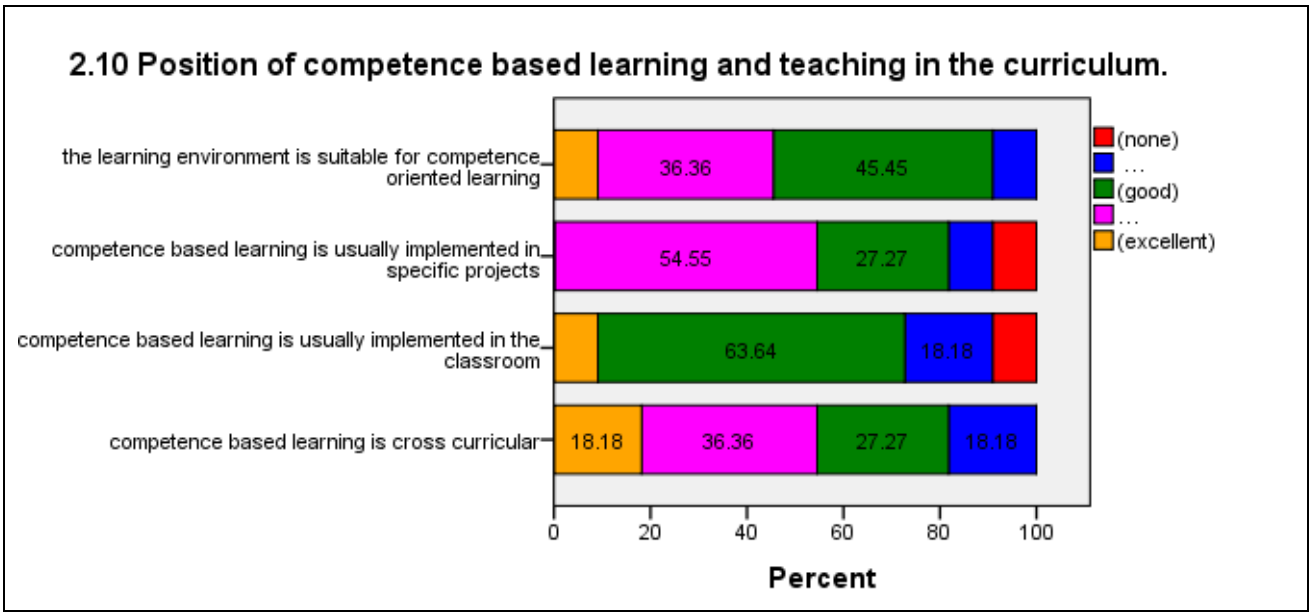

Fig. 29: Distribution of the answers to the question 2.10 of Dutch participants

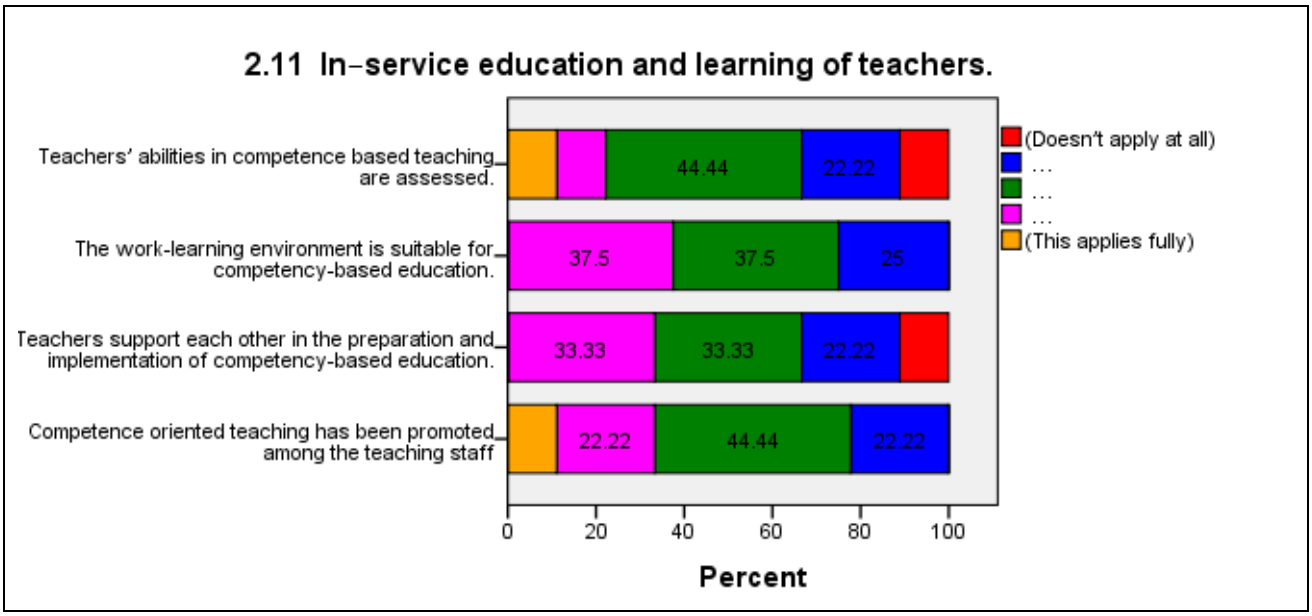

Fig. 30: Distribution of the answers to the question 2.11 of Dutch participants

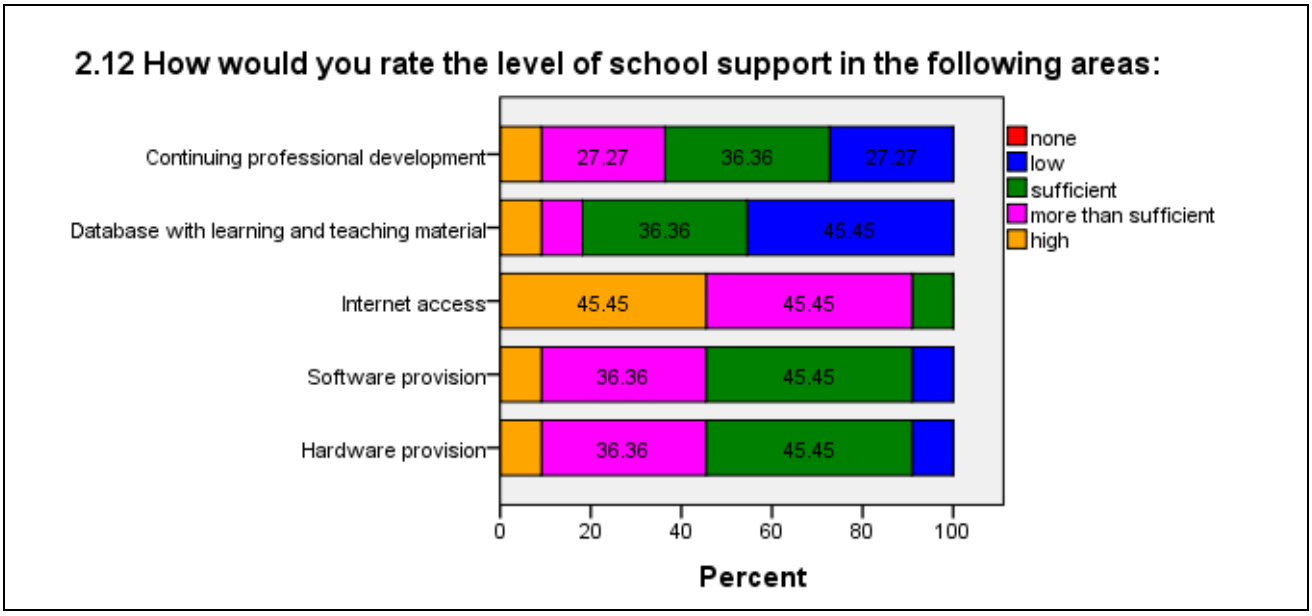

Fig. 31: Distribution of the answers to the question 2.12 of Dutch participants

Requirements: In general the Dutch respondents in this survey have quite a lot of experience with teaching following a competence based approach. More than 54% have more than three years of experience in the field of teaching social and civic competencies. In case of cultural awareness and expression, learning to learn and digital competencies, more than 45% of the respondents indicate that they have more than three years of teaching experience. Most of the Dutch respondents mentioned that they have experience with problem-based learning. Half of the respondents confirm that they use this approach more than regularly. However, some teaching methods were almost never used, i.e. guided discovery and action learning are two methods that were rarely used. During the planning and implementation of competence based learning three tools were used the most: 1) information searching tools (web browsers, online databases and WebQuests), 2) productivity tools (word processors and presentation software) and 3) basic communication tools (video-conferencing, instant messaging and Email). Almost 64% of the Dutch respondents indicate that they use ICT assessment tools to gain (as a teacher) information about the progress in student performance. More than half of the participants in the survey indicate that they use these tools to assess the student

performance. The assessment tools/methods the respondents have used regularly are computer assignments, peer assessment and self-assessment techniques, while the rubrics were almost never used. The Dutch respondents have confidence in the knowledge and ability of their colleagues when it comes to the competencies, only the competencies 'cultural awareness and expression' and 'competencies about sense of initiative and entrepreneurship' doesn't have a high score. The position of competence based learning and teaching in the curriculum is mainly implemented in specific projects and is according to half of the Dutch respondents cross curricular. There is no consensus in the quality of the in-service education. Competence oriented teaching is for example almost never promoted among the teaching staff and the teachers' abilities in competence based teaching is hardly assessed. The results from question 2.12 show that only the internet access is sufficient in the school. The level of continuing professional development and a database with learning and teaching material is only seldom present.

Open question 2.2: Please briefly describe what general steps you take when you plan a cross-curricular lesson that promotes key competency acquisition for your students.
There is big variation in answers to this open question. Some respondents mentioned that they try to start planning based on the competency and enhance it with cross- curricular approach. Others start the development of a cross curricular approach for teaching and assessing key competencies by planning lessons where competencies are immediately tested/practiced, i.e. by role playing games to test the social and citizen competencies, cultural awareness and expression or by doing online workshops to teach and assess the digital competencies.

Open question 2.5: Do you experience constraints when planning competency based teaching? If yes, please describe these constraints (e.g. constraints relating to resources, class size, time, knowledge and experience, not a priority in my school)?
Some constraints the respondents encounter when planning competency based teaching are: class size, time constraints and insufficient available rooms. Beside that some respondents also mentioned some structural shortcomings like institutional frameworks and established (traditional) systems.

4.2.3 Training needs

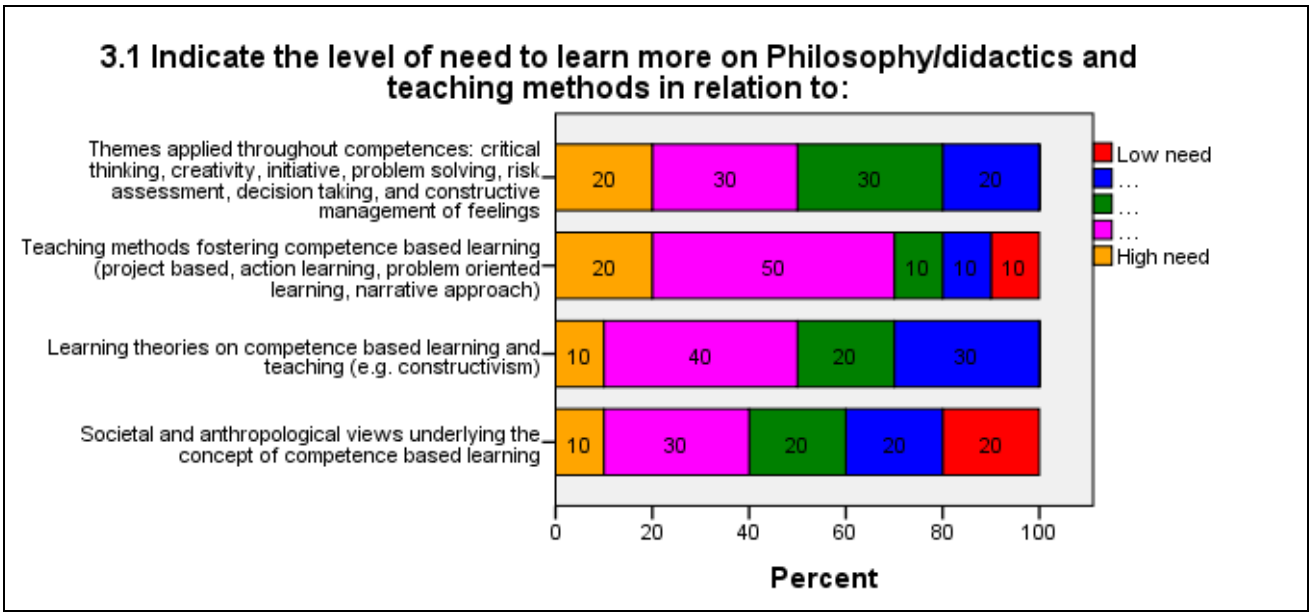

Fig. 32: Distribution of the answers to the question 3.1 of Dutch participants

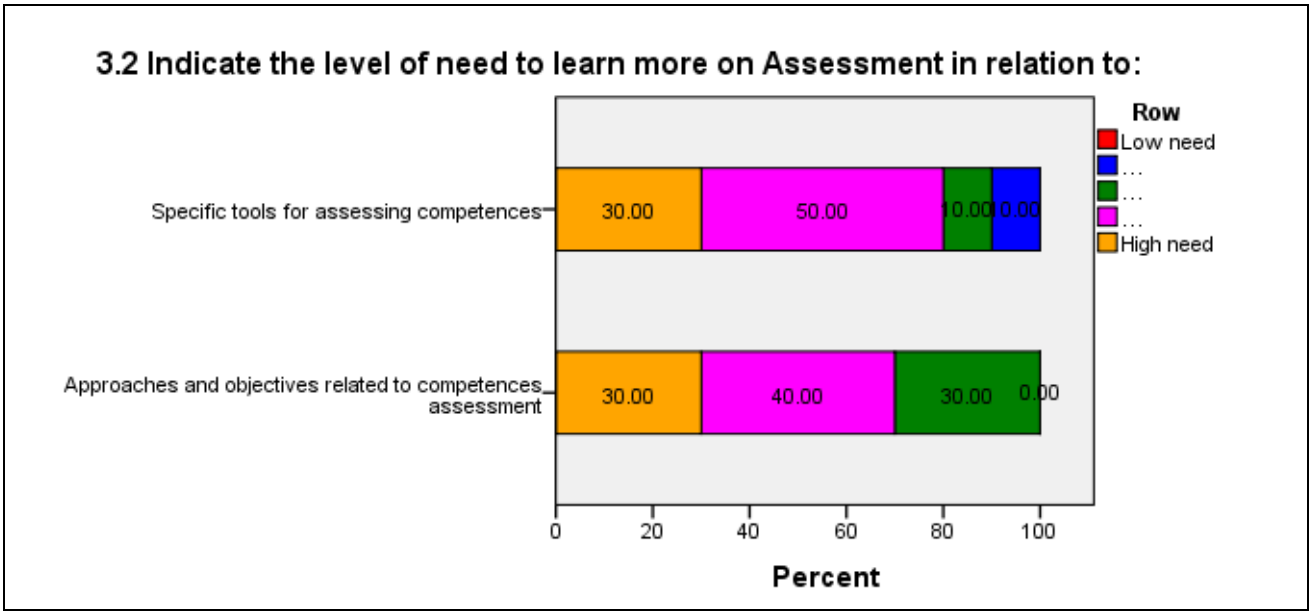

Fig. 33: Distribution of the answers to the question 3.2 of Dutch participants

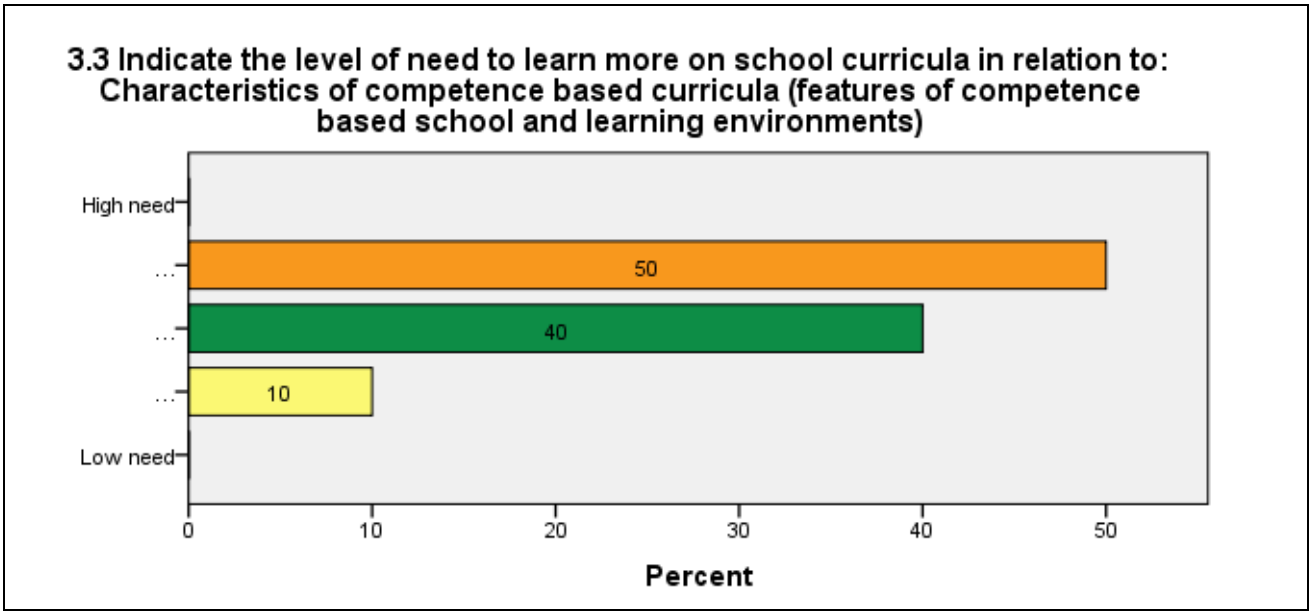

Fig. 34: Distribution of the answers to the question 3.3 of Dutch participants

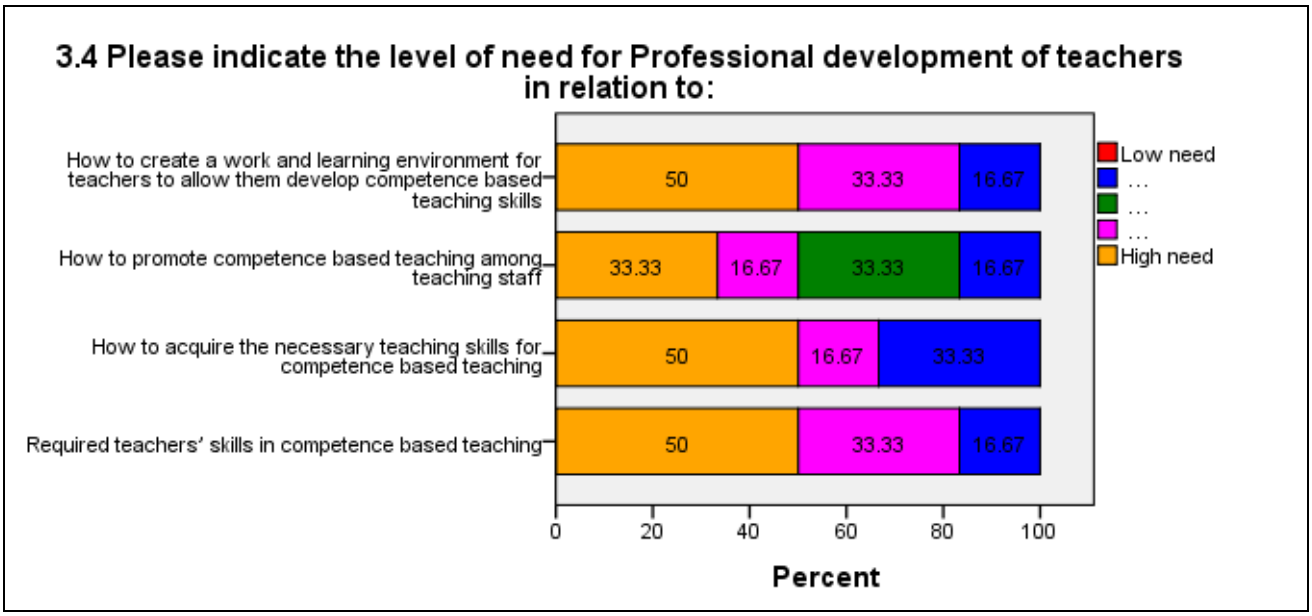

Fig. 35: Distribution of the answers to the question 3.4 of Dutch participants

Training requirements: The result show that Dutch participants in the survey have a high need in teaching methods fostering competency based learning (i.e. project based, action learning, problem oriented learning and narrative approaches). In addition there is a substantial need for learning theories on competency based learning and teaching (i.e. constructivism). In case of assessment methods there is a high need for both specific tools for assessing competencies as approaches and objectives related to competencies assessment. Half of the participants in this survey have a need to learn more on school curricula in relation to characteristics of competence based curricula (features of competence based school and learning environments). The need for professional development – as asked in question 3.4 – is high for circumstances. More than 83% want to learn how they can create a work and learning environment for teachers to allow them in developing competence based teaching skills, the same amount of respondents also want to learn more about the required teachers' skills in competence based teaching.

4.2.4 Availability to participate in the project

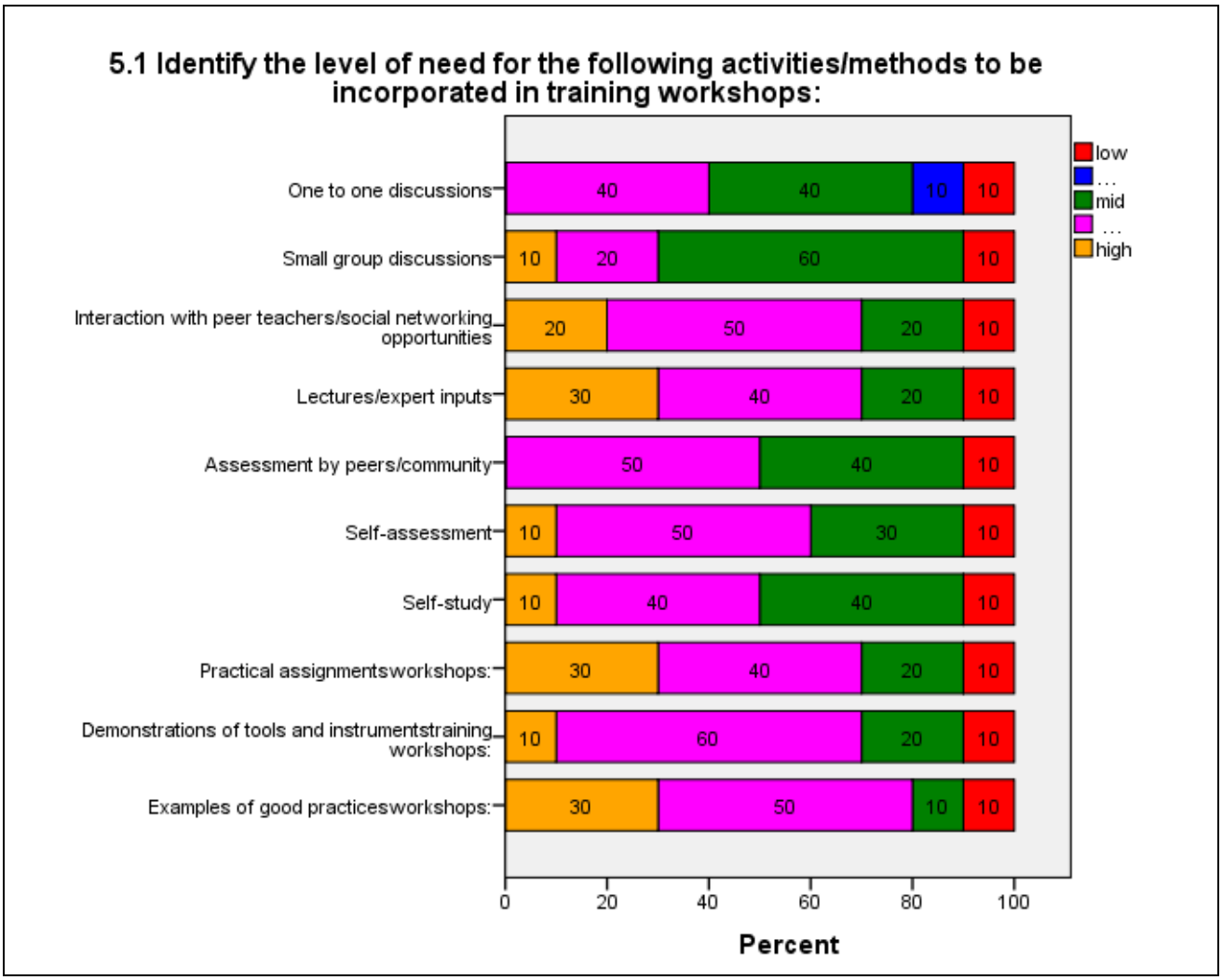

Fig. 36: Distribution of the answers to the question 5.1 of Dutch participants

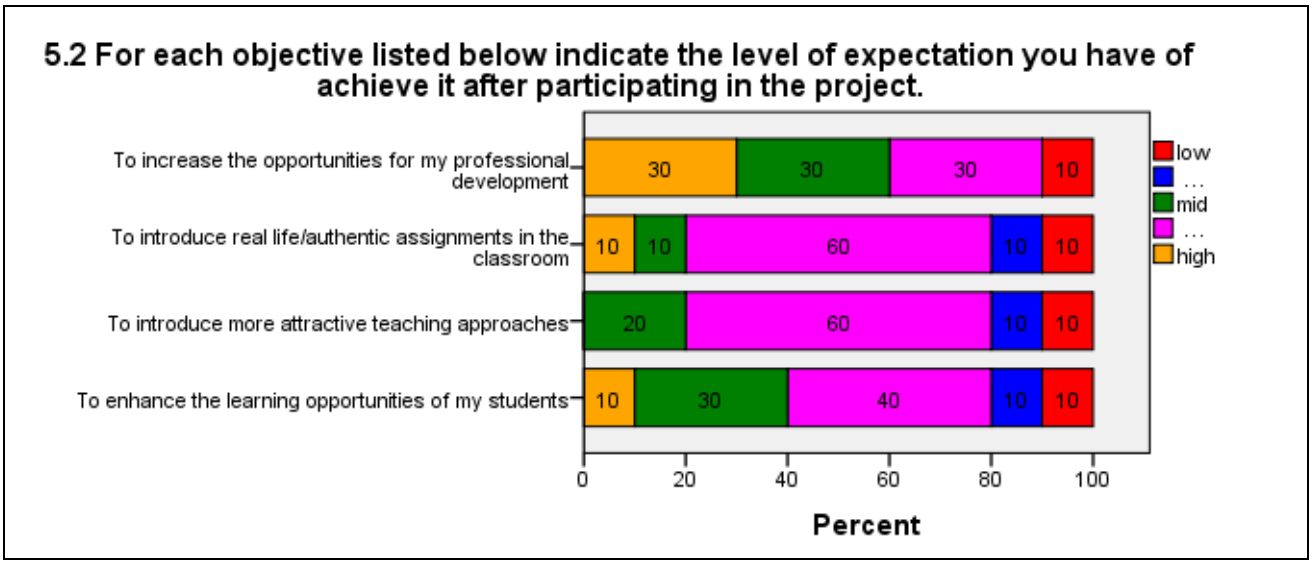

Fig. 37: Distribution of the answers to the question 5.2 of Dutch participants

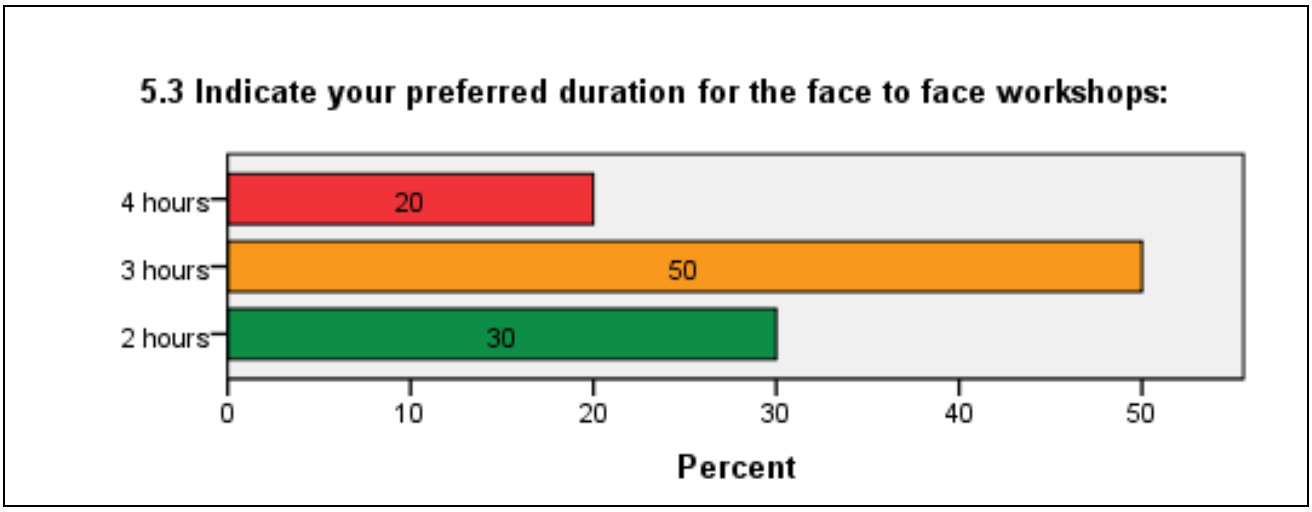

Fig. 38: Distribution of the answers to the question 5.3 of Dutch participants

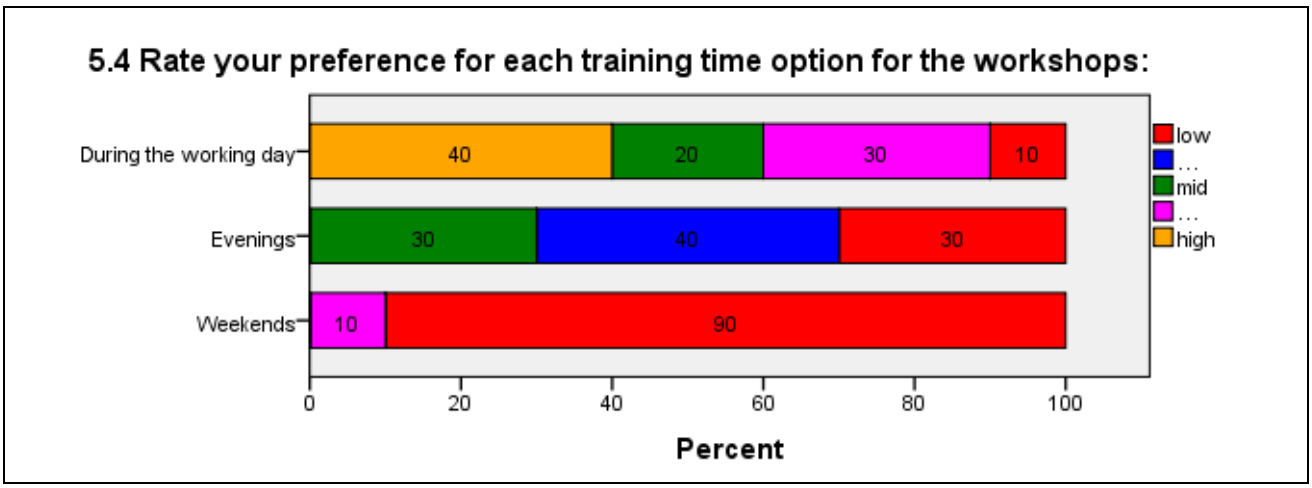

Fig. 39: Distribution of the answers to the question 5.4 of Dutch participants

Requirements: During the workshops, the following activities/methods should be integrated: examples of good practices workshops, practical assignments workshops and lectures/expert inputs. There is no urgent need for one-to-one discussions in the upcoming workshops. The respondents expect to learn how to increase the opportunities for a professional development, how to introduce real life/authentic assignment in the classroom, how to introduce more attractive teaching approaches and how to enhance the learning opportunities of the students.

Preferred time and duration of the workshop: The Dutch respondents prefer to participate in the training workshops during the working day and with duration of three hours.

4.3 Ireland

4.3.1 User profile

In Ireland 17 respondents filled in the questionnaire related to competency-based learning and training. Most of them were male and in the age of 41 and older. Half of them are teachers in secondary education, while the other half is school leader.

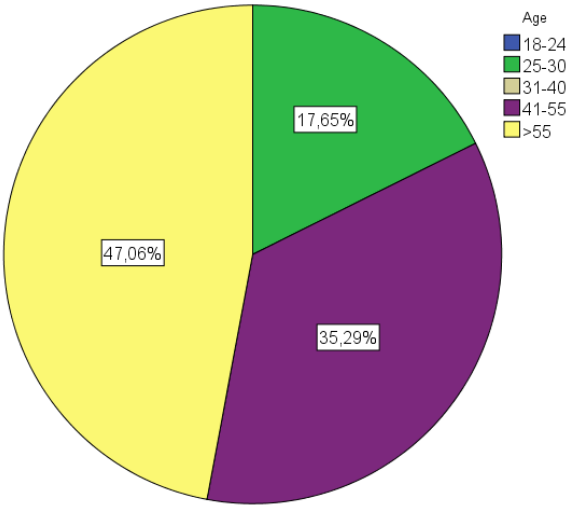

Fig. 40: Age distribution of respondents

Most of the respondents have more than 15 years of experience within their profession. Seven of them have a bachelor-degree and six of them a master-degree. The respondents characterize themselves as enthusiastic users of ICT.

4.3.2 Current implementation of didactic and assessment of key competencies

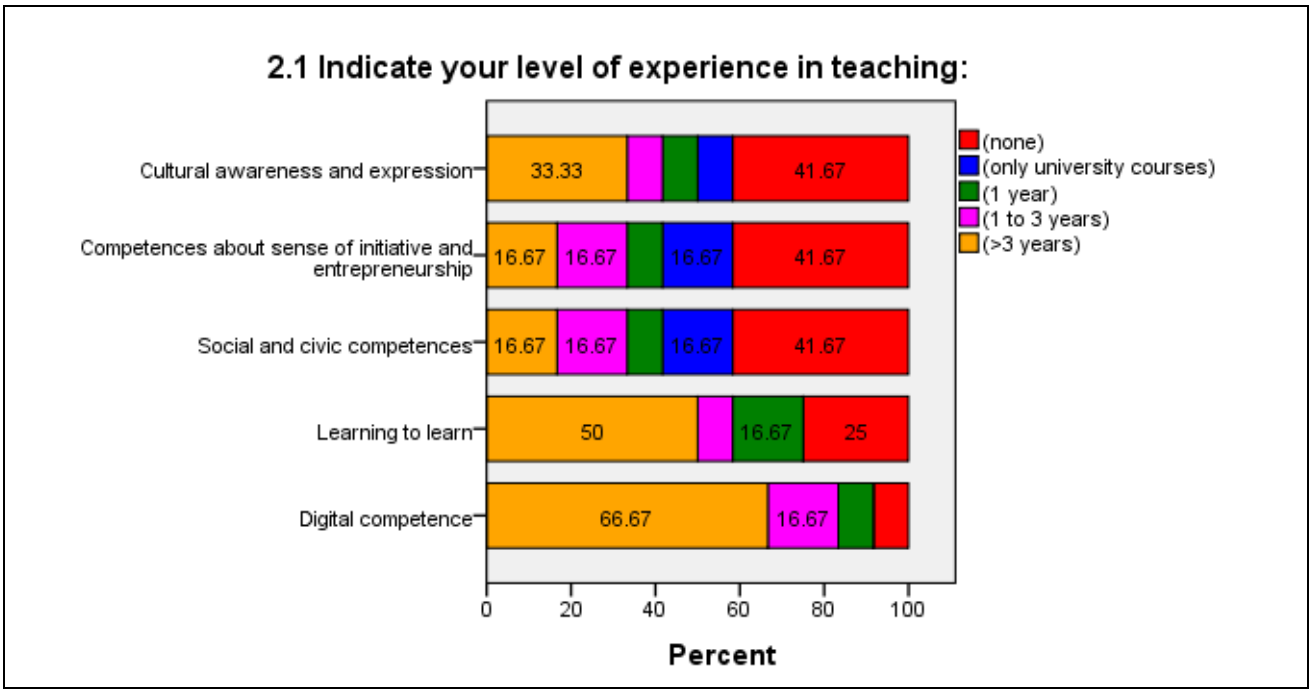

Fig. 41: Distribution of the answers to the question 2.1 of Irish participants

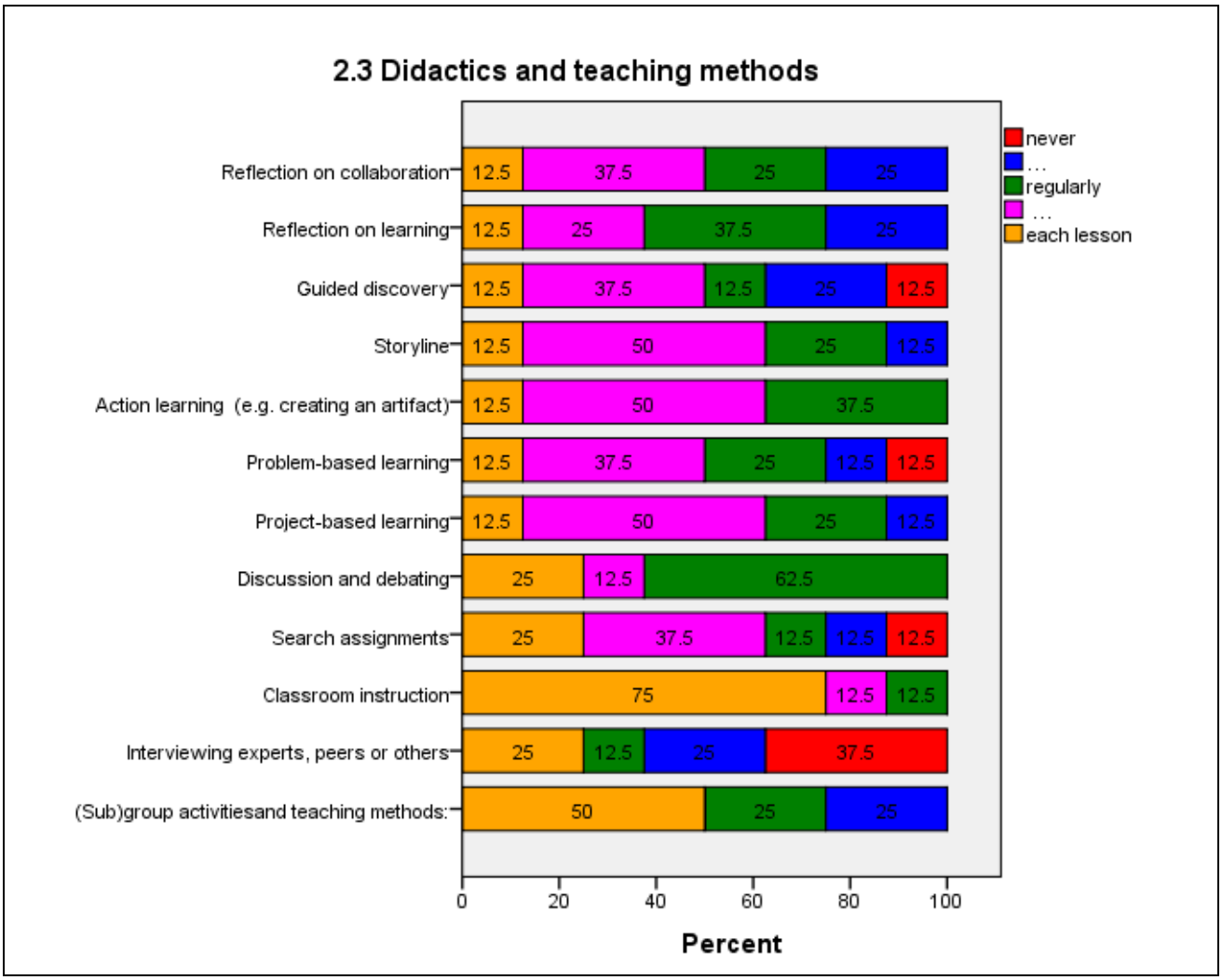

Fig. 42: Distribution of the answers to the question 2.3 of Irish participants

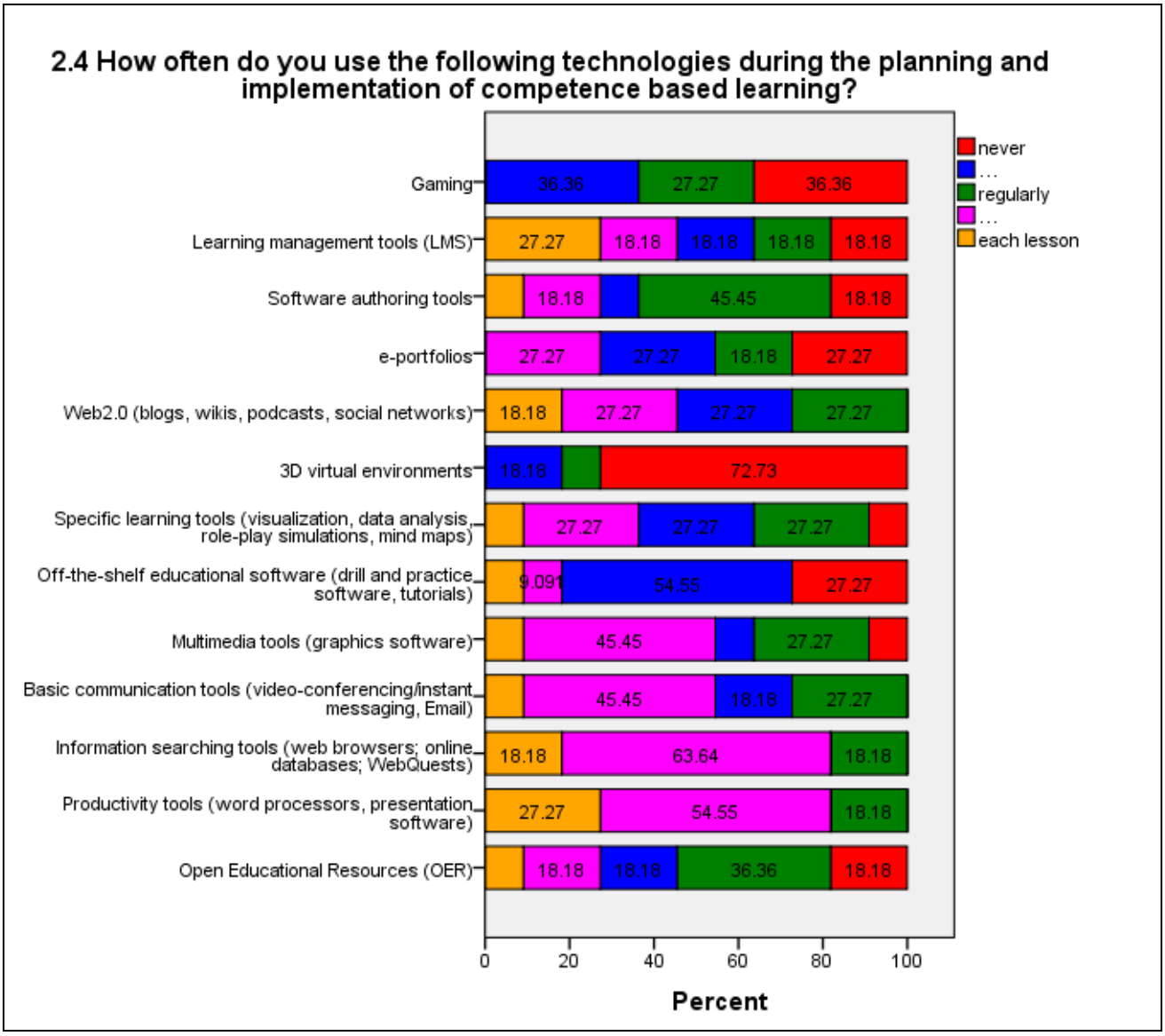

Fig. 43: Distribution of the answers to the question 2.4 of Irish participants

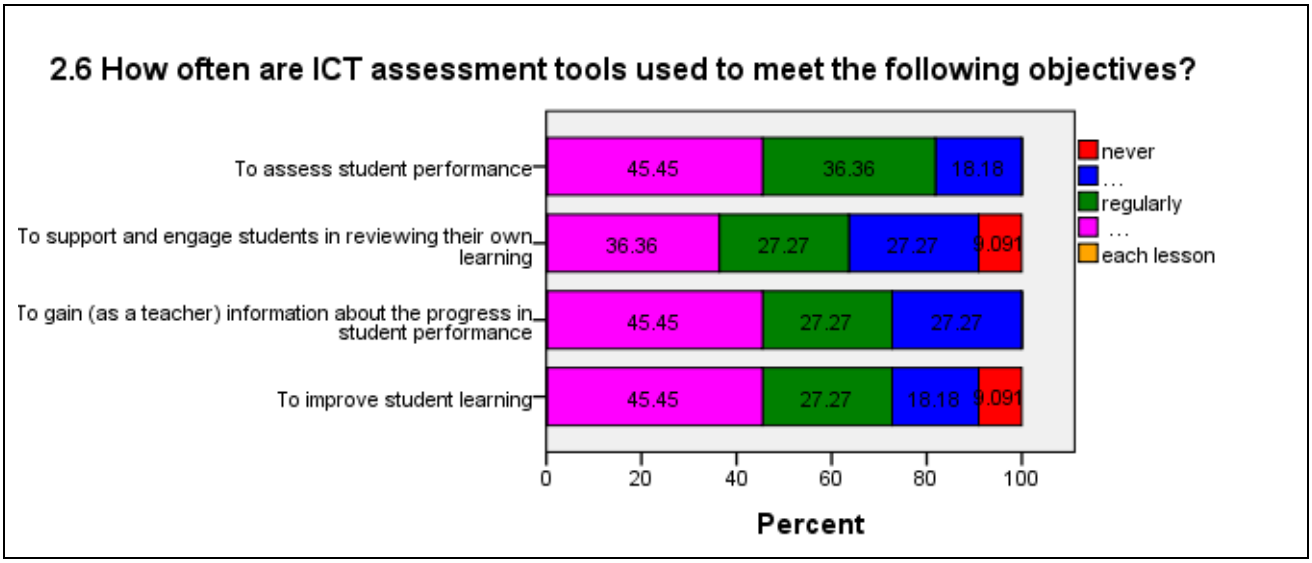

Fig. 44: Distribution of the answers to the question 2.6 of Irish participants

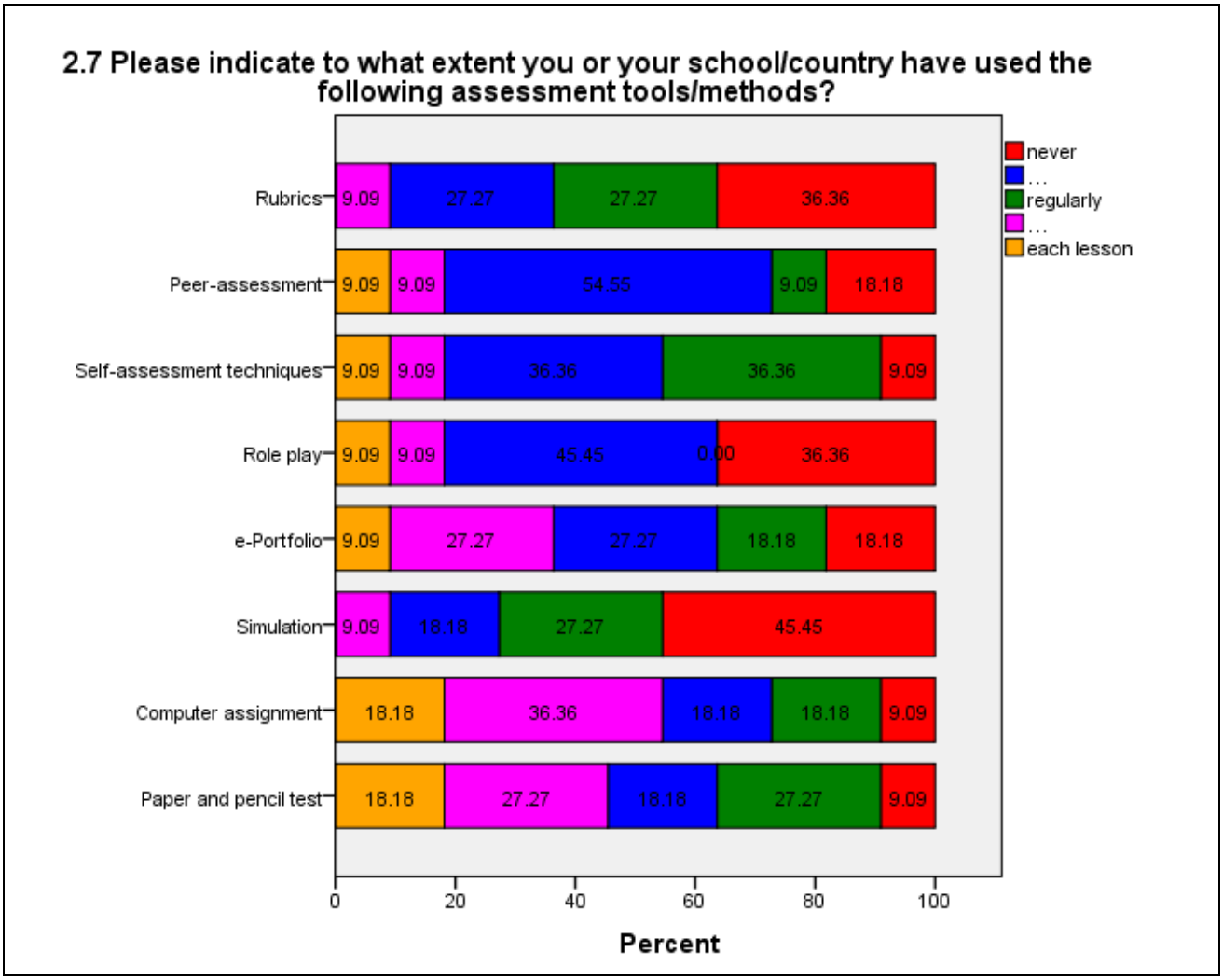

Fig. 45: Distribution of the answers to the question 2.7 of Irish participants

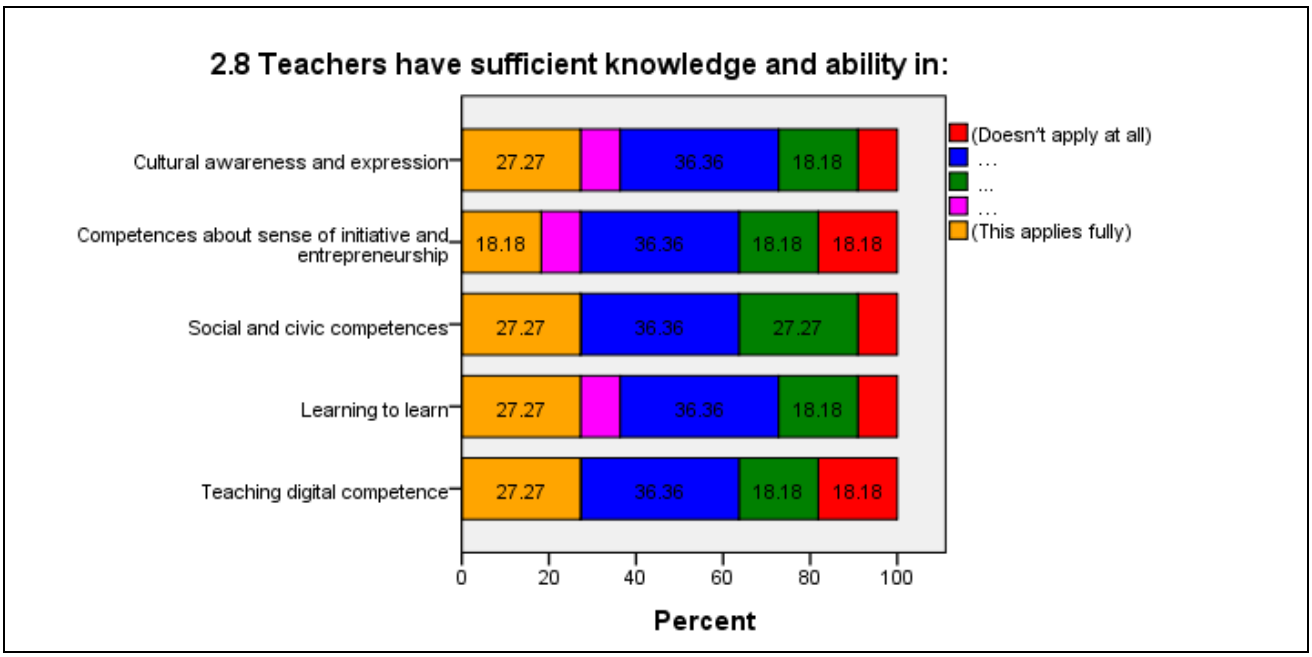

Fig. 46: Distribution of the answers to the question 2.8 of Irish participants

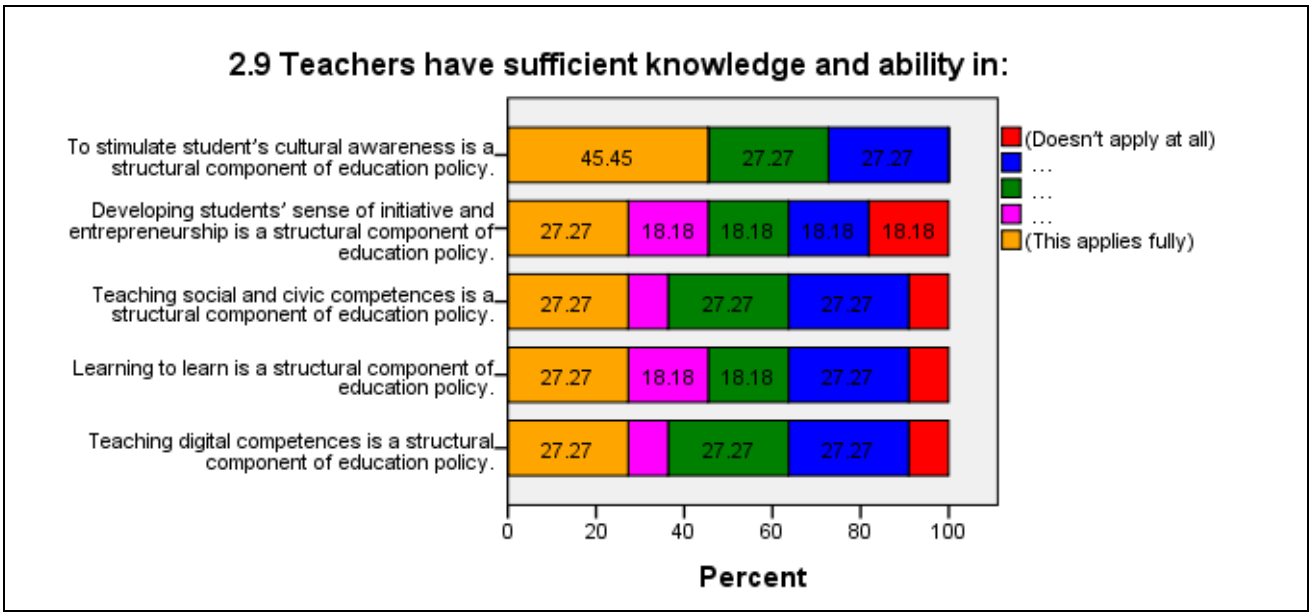

Fig. 47: Distribution of the answers to the question 2.9 of Irish participants

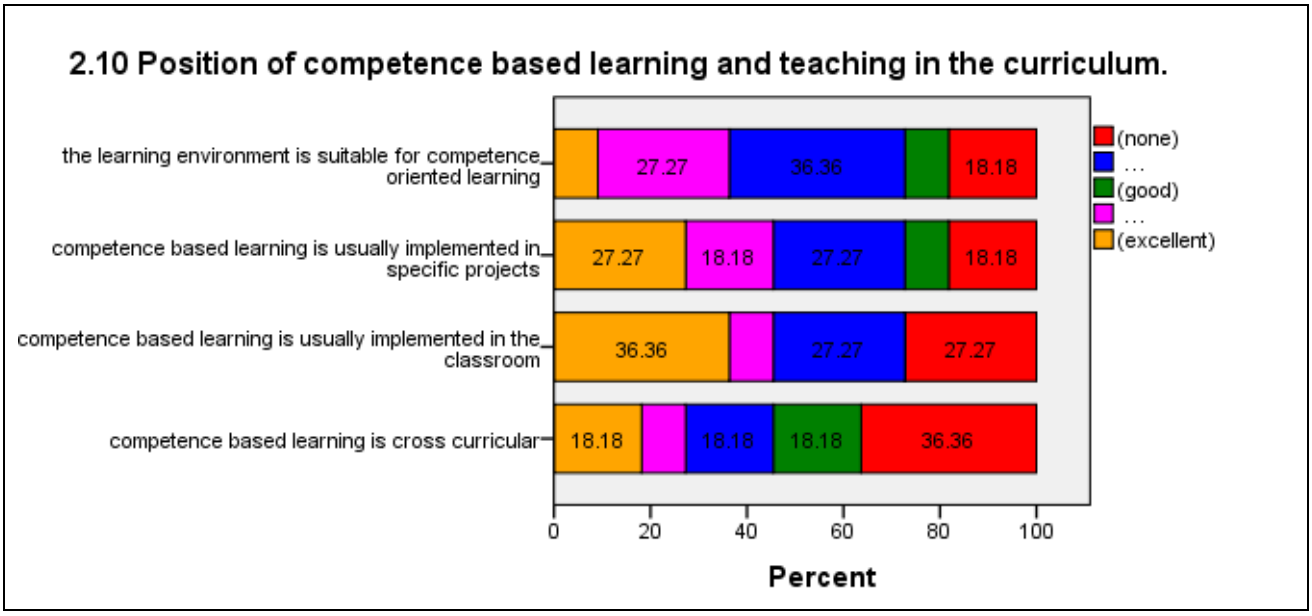

Fig. 48: Distribution of the answers to the question 2.10 of Irish participants

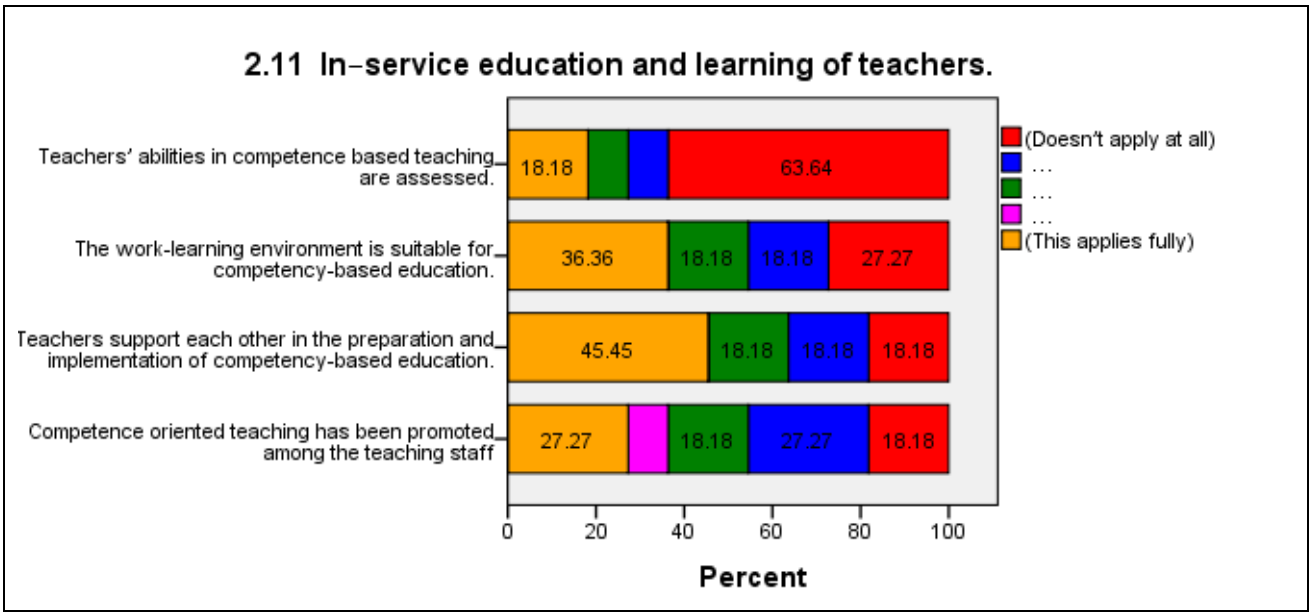

Fig. 49: Distribution of the answers to the question 2.11 of Irish participants

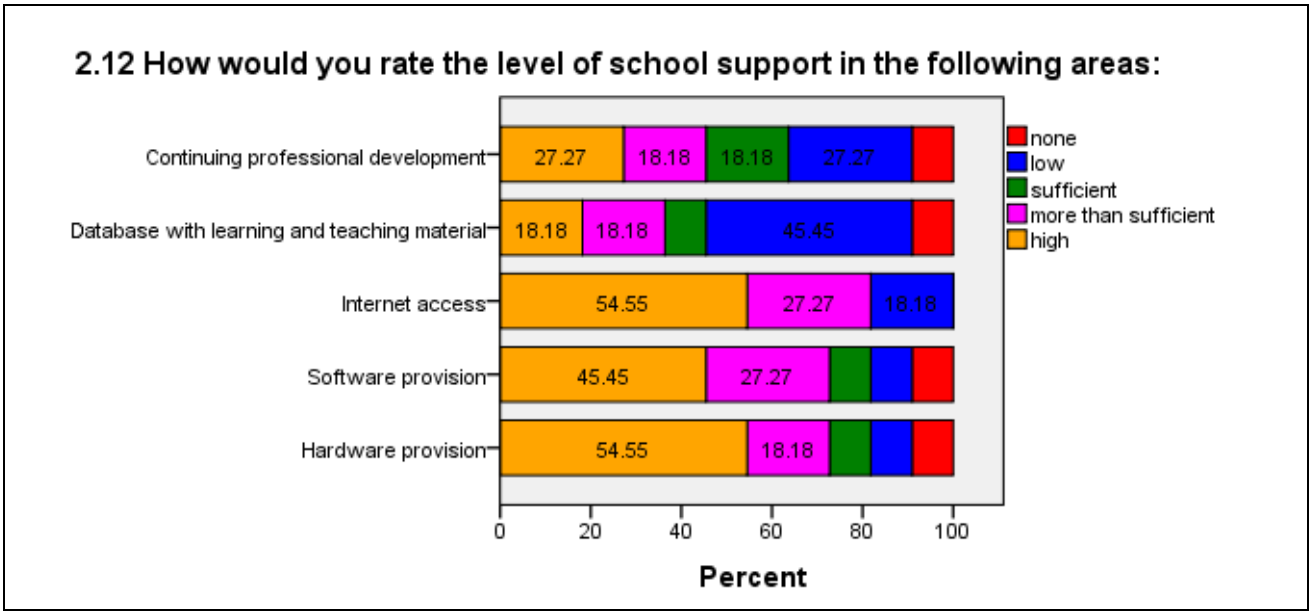

Fig. 50: Distribution of the answers to the question 2.12 of Irish participants

Requirements: The respondents in Ireland mentioned that they have a high level of experience within teaching digital competencies (66,7%). The experience with teaching the other competencies is a bit lower. Half of the respondents have more than five year experience with teaching the competency 'learning to learn'. However, within the Irish sample there is little experience with the teaching of social and civic competencies, competencies about sense of initiative and entrepreneurship and cultural awareness and expression. The didactics and teaching methods in Ireland are mostly based on classroom instruction and (sub)group activities and teaching methods. Storyline, action learning and project-based learning are also used with great frequency. The method to interview experts, peers or others is a seldom used one. In the implementation of CBL information searching tools and productivity tools were the most used technologies, while there is almost no use of 3D-environments. The use of ICT assessment tools is often used to assess the student performance, to gain information about the progress in student performance and to improve student learning. The Irish respondent pointed computer assignments and paper and pencil assignments as two of the most used assessment tools. Simulation, rubrics and role play are three

tools that are used very rarely. There is still some doubt about the knowledge and ability of the Irish teachers on CBL. They are more confident about giving competency based teaching, especially when it comes to stimulate student's cultural awareness as a structural component of educational policy. The position of CBL in the curriculum is limited mainly to the classroom and specific projects. One of the reasons for the limited position of CBL in the curriculum can be the in-service training; the teachers' abilities in competence based teaching are for example almost not assessed. The support of teachers in the preparation and implementation of competency based education is a much more positive tendency. The level of school support when it comes to having a database with learning and teaching material is limited to a small part of educational institutions. The internet access and software & hardware provision is much better regulated.

Open question 2.2: Please briefly describe what general steps you take when you plan a cross-curricular lesson that promotes key competency acquisition for your students.
The majority of Irish respondents don't plan cross curricular lessons. Most of them only plan subject lessons. However, some respondents mentioned that they want to create CBL: "I try to build in the competencies in my lesson plans and project work I give using rubrics and continuous assessment.

Open question 2.5: Do you experience constraints when planning competency based teaching? If yes, please describe these constraints (e.g. constraints relating to resources, class size, time, knowledge and experience, not a priority in my school)?
The constraints the participants in this survey experience are class size, lack of broadband connectivity and lack of time. One respondent describes it as follows: "Not a priority in my school - not part of the exam syllabus thus time constraints".

4.3.3 Training needs

One of the major needs is for themes applied throughout competencies such as critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings. Big variation is noticed in answering the specific question.

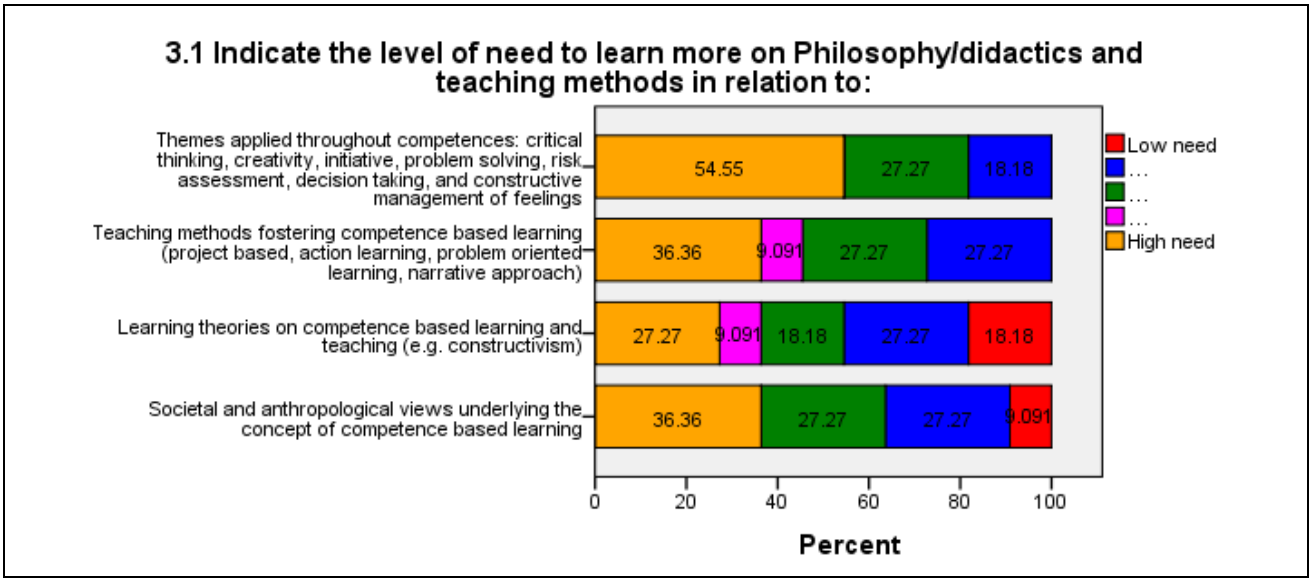

Fig. 51: Distribution of the answers to the question 3.1 of Irish participants

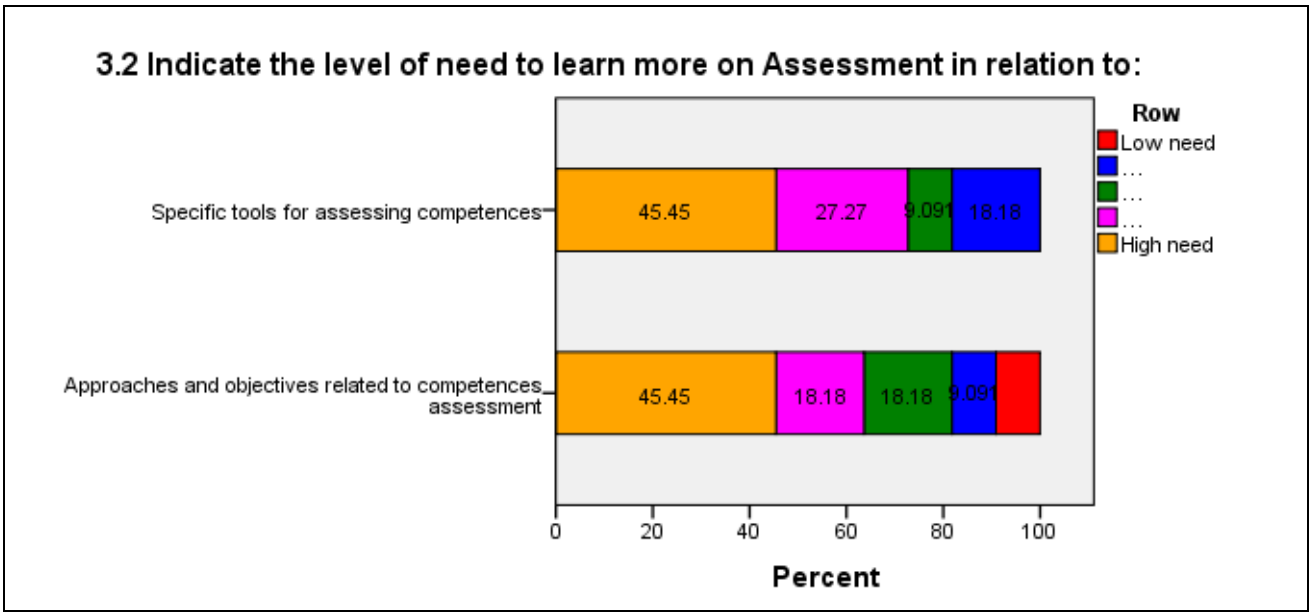

Fig. 52: Distribution of the answers to the question 3.2 of Irish participants

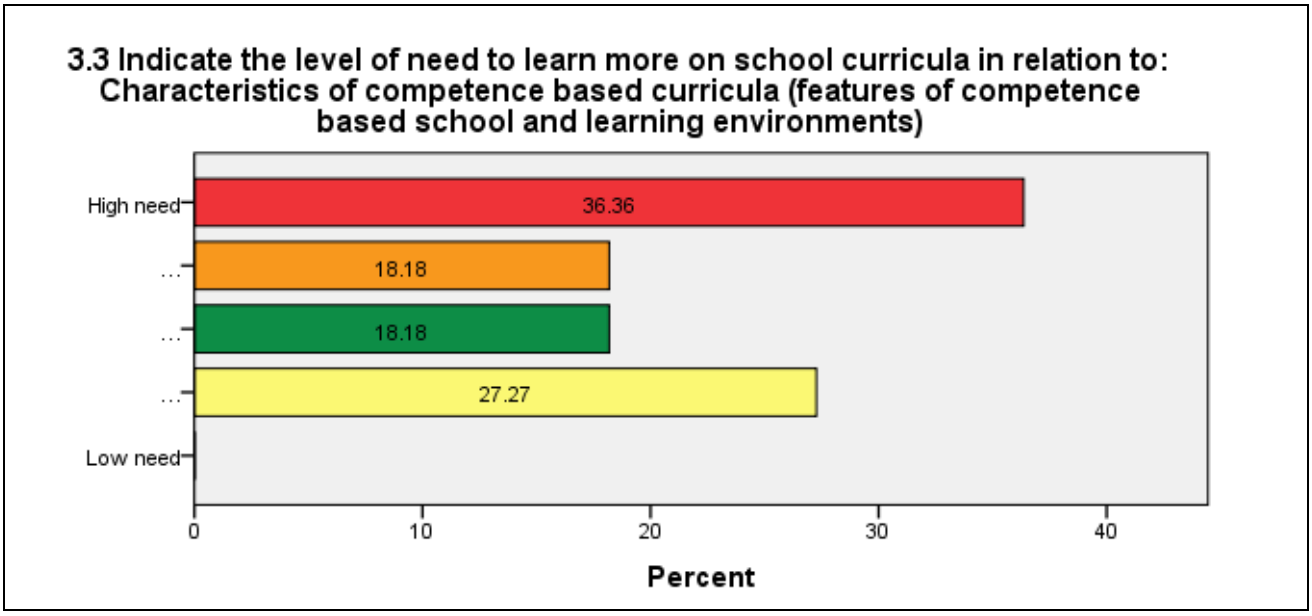

Fig. 53: Distribution of the answers to the question 3.3 of Irish participants

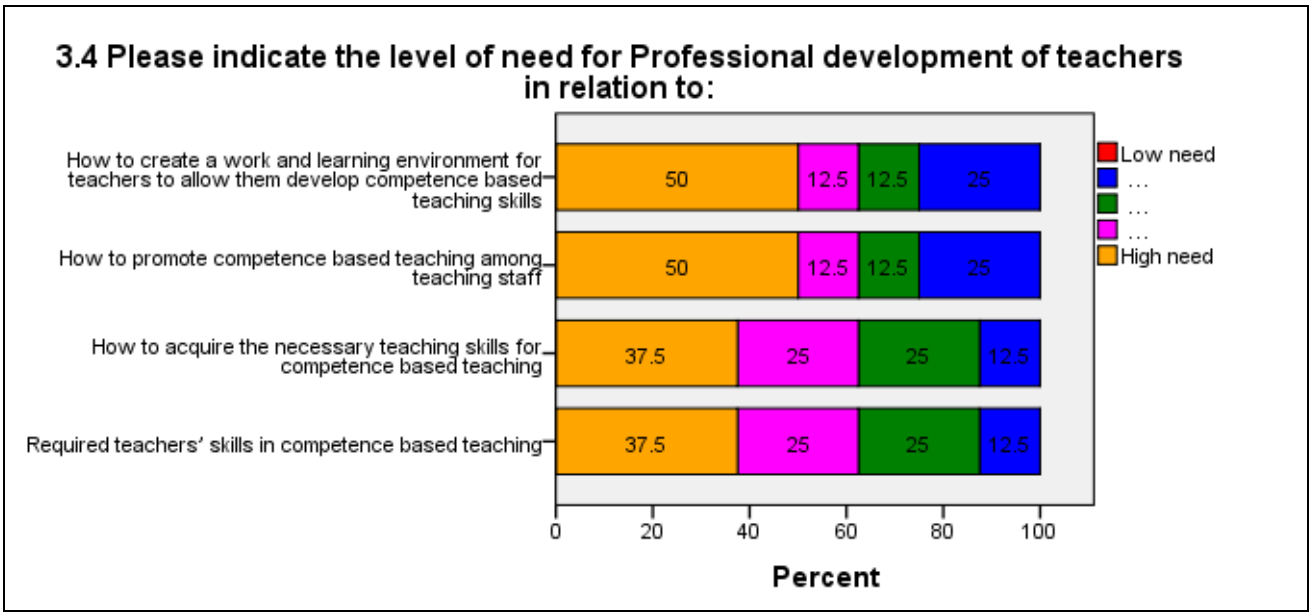

Fig. 54: Distribution of the answers to the question 3.4 of Irish participants

Training requirements: The Irish respondents mentioned the themes applied throughout competencies, like critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings as the key training need to improve competency based teaching. Beside that they want to learn more about teaching methods fostering competency based learning and the societal and anthropological views underlying the concept of competency based learning. In case of the assessment of competencies, the respondents point specific tools for assessing competencies and approaches and objectives related to competencies assessment as the most important needs. The need to learn more on school curricula in relation to characteristics of competency based curricula (features of competence based school and learning environments) is quite high in Ireland. A lot of respondents (more than 72%) have a need for more education in school curricula. The level of need for professional development of teachers is especially high when it comes to the creation of a work and learning environment for teachers to allow them in developing competence based skills. Besides that they have a high need for more guidelines in how to promote competence based teaching among teaching staff.

4.3.4 Availability to participate in the project

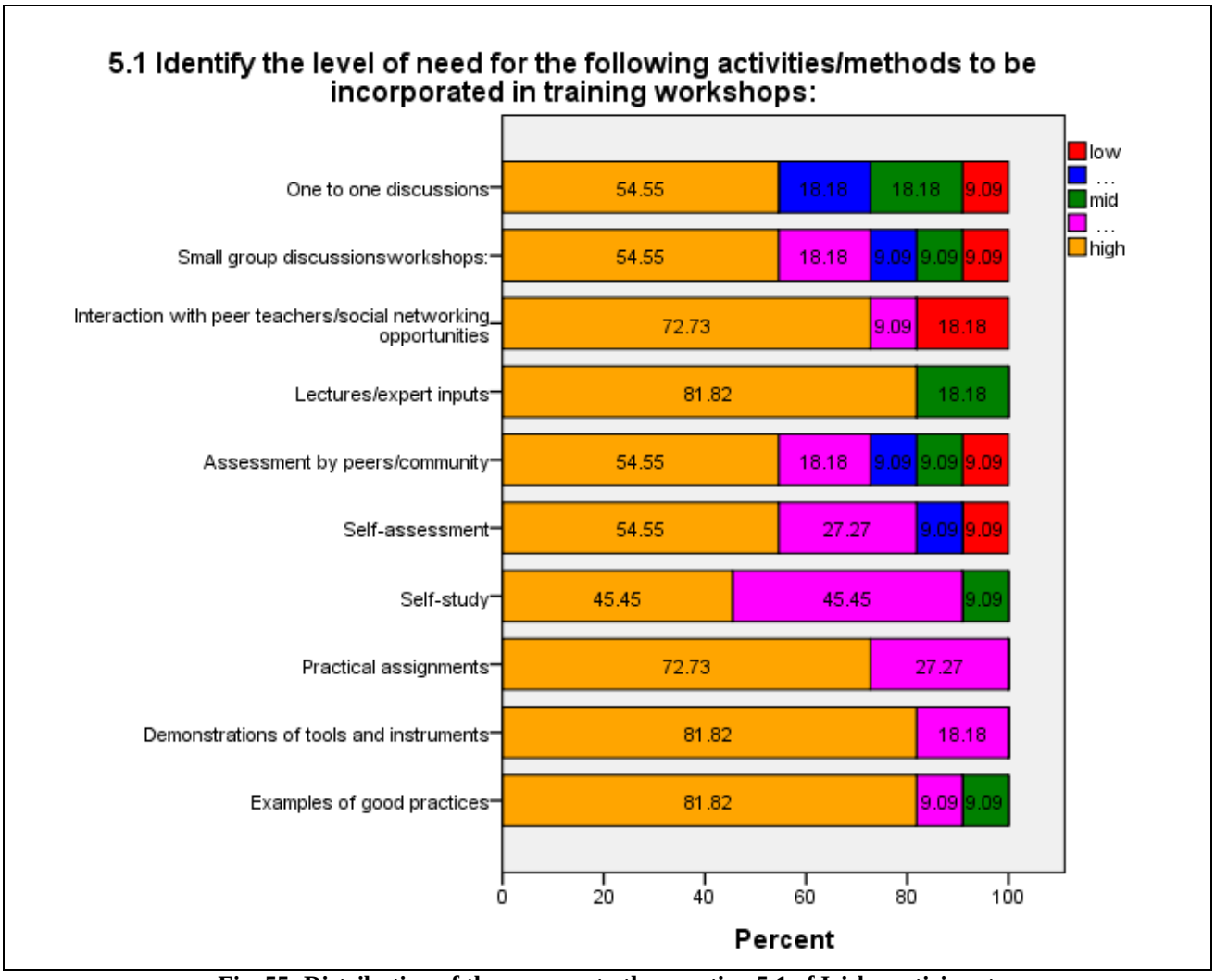

Fig. 55: Distribution of the answers to the question 5.1 of Irish participants

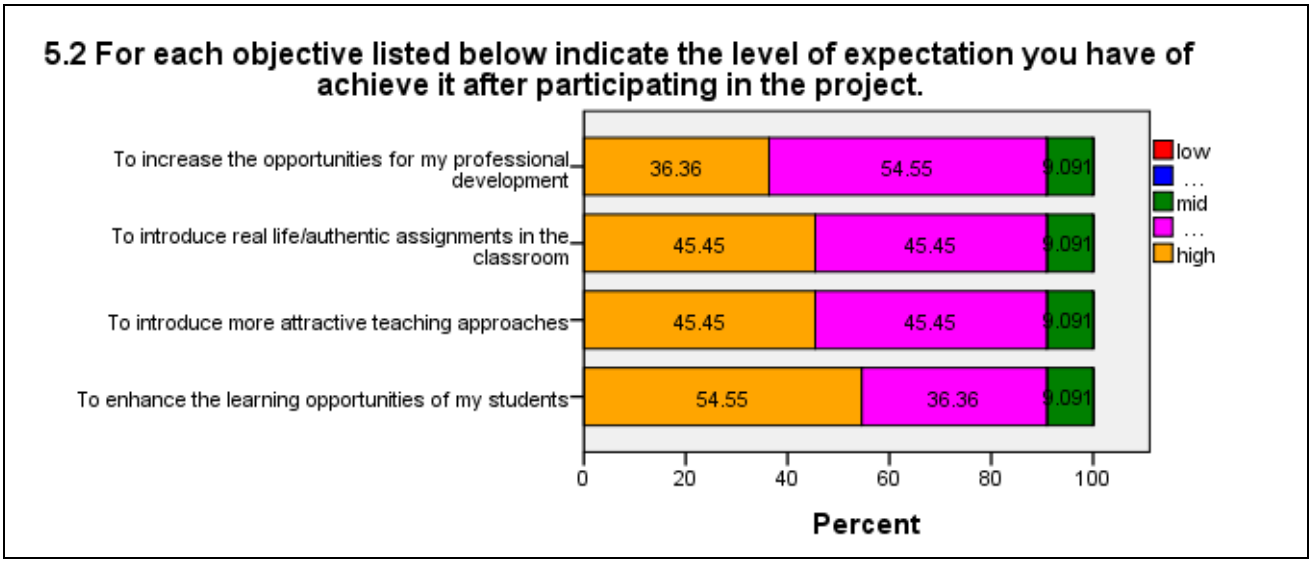

Fig. 56: Distribution of the answers to the question 5.2 of Irish participants

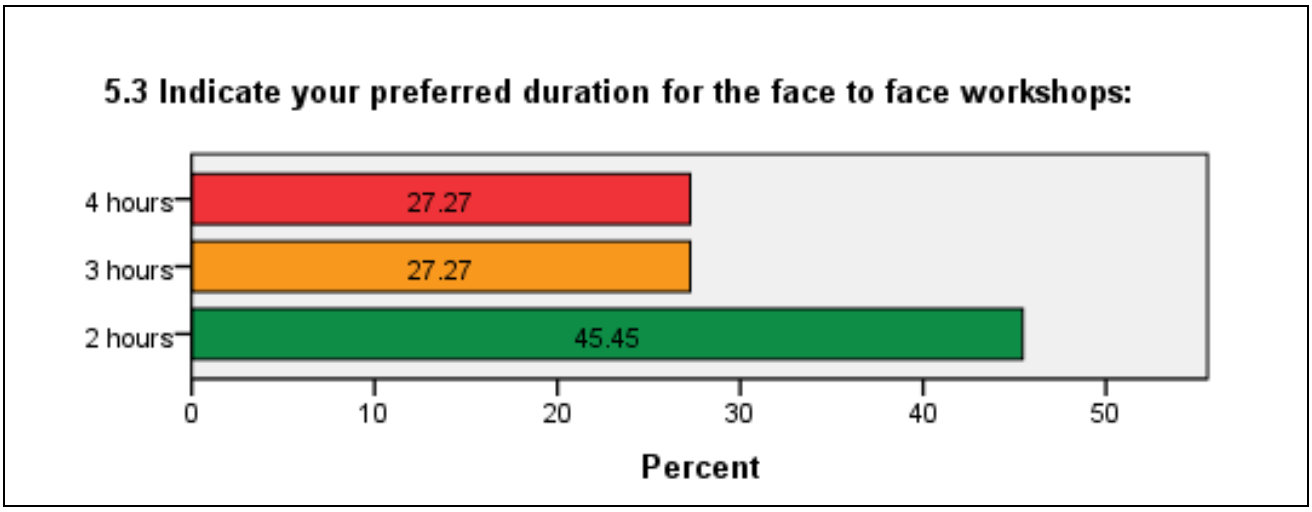

Fig. 57: Distribution of the answers to the question 5.3 of Irish participants

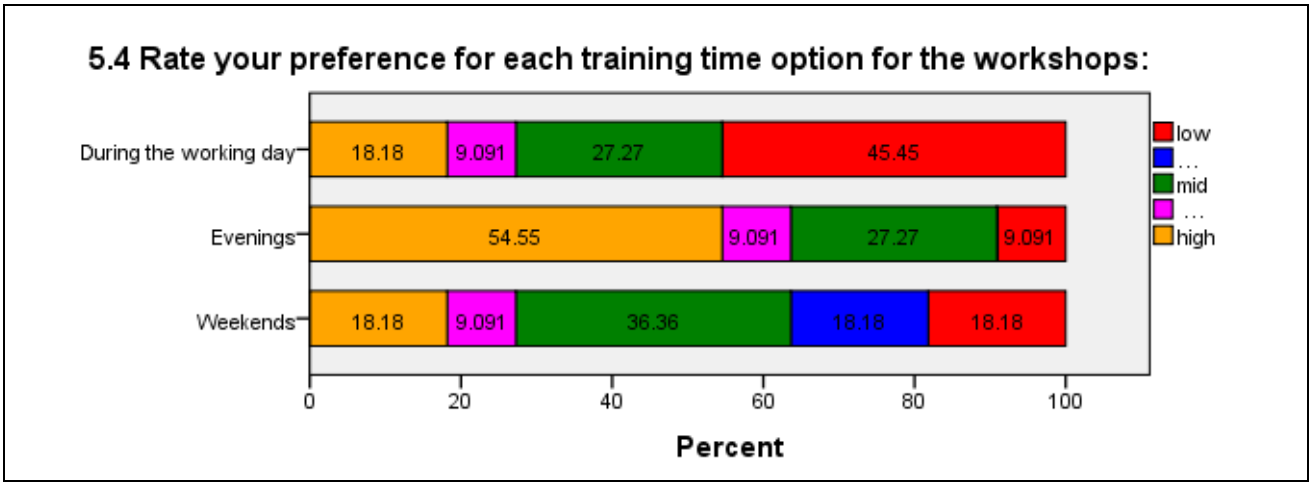

Fig. 58: Distribution of the answers to the question 5.4 of Irish participants

Requirements: The Irish respondents prefer to have the following activities/methods incorporated in the upcoming training workshops: lectures/expert inputs, demonstrations of tools and instruments and examples of good practices. The respondents only have no need for self-study, as a method for the workshops. The participants in the online survey expect that they enhance the learning opportunities of the students, when they participate in the upcoming CBL-workshops. Beside that they also expect to achieve the objective to introduce real life/authentic assignments in the classroom, to increase the opportunities of the professional development and to introduce more attractive teaching approaches.

The preferred time and duration of the workshop in Ireland is in the evening, with a maximum duration of approximately two hours.

4.4 Spain

4.4.1 User profile

The sample size in Spain was 32. The majority of these participants were female and in the age range of 41 to 55 years old (57,14%). The other half of age range were spread across the remaining categories (see figure 1).

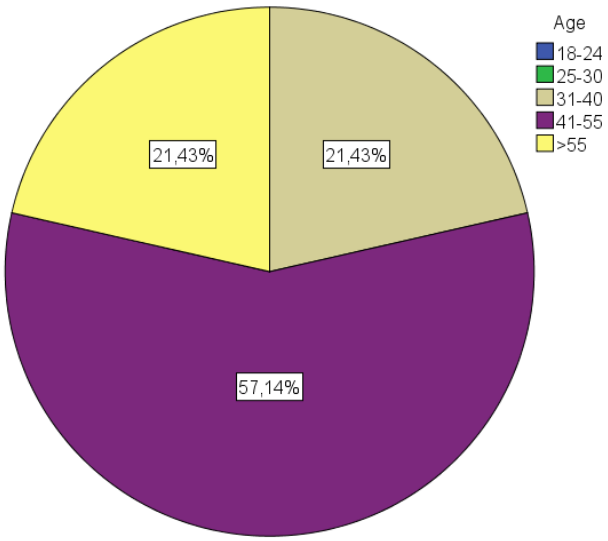

Fig. 59: Age distribution of the Spanish respondents

All participants were related to the field of Education. 19 participants devoted their activities to students from Primary education and 5 to Secondary education. Regarding their profession, 15 participants were teachers. The second group of participants with a highest representation, i.e. 5 participants, was pre-service teachers. Most participants report more than 15 years of experience in their profession, but only 2 of them have taken training in competency-based education.

4.4.2 Current implementation of didactic and assessment of key competencies

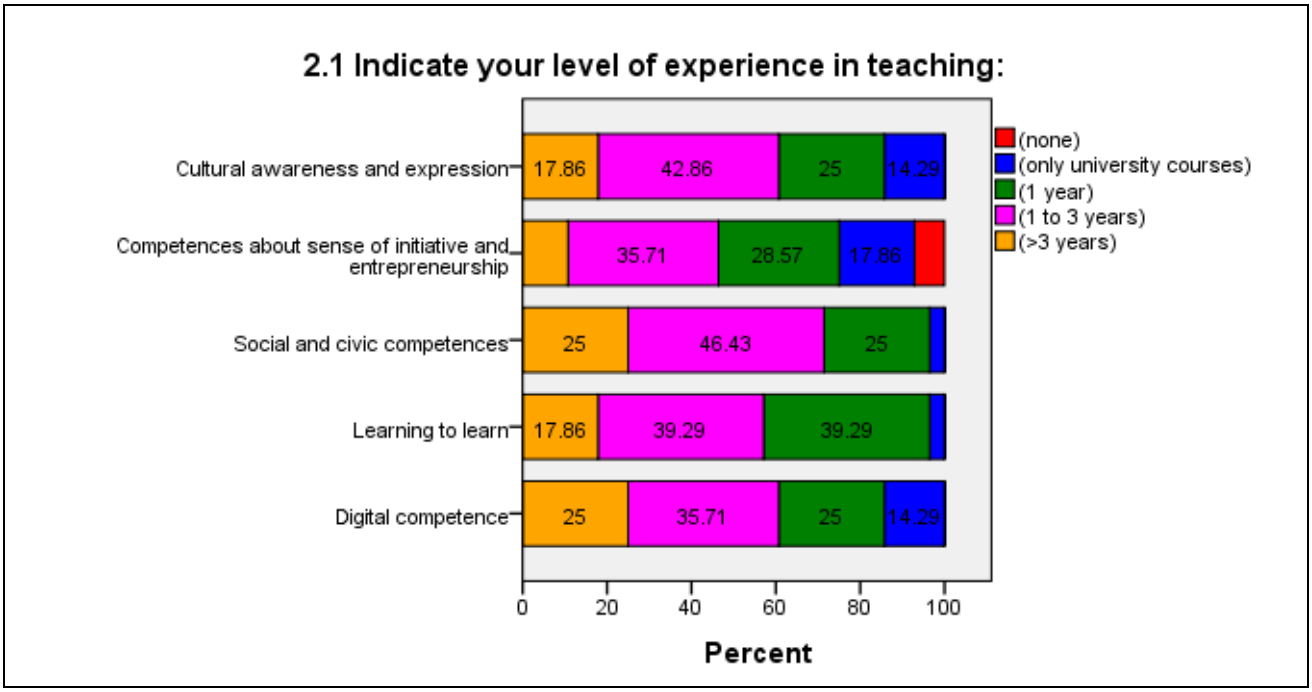

Fig. 60: Distribution of the answers to the question 2.1 of Spanish participants

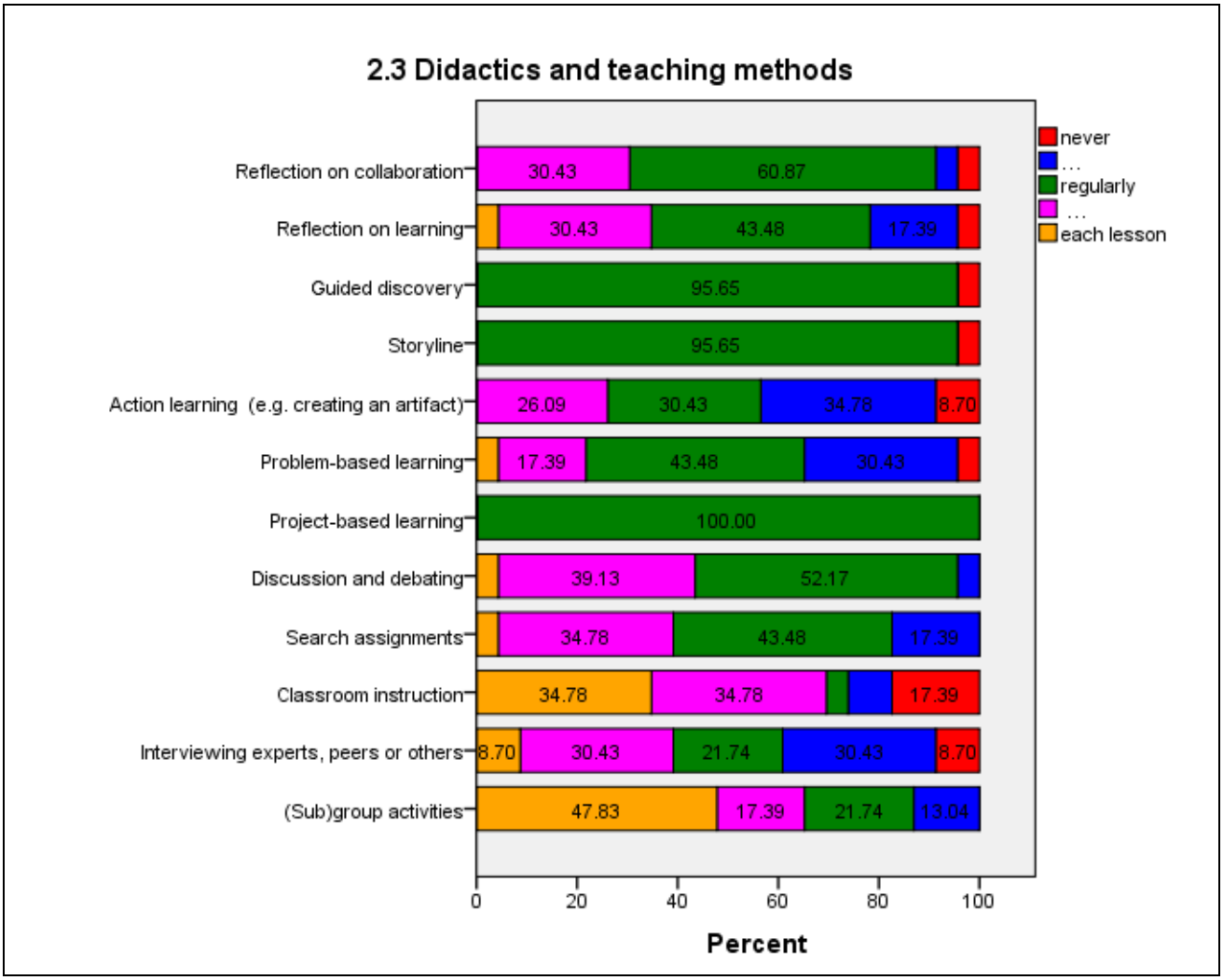

Fig. 61: Distribution of the answers to the question 2.3 of Spanish participants

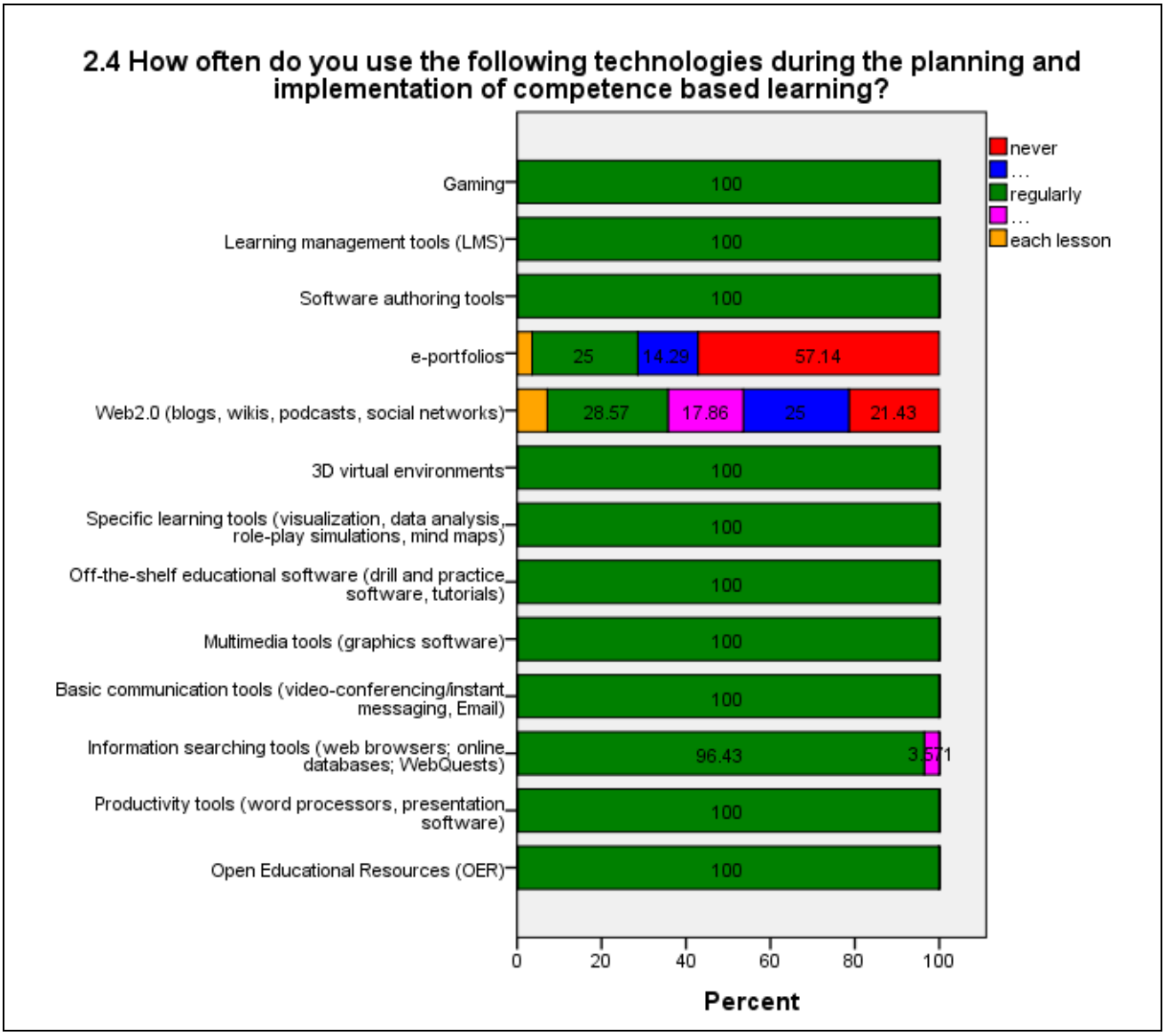

Fig. 62: Distribution of the answers to the question 2.4 of Spanish participants

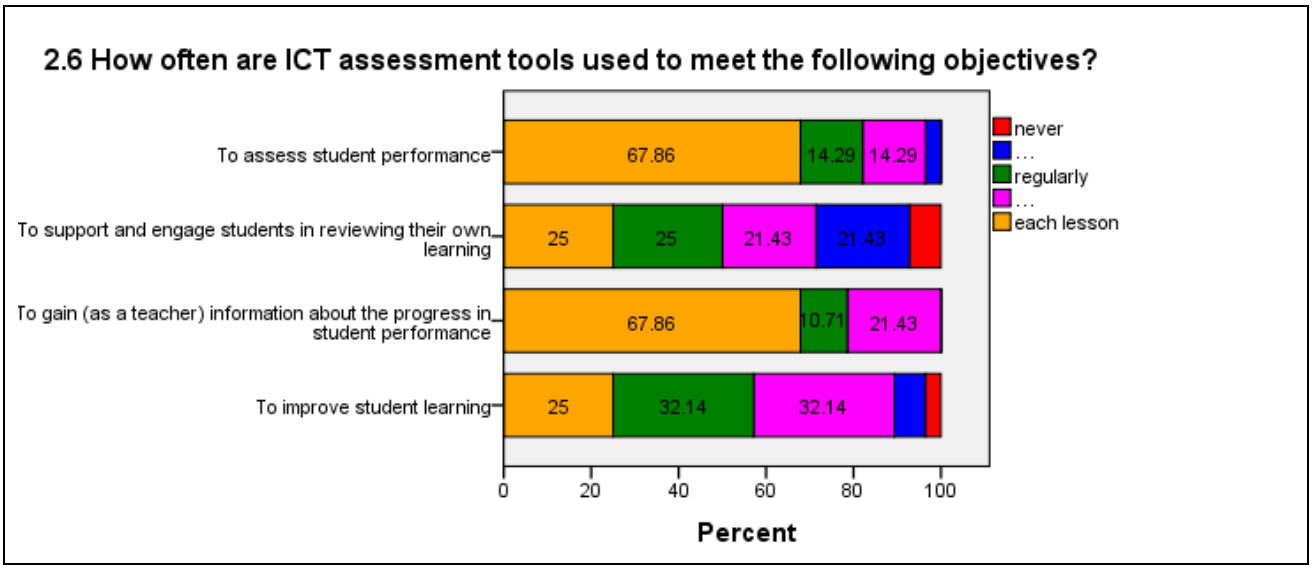

Fig. 63: Distribution of the answers to the question 2.6 of Spanish participants

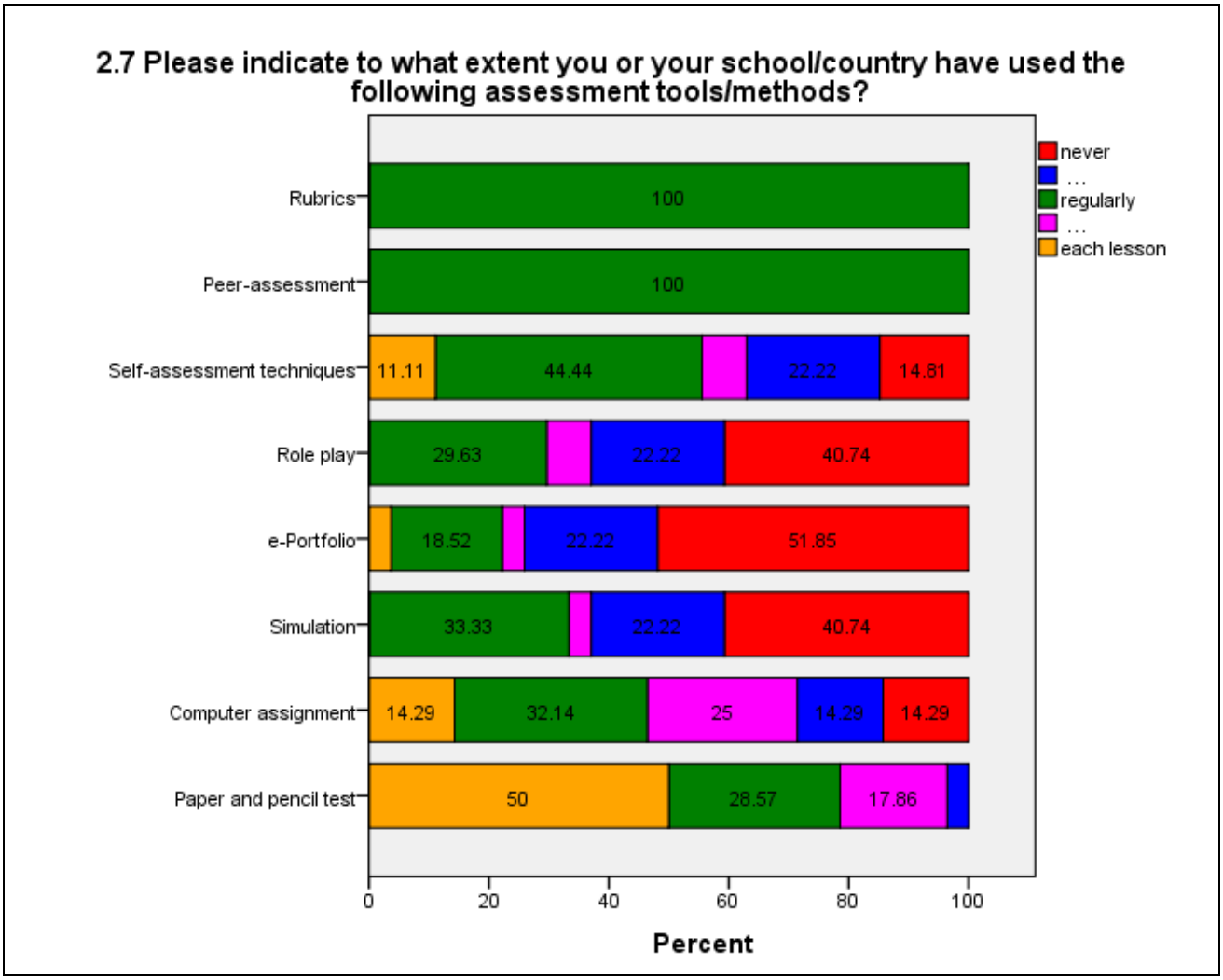

Fig. 64: Distribution of the answers to the question 2.7 of Spanish participants

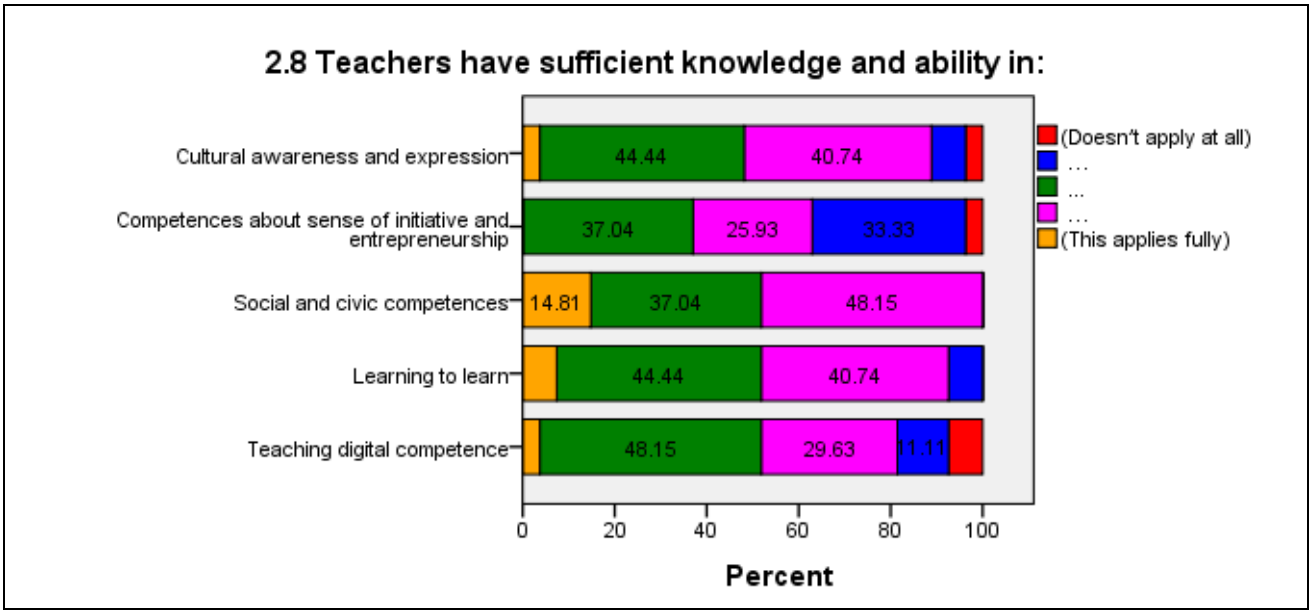

Fig. 65: Distribution of the answers to the question 2.8 of Spanish participants

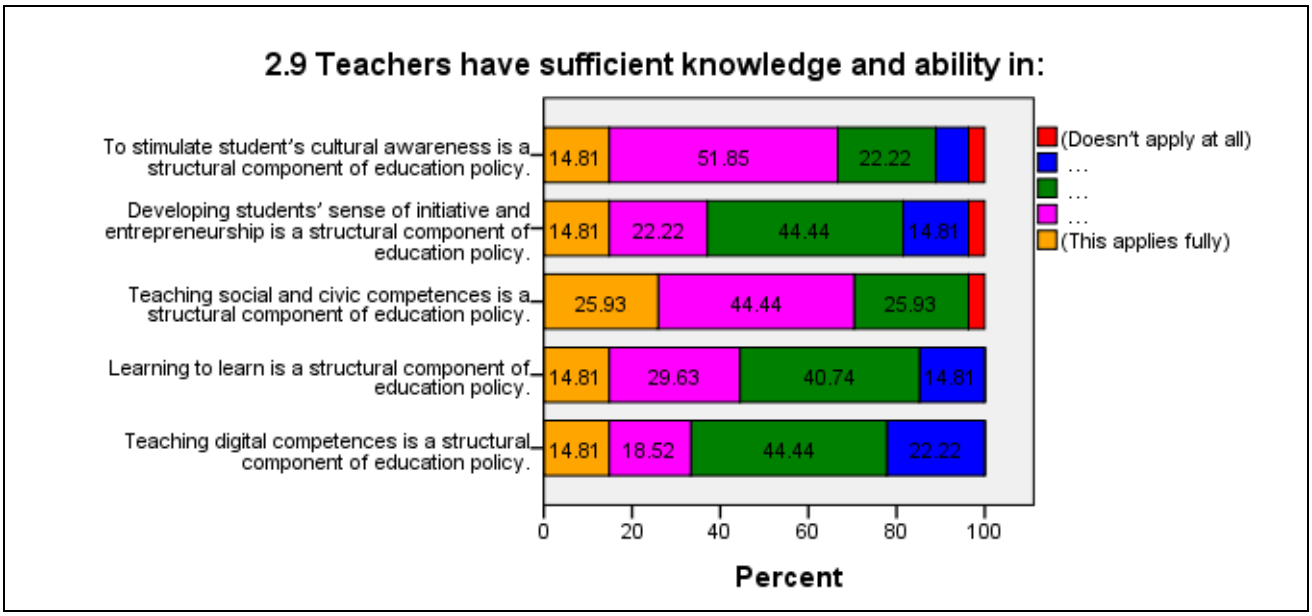

Fig. 66: Distribution of the answers to the question 2.9 of Spanish participants

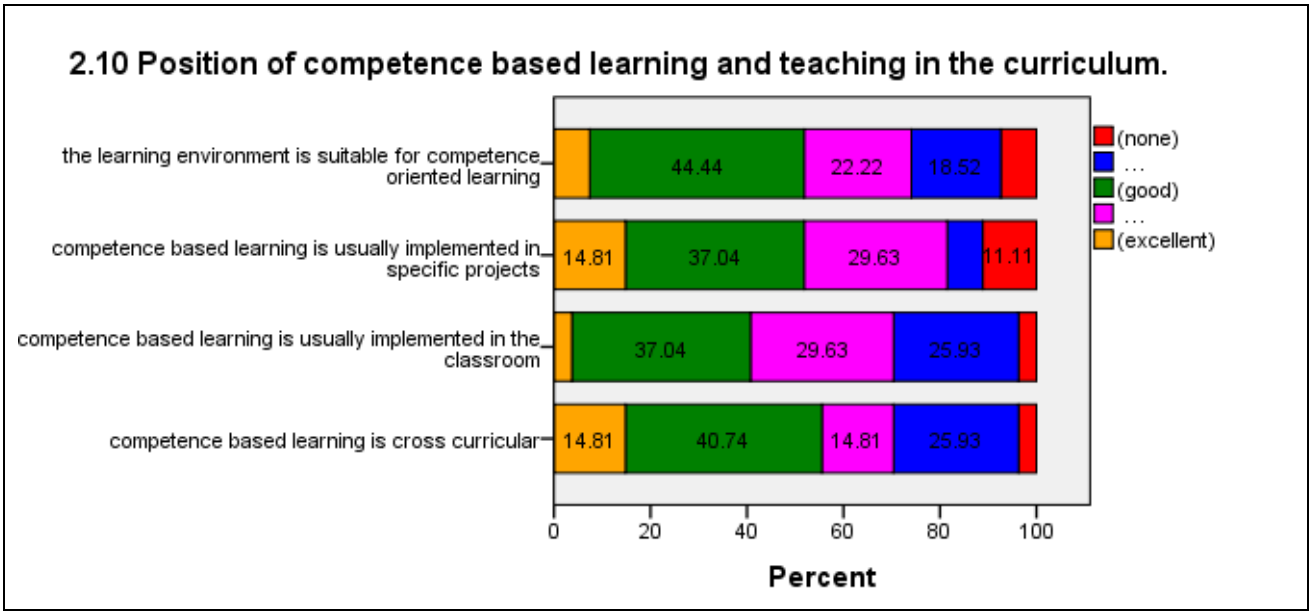

Fig. 67: Distribution of the answers to the question 2.10 of Spanish participants

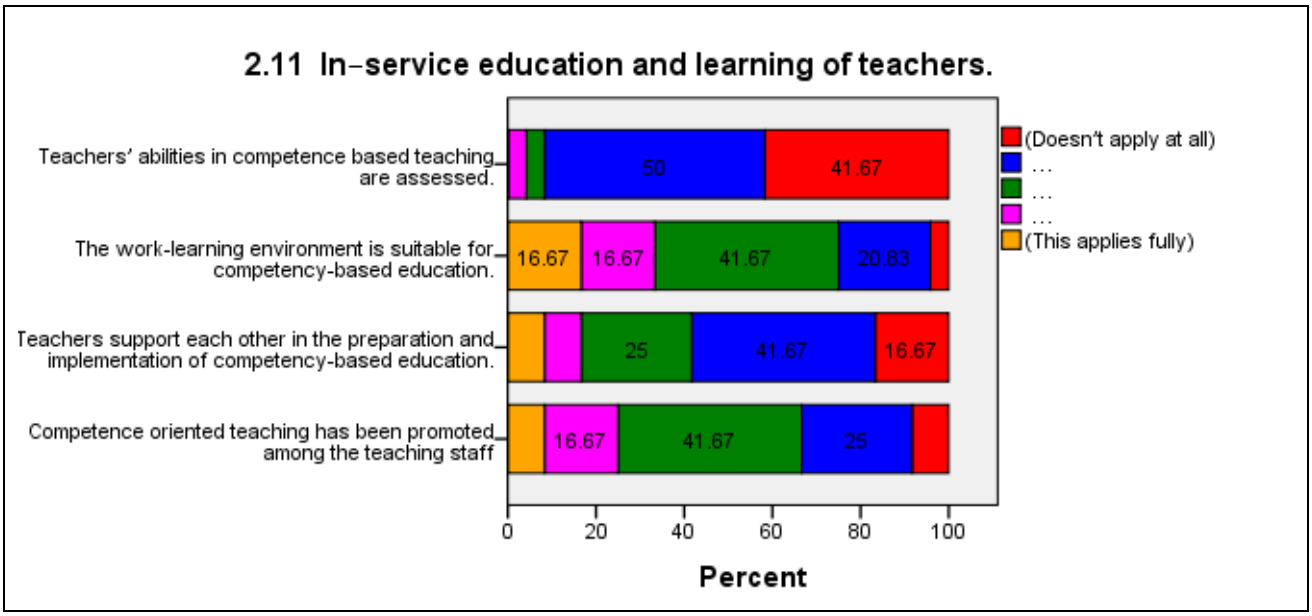

Fig. 68: Distribution of the answers to the question 2.11 of Spanish participants

Requirements: The Spanish respondents in the survey indicate that they have pretty much experience in teaching the competences. A quarter of them indicate that they have more than three years of experience in teaching social and civic competences and digital competences. The experience in teaching competences about sense of initiative and entrepreneurship remains somewhat behind. Almost 48% of the teachers use (sub)group activities to teach the competences and almost 35% makes use of the traditional classroom instructions. Striking result of the survey is that Spanish teachers almost never use e-portfolios when planning and implementing competence based learning. Nevertheless, the Spanish teachers make extensive use of ICT tools for assessment purposes in order to assess student performance or gain information about the progress in student performance. However, the most used assessment tool is a traditional one: paper and pencil tests. As said e-Portfolio, role play and simulation are used very rarely. But the respondents have still the feeling that they have sufficient knowledge and ability in the different competences. Only competences about sense of initiative and entrepreneurship is thereby somewhat behind. Competence based learning and teaching has a central position in the curriculum of the Spanish education. More than three quarters of respondents said that the learning environment of the school is suitable for competence oriented learning, approximately the same amount of respondents said that CBL is implemented in specific projects, that CBL is usually implemented in the classroom and that CBL is cross curricular. However, the in-service training of teachers can be better. Almost all respondents mentioned that teachers' abilities in competence based learning are not assessed and the majority of respondents also said that teachers do not support each other in the preparation and implementation of competence-based education.

Open questions: There is an insufficient amount of answers to the open question 2.2 to formulate a general answer to this question. However, some constraints the participants encounter are: time constraints, insufficient flexibility to adapt the curriculum, lack of resources (Wifi, hard- and software), and insufficient knowledge and experience of teaching staff.

4.4.3 Training needs

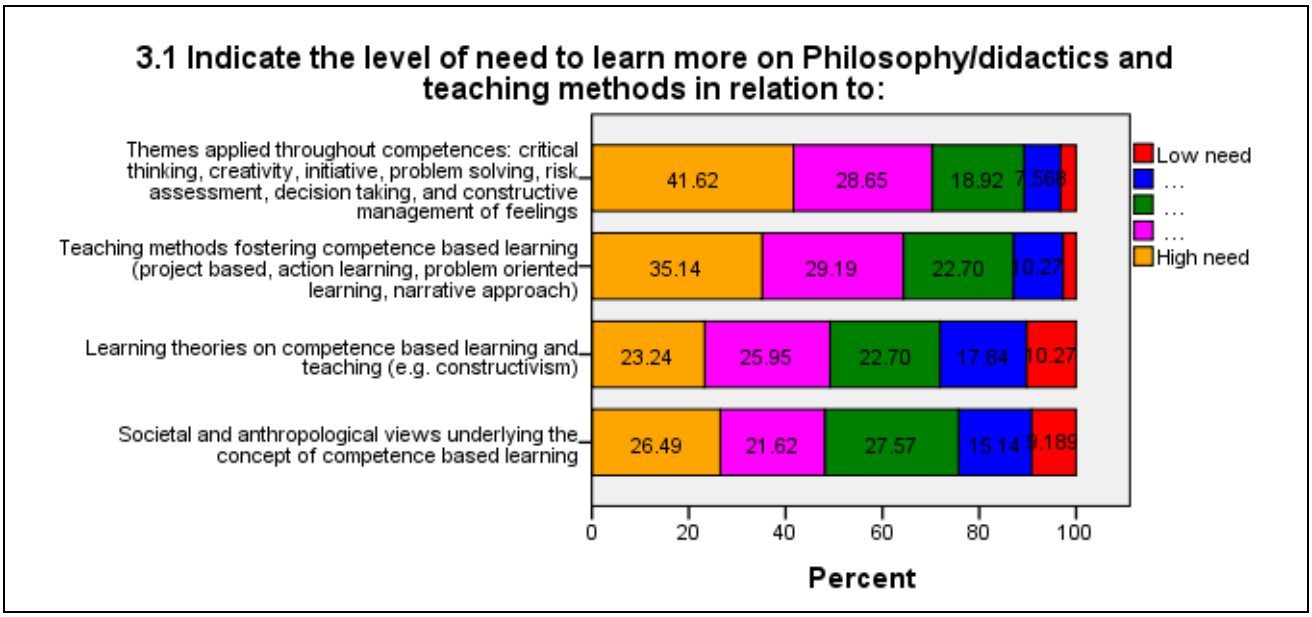

Fig. 69: Distribution of the answers to the question 3.1 of Spanish participants

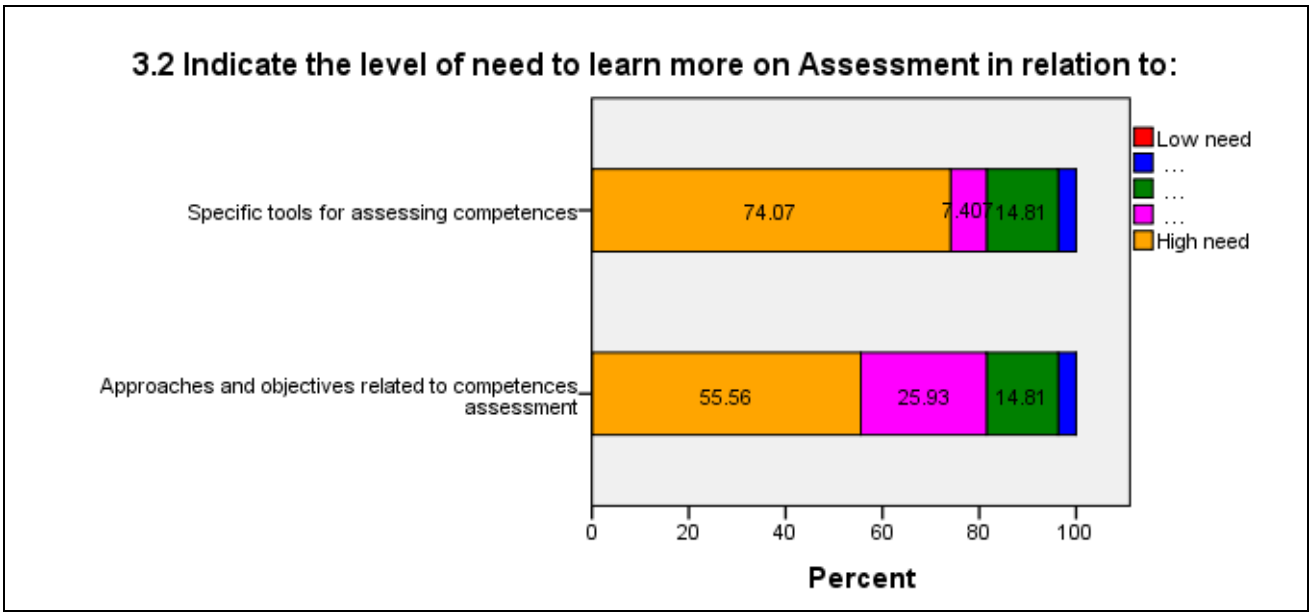

Fig. 70: Distribution of the answers to the question 3.2 of Spanish participants

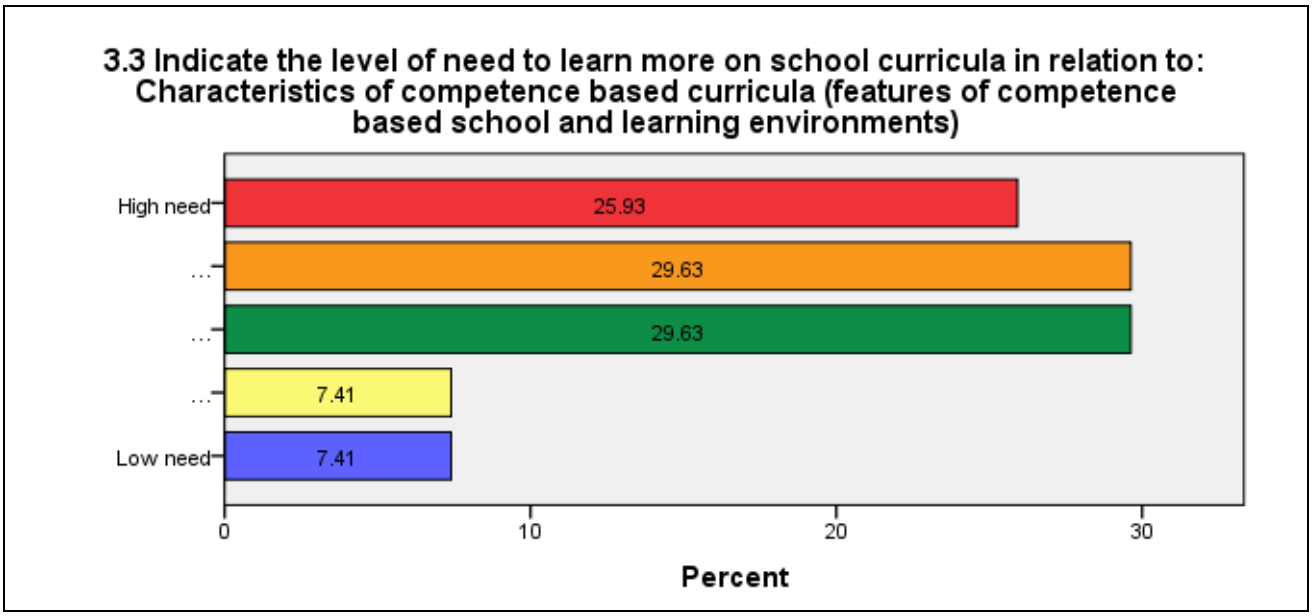

Fig. 71: Distribution of the answers to the question 3.3 of Spanish participants

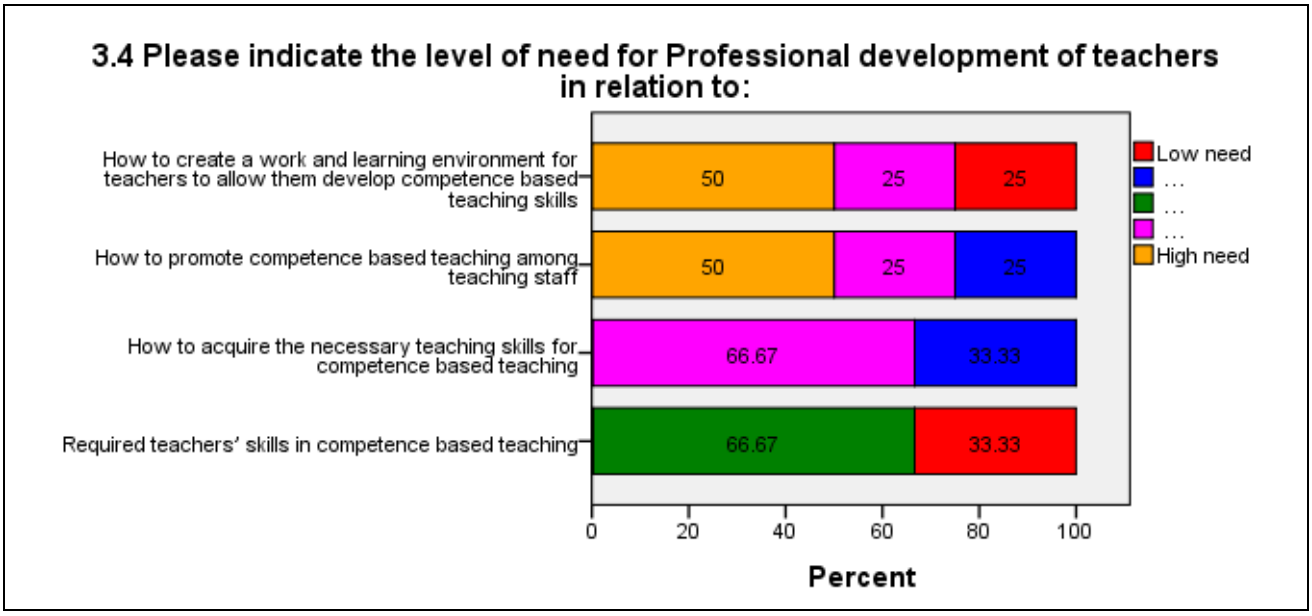

Fig. 72: Distribution of the answers to the question 3.4 of Spanish participants

Training requirements: Respondents were asked to grade their training needs on various topics, covering underpinnings and specificities of transversal key competencies, competency-based didactics and assessment and teacher professional development, among others. Data on training needs is consistent with the current implementation of competency-based didactics and assessment. The most important need of the respondents is to learn more about themes applied throughout competences (e.g. critical thinking, creativity, initiative, etc.). But beside that there is also a need to learn more on teaching methods fostering competence based learning (e.g. project based, action learning, etc.) and finally there is also a high need to learn more about specific tools for assessing competences and approaches and objectives related to competences assessment.

The answers to question 3.4 indicates that the respondents have a need for professional development in relation to the creation of work- and learning environments to allow them to develop competence based teaching skills and to guidelines how to promote competence based teaching among teaching staff. The respondents also want to learn more about how to acquire the necessary teaching skills for competence based teaching.

4.4.4 Availability to participate in the project

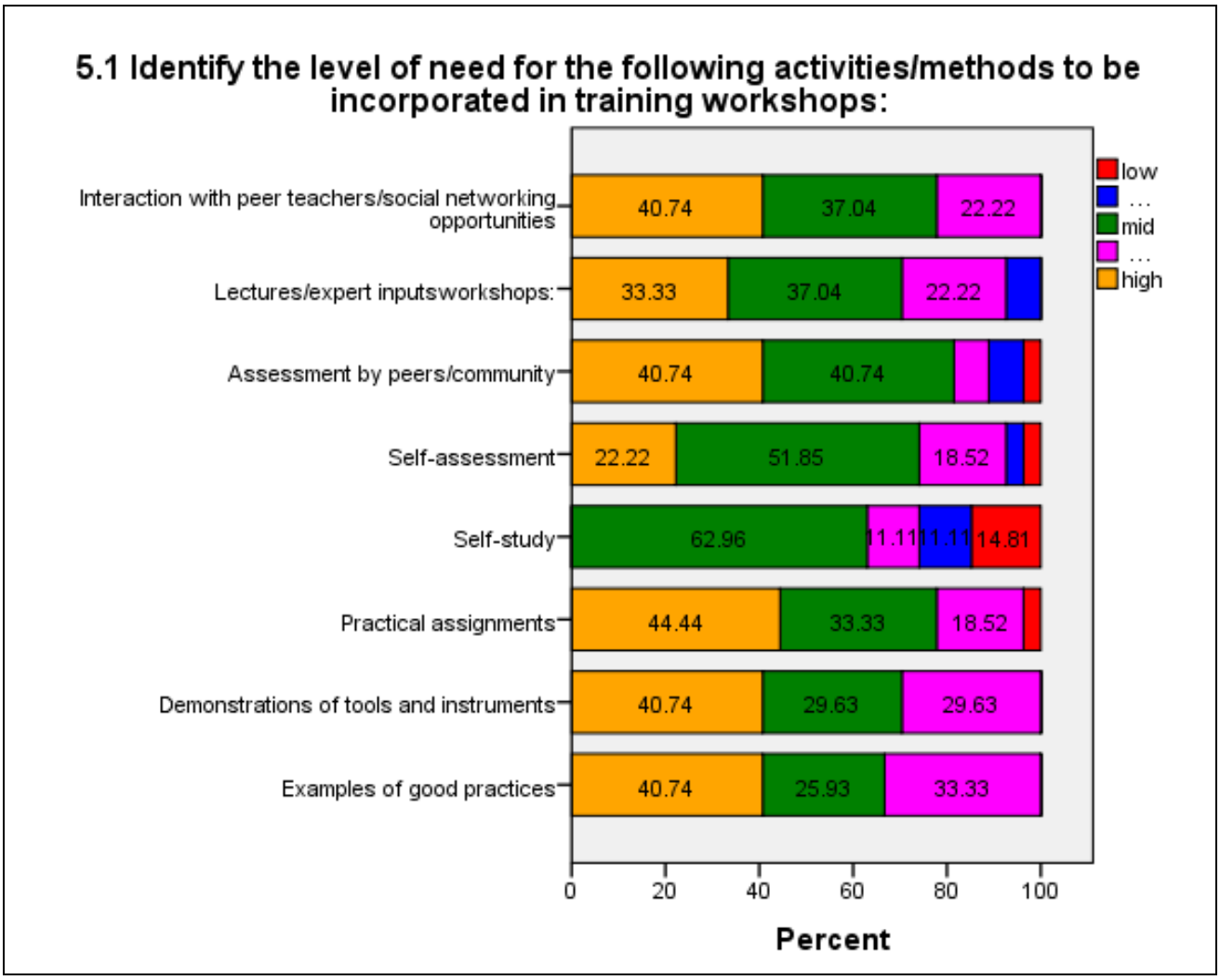

Fig. 73: Distribution of the answers to the question 5.1 of Spanish participants

Requirements:
The participants in the survey indicates that the training workshop must consist of examples of good practices (74.07%), demonstrations of tools and instruments (70.37%), practical assignments (62.96%) and interaction with peer teachers/social networking opportunities (62.92%). Within this context, a training on transversal key competencies which is tailored to the needs of the typical profile of teachers in Spain should have high probabilities of success.[1]

[1] Since Spain did the pilot testing of the questionnaire, the Spanish respondents didn't answer all questions that were asked in the final questionnaire.

4.5 France

4.5.1 User profile

The sample-size in France was 28 respondents. The major part of these respondents are male (85,7%). The largest part of the respondents felt in the age range of 41 till 55.

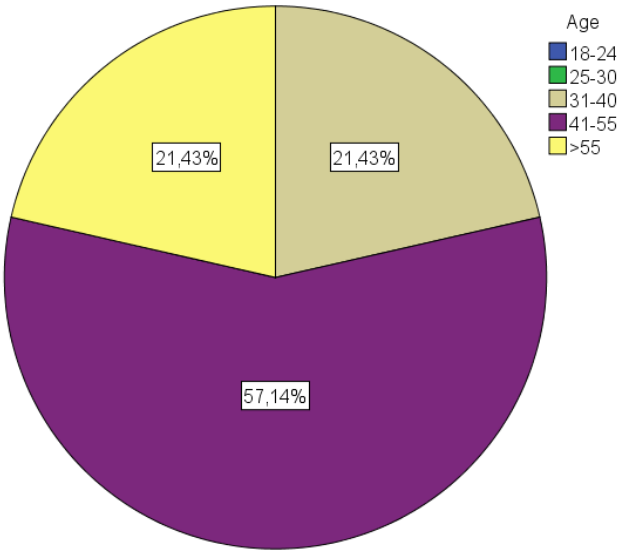

Fig. 74: Age distribution of the French respondents.

Most respondents from France have their profession in secondary education (57,1%) or are teacher trainer (21,4%). 60,7% of them have more than fifteen years of experience in their profession and currently holds a master's degree. The respondents describe themselves as enthusiastic with ICT. They are benevolent to make maximum advantage of the available ICT-application within the educational institution.

4.5.2 Current implementation of didactic and assessment of key competencies

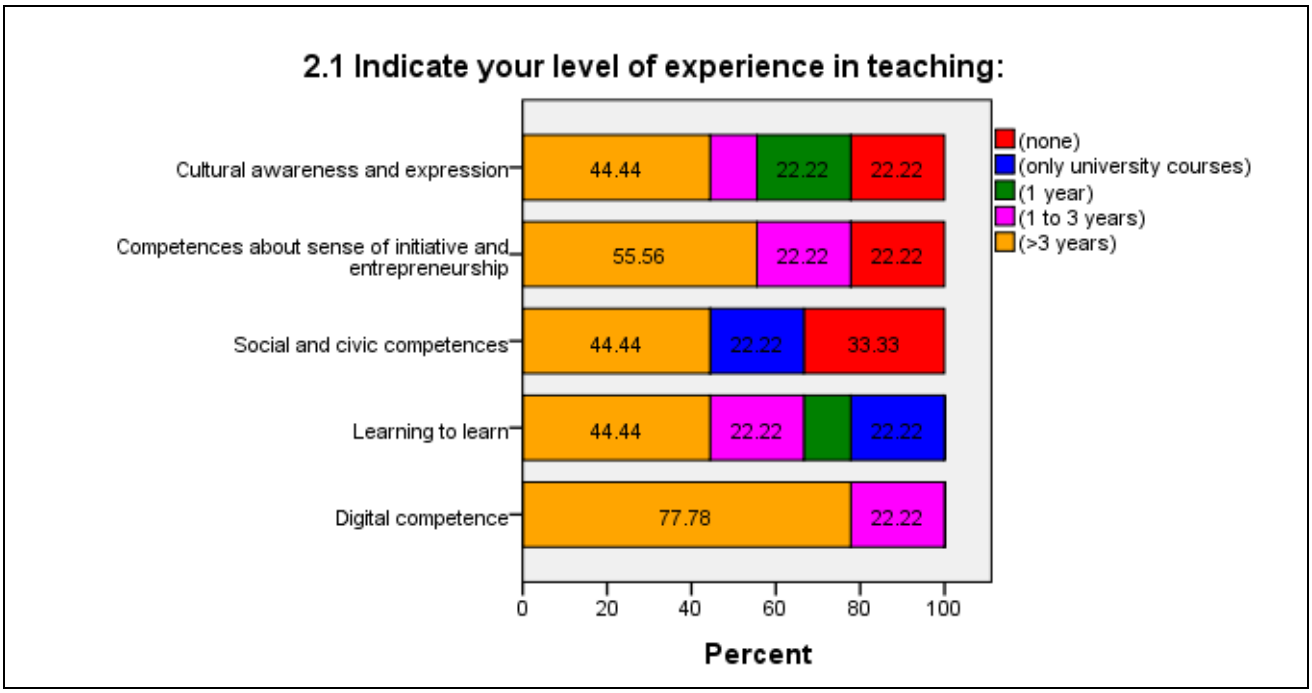

Fig. 75: Distribution of the answers to the question 2.1 of French participants

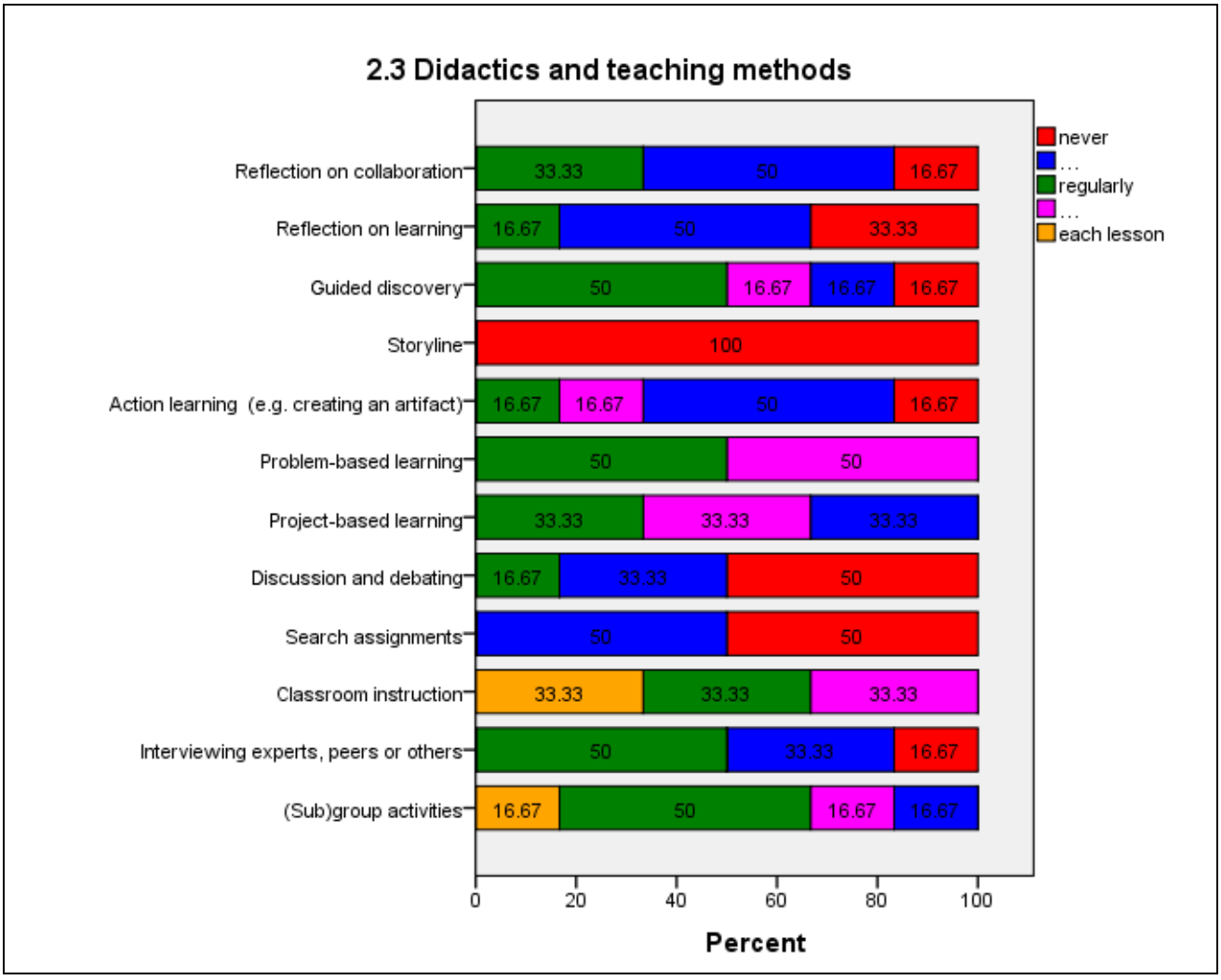

Fig. 76: Distribution of the answers to the question 2.3 of French participants

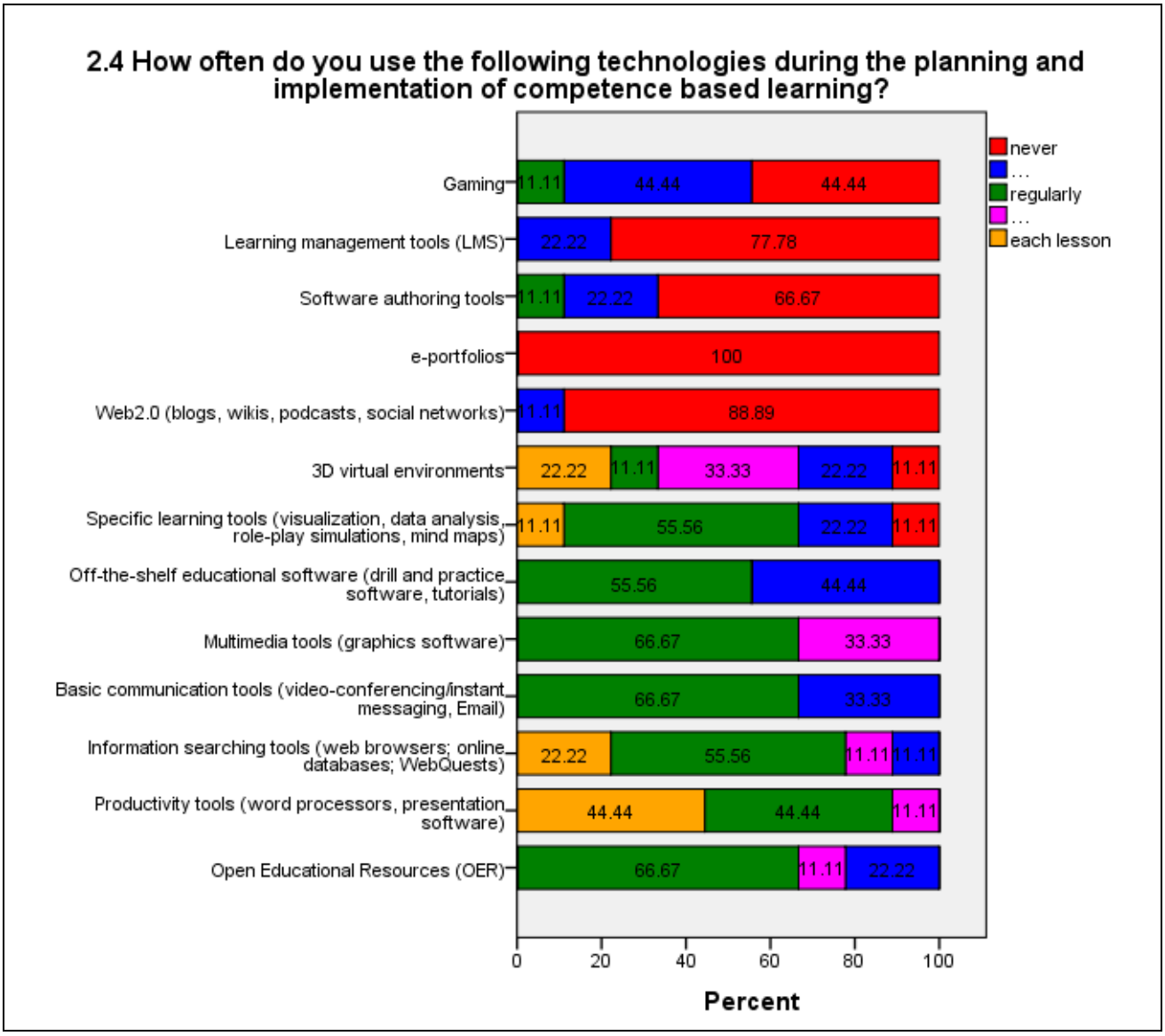

Fig. 77: Distribution of the answers to the question 2.4 of French participants

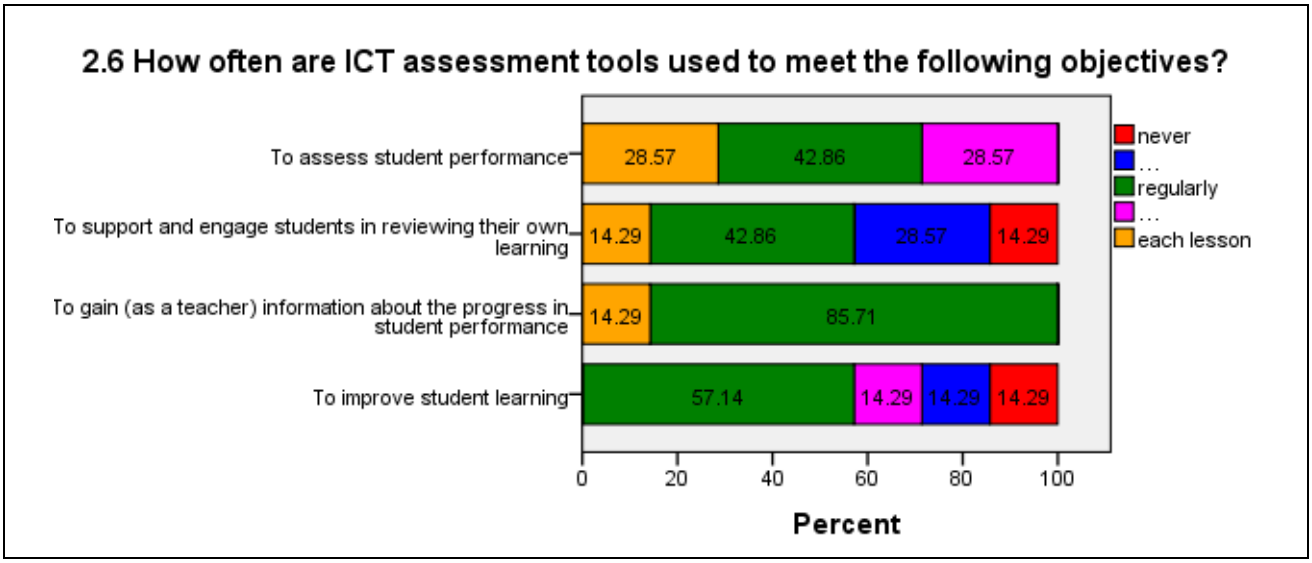

Fig. 78: Distribution of the answers to the question 2.6 of French participants

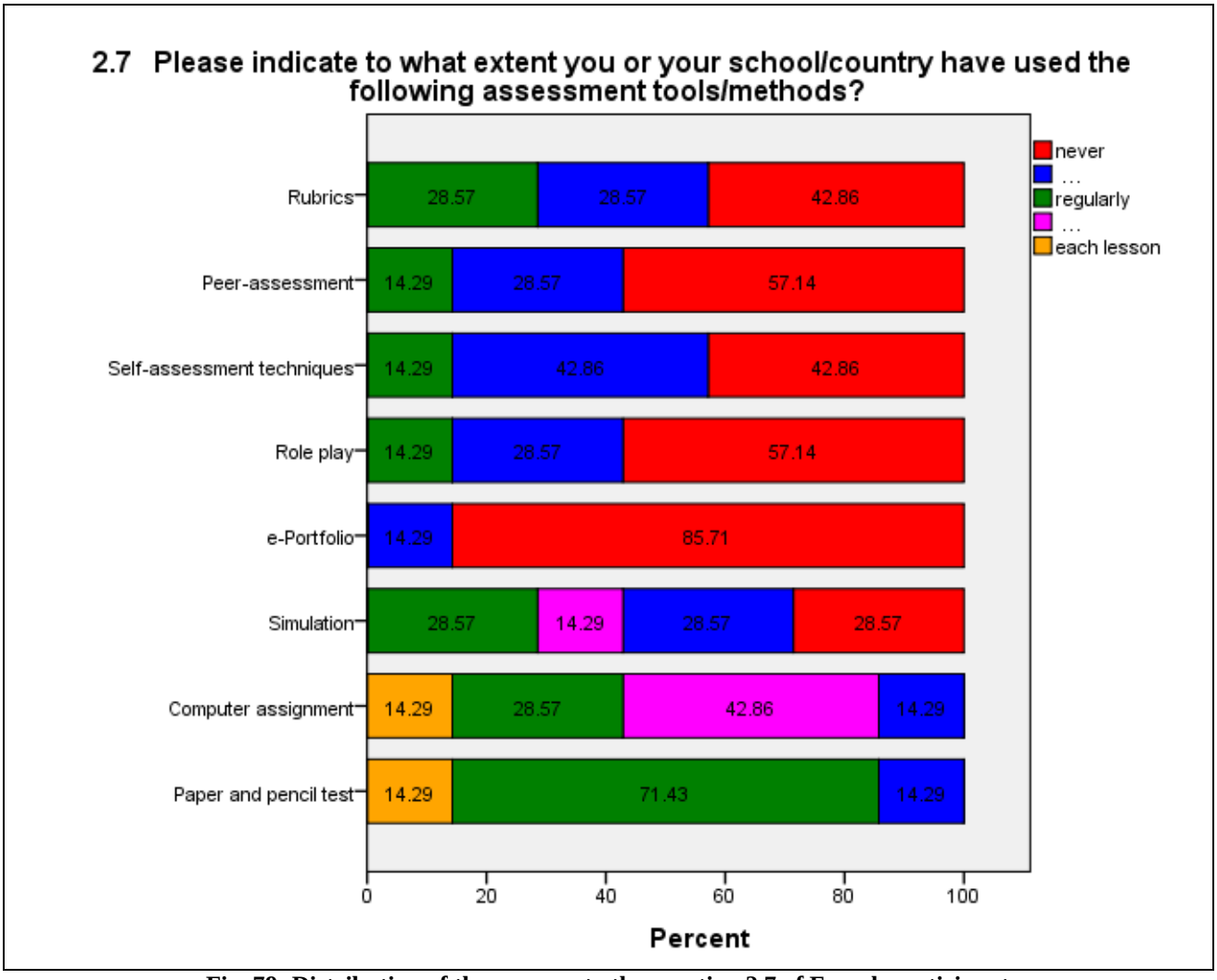

Fig. 79: Distribution of the answers to the question 2.7 of French participants

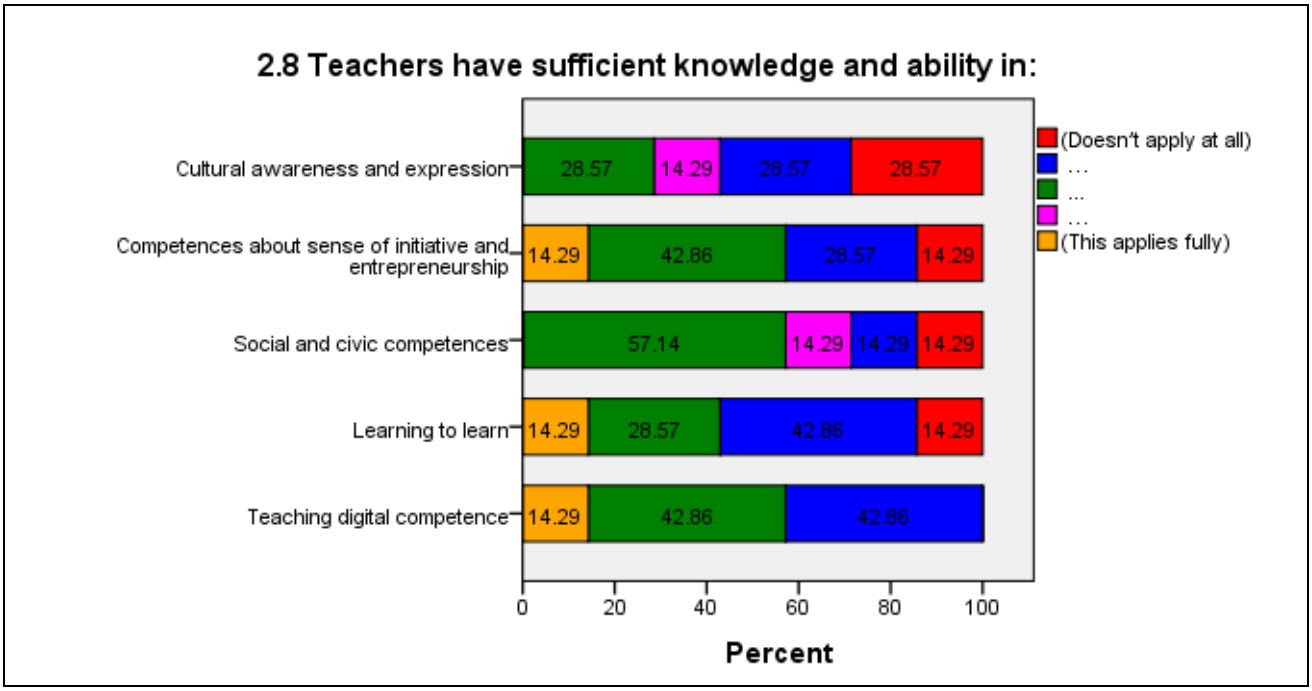

Fig. 80: Distribution of the answers to the question 2.8 of French participants

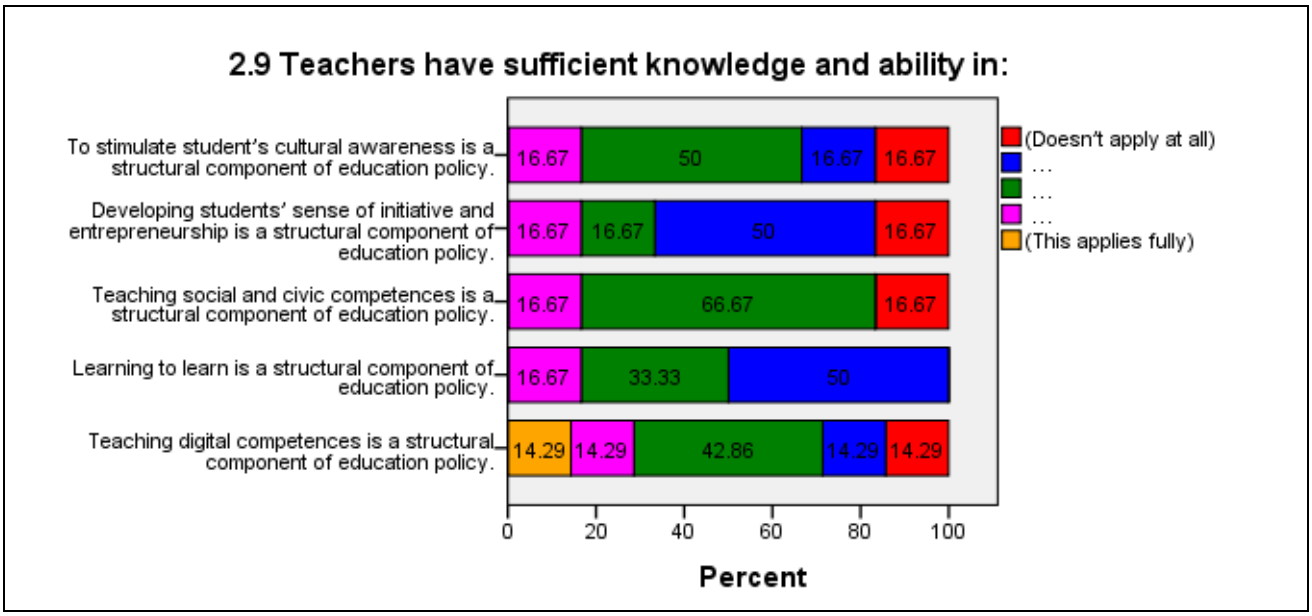

Fig. 81: Distribution of the answers to the question 2.9 of French participants

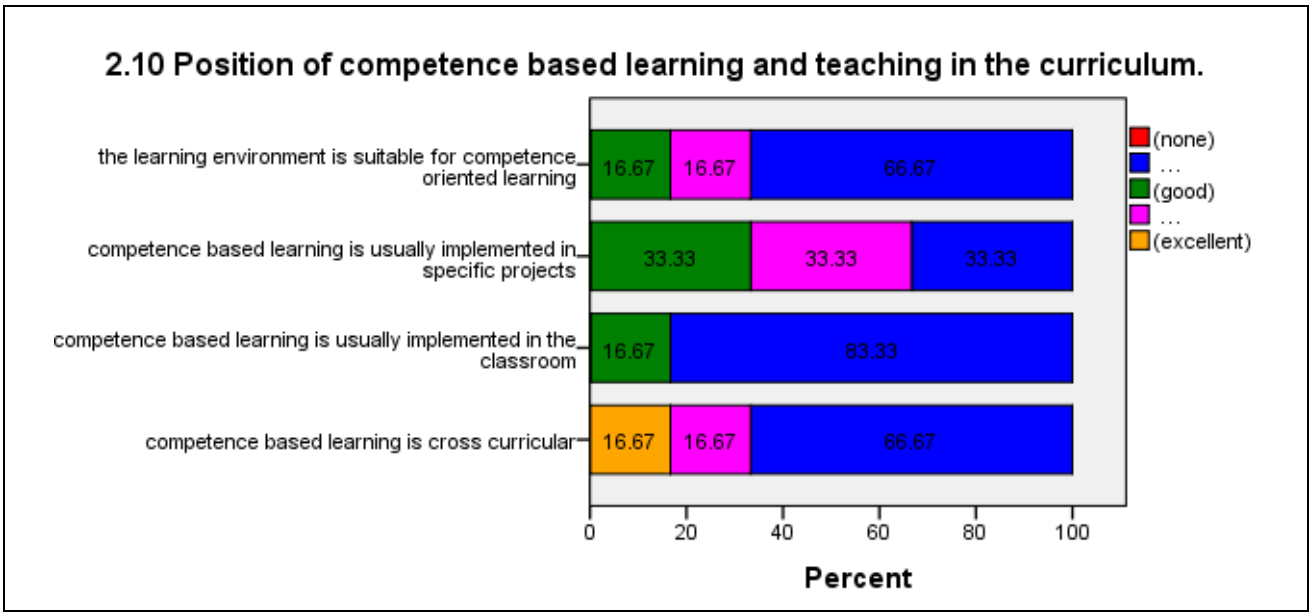

Fig. 82: Distribution of the answers to the question 2.10 of French participants

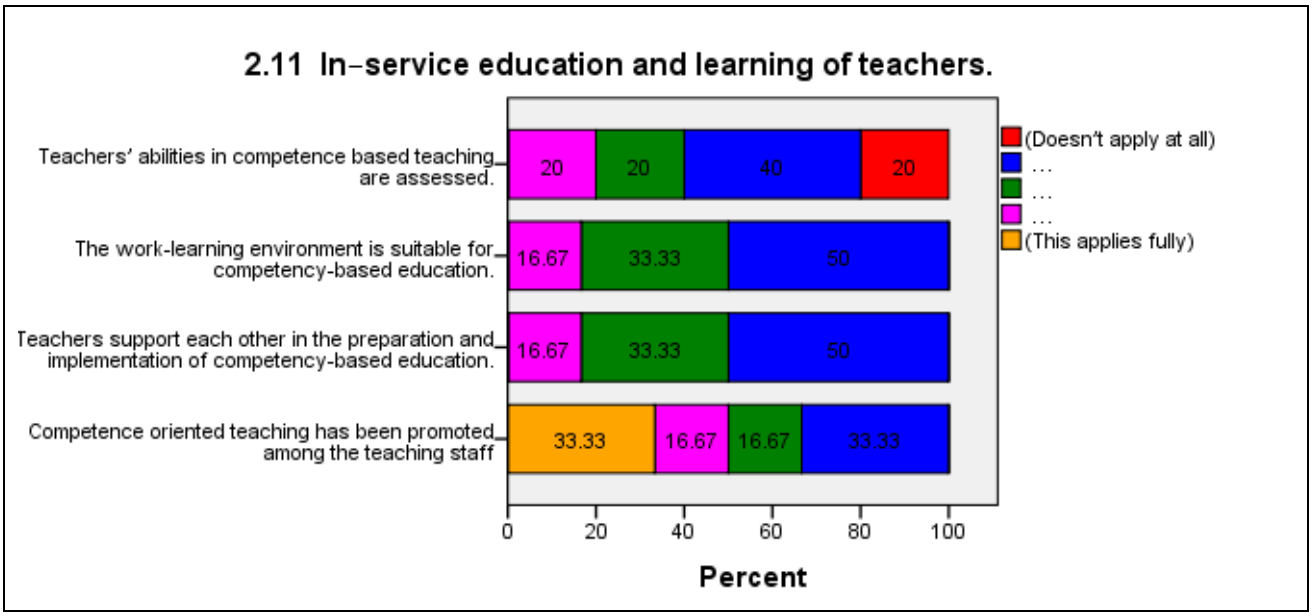

Fig. 83: Distribution of the answers to the question 2.11 of French participants

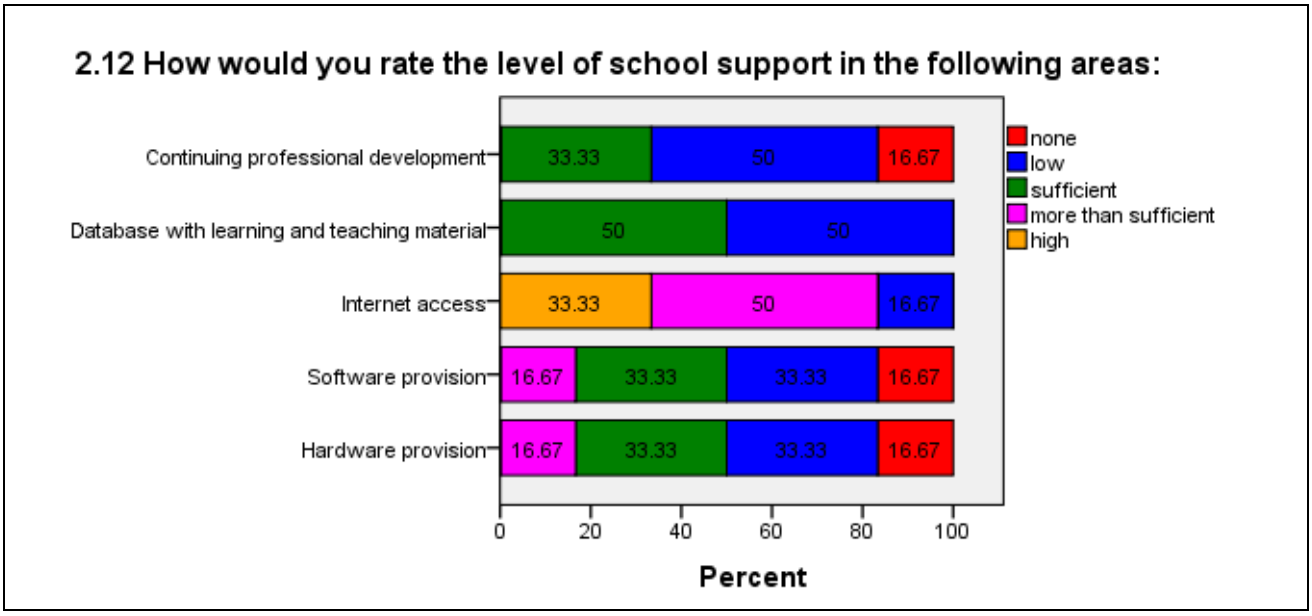

Fig. 84: Distribution of the answers to the question 2.12 of French participants

Requirements: The majority of French respondents have more than 3 years of experience in teaching digital competencies. More than half of the respondents have more than 3 years of experience in teaching competences about sense of initiative and entrepreneurship. A third of the respondents has no experience with social and civic competences. The didactics and teaching methods they use in classes are mainly classroom instructions. Guided discovery, problem based learning, interviewing experts, peers or others and (sub)group activities were used (more than) regularly. A striking result is the fact that the French respondents don't use storyline as a didactic and teaching method. In the implementation of CBL, French respondents mainly use productivity tools, information searching tools and 3D virtual environments. ePortfolios, Web2.0, Learning management tools and software authoring tools are tools that were used seldom. The French educational staff frequently uses several ICT assessment tools to assess student performance and to gain information about the progress in student performance. But the current assessment tools that were used are mainly written; paper and pencil tests. However, computer assignments are also firmly on the rise.

The respondents assess their colleagues as having sufficient knowledge and ability in teaching digital competencies, social and civic competencies and competencies about sense of initiative and entrepreneurship. There is no consensus about the availability of skilled teachers in the field cultural awareness and expression and learning to learn. There is also sufficient knowledge and ability in stimulating student's cultural awareness as a structural component of educational policy to teach social and civic competences as a structural component of educational policy. Sense of initiative and entrepreneurship is a competency that needs more attention in the future. It can be assumed that competence based learning and teaching have a central position in specific projects. But the respondents mention that it has no specific role in the classroom. However, the limited sample size makes drawing conclusions difficult. The majority of respondents (60%) points that French teachers were not assessed for their competence based learning abilities. 67% of the respondents mentioned that competency oriented teaching has been promoted among the teaching staff. The facilities in France are very limited; continuing professional development and database with learning and teaching material are very rarely present.

Open questions: Because there are insufficient answers to question 2.2, it is not possible to give a general answer to this question. Lack of time and lack of hard- and software are two constraints the French respondents mentioned as problematic when creating competence based learning curricula. One respondents mentioned the following problem: "The difficulty of assessment, which is not as methodological as you would like us to believe. There is also a lack of understanding of the elements related to competencies. What is a competency?"

4.5.3 Training needs

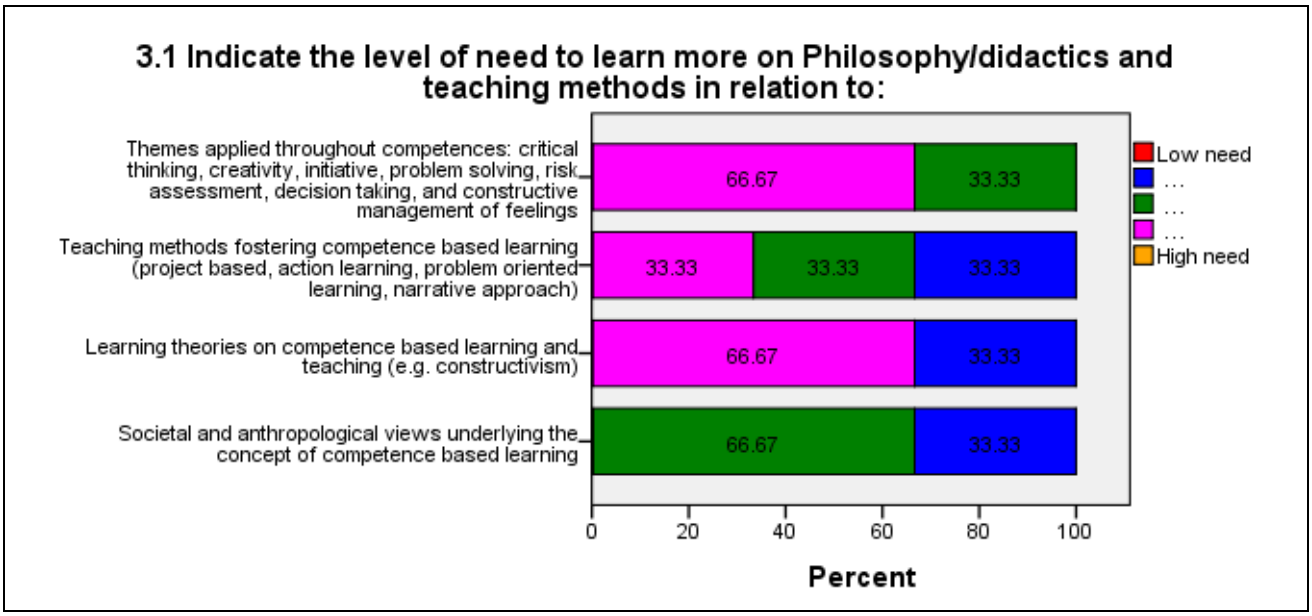

Fig. 85: Distribution of the answers to the question 3.1 of French participants

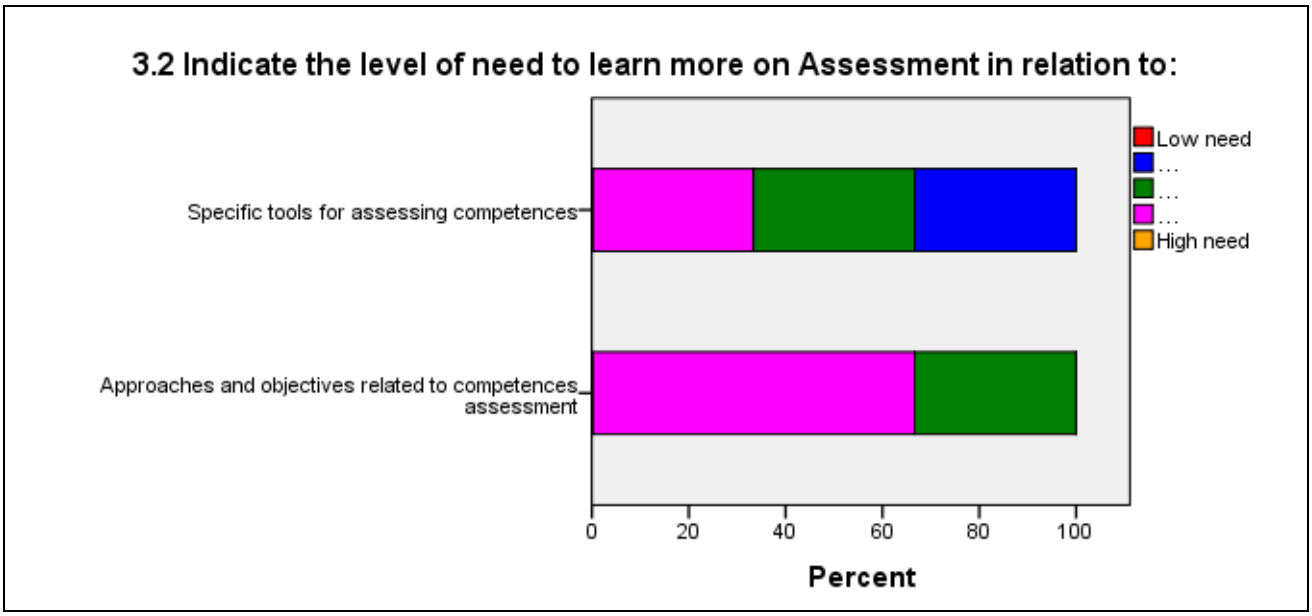

Fig. 86: Distribution of the answers to the question 3.2 of French participants

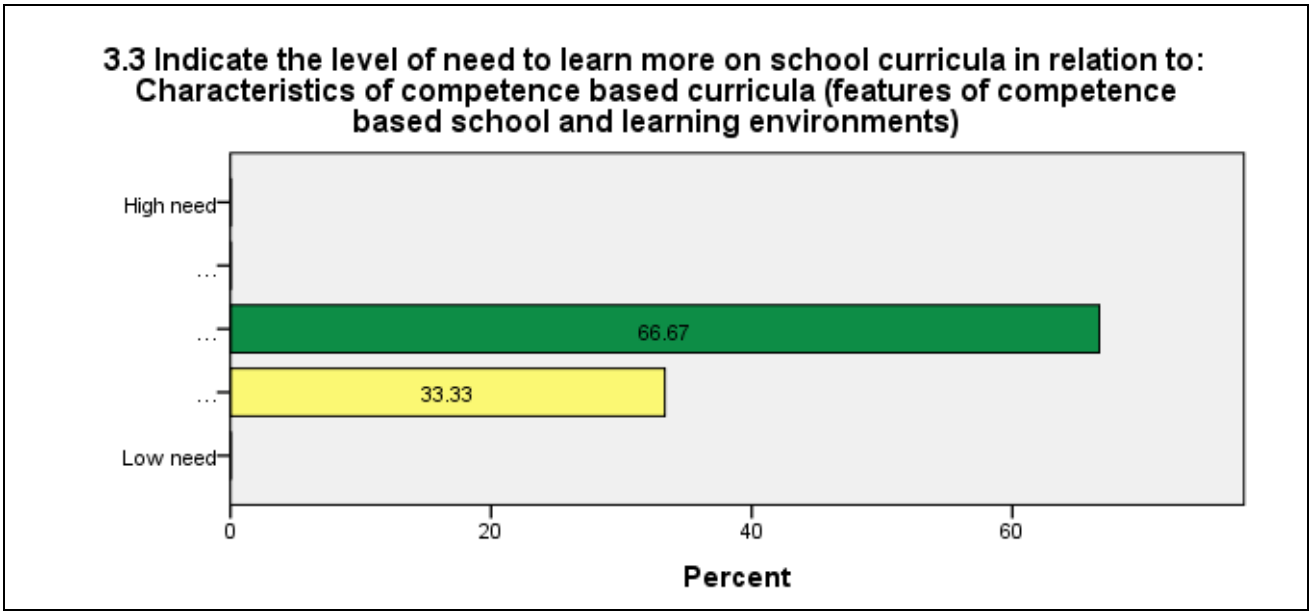

Fig. 87: Distribution of the answers to the question 3.3 of French participants

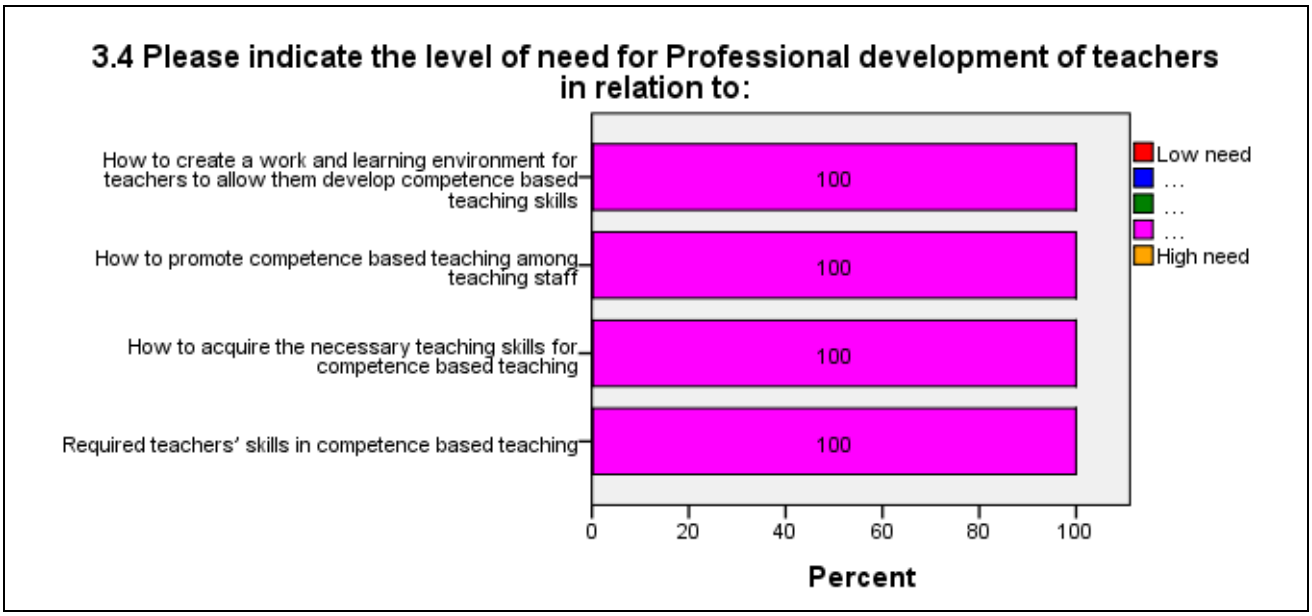

Fig. 88: Distribution of the answers to the question 3.4 of French participants

The sample size for France according to the training needs for competency based teaching was too small (N=3) in order to derive meaningful conclusions for the creation of a training framework specific for France.

4.5.4 Availability to participate in the project

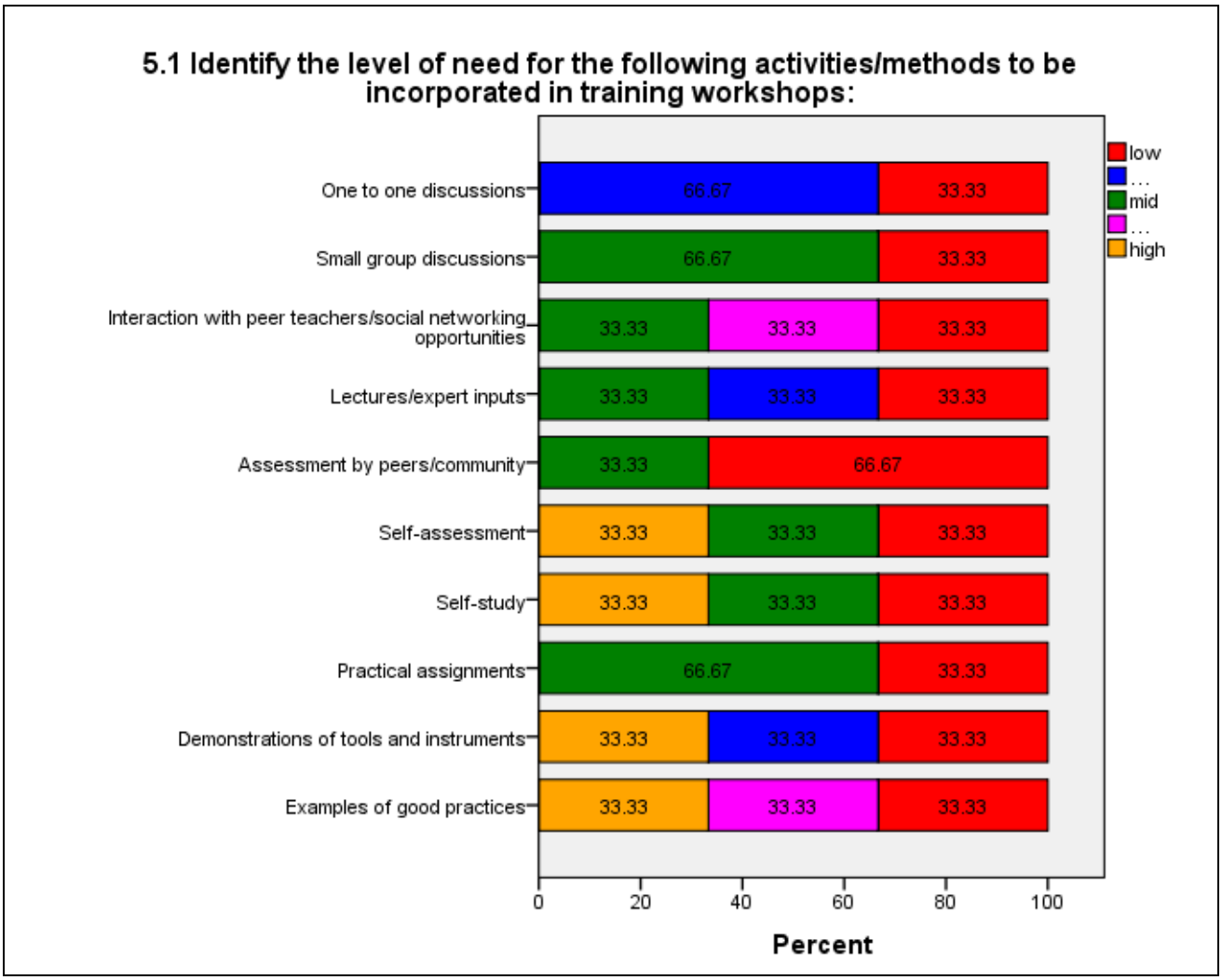

Fig. 89: Distribution of the answers to the question 5.1 of French participants

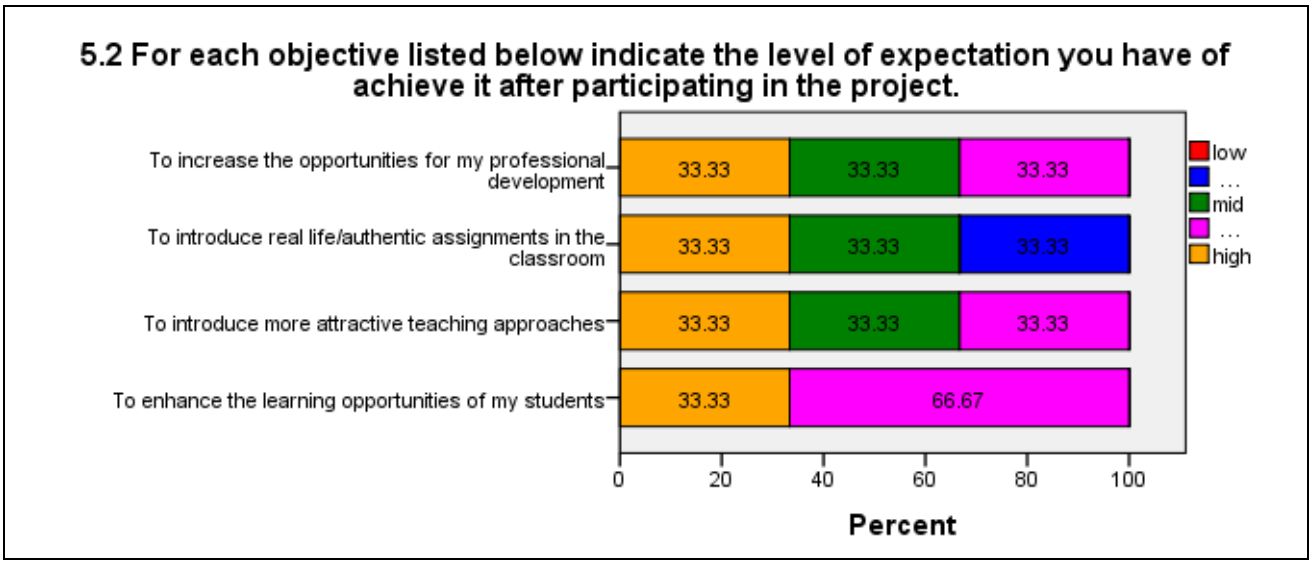

Fig. 90: Distribution of the answers to the question 5.2 of French participants

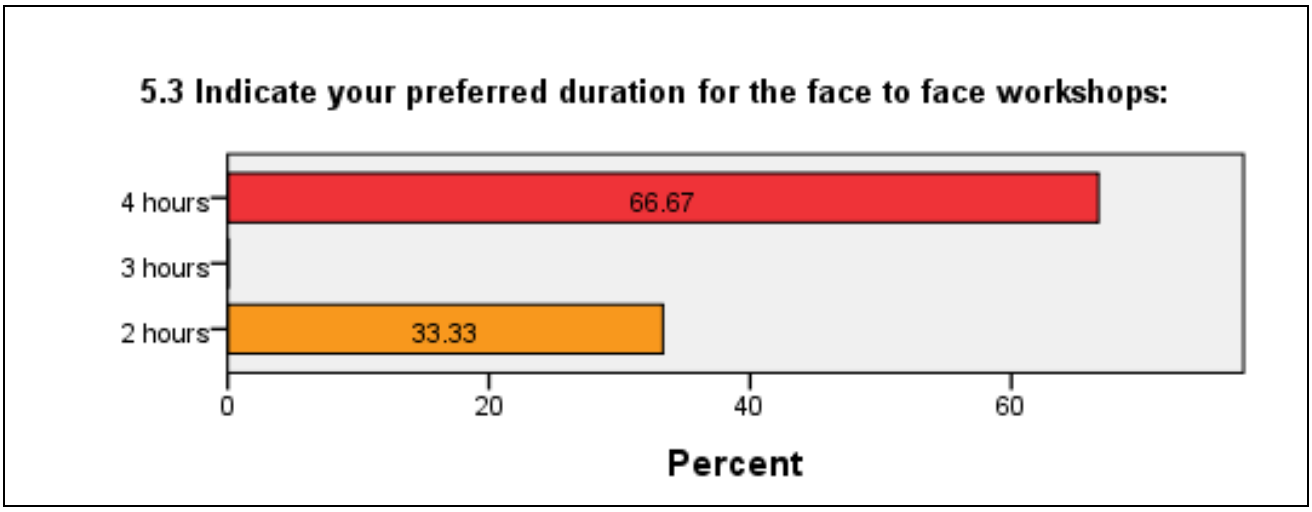

Fig. 91: Distribution of the answers to the question 5.3 of French participants

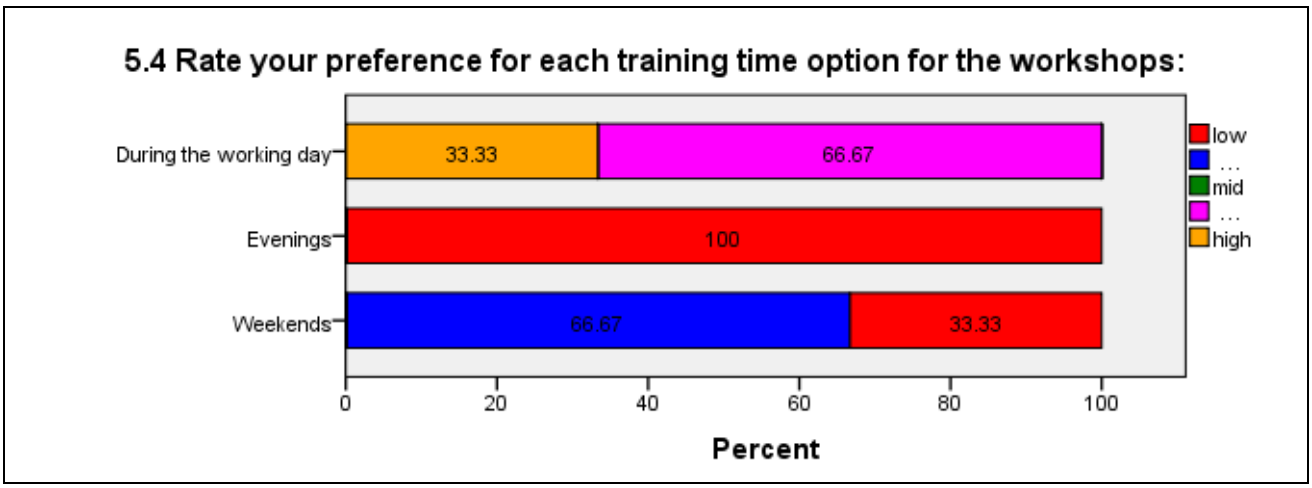

Fig. 92: Distribution of the answers to the question 5.4 of French participants

The sample size for France according to the availability for competency based teaching training was too small (N=3) in order to derive meaningful conclusions for the creation of a training framework specific for France.

4.6 Austria

4.6.1 User profile

In Austria 30 respondents participated in the survey. The major part of these respondents are female (60%) and the largest part of the respondents are in the age range of 31 and older (see Figure 97).

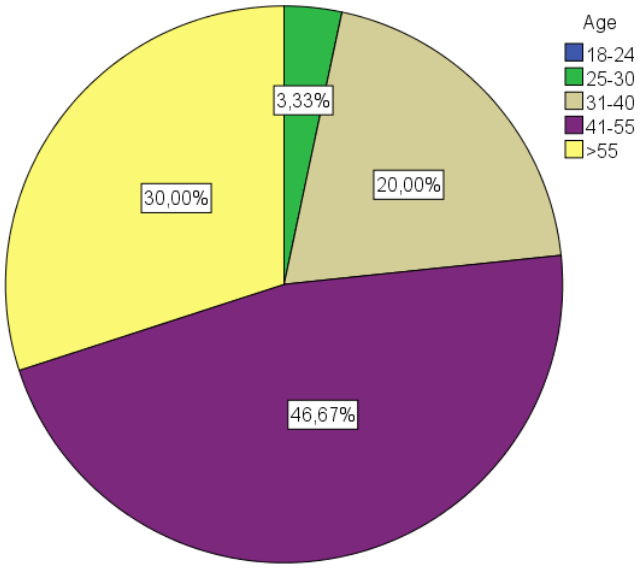

Fig. 93: Age distribution of the Austrian participants

Most participants (n=22) in Austria are teachers in secondary education. More than half of them (53.3%) have more than fifteen years of experience in their profession and currently holds a teaching qualification or master's degree. The majority of them are enthusiastic in the use of ICT for educational purposes (83.3%).

4.6.2 Current implementation of didactic and assessment of key competencies

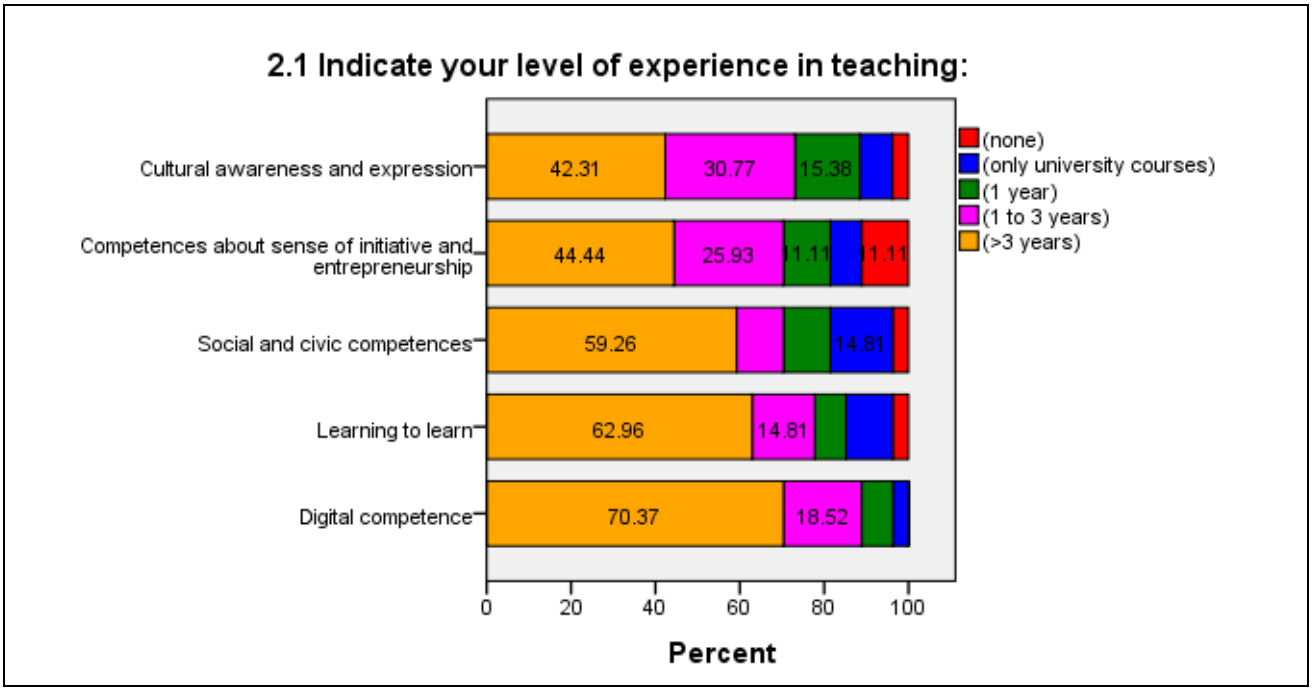

Fig. 94: Distribution of the answers to the question 2.1 of Austrian participants

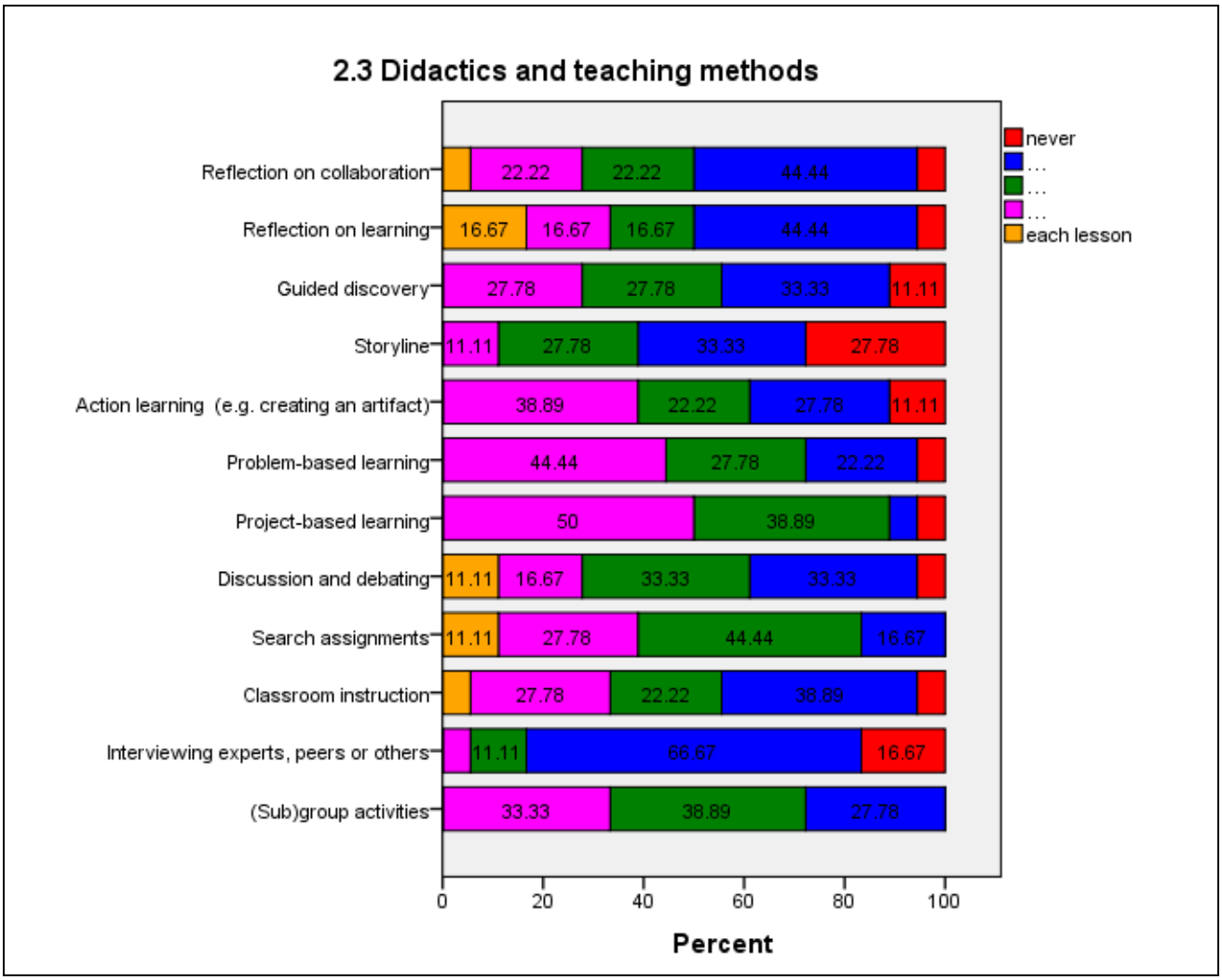

Fig. 95: Distribution of the answers to the question 2.3 of Austrian participants

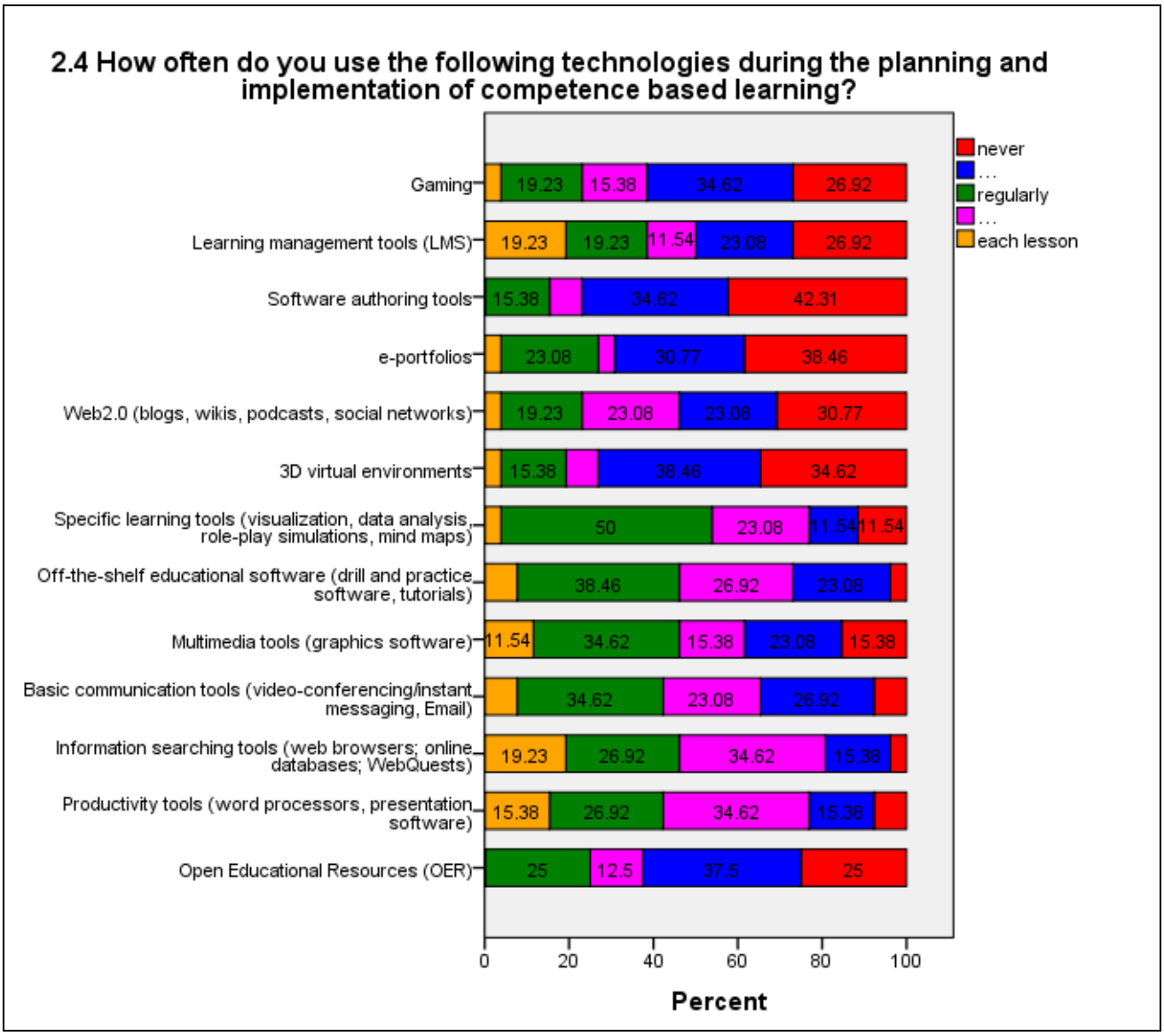

Fig. 96: Distribution of the answers to the question 2.4 of Austrian participants

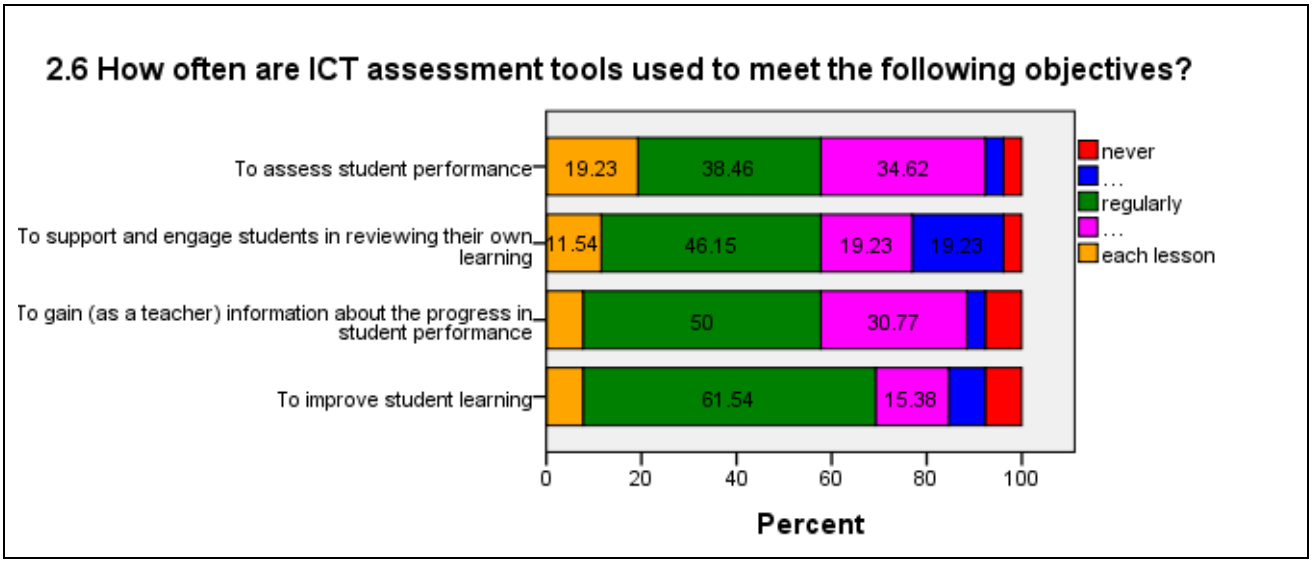

Fig. 97: Distribution of the answers to the question 2.6 of Austrian participants

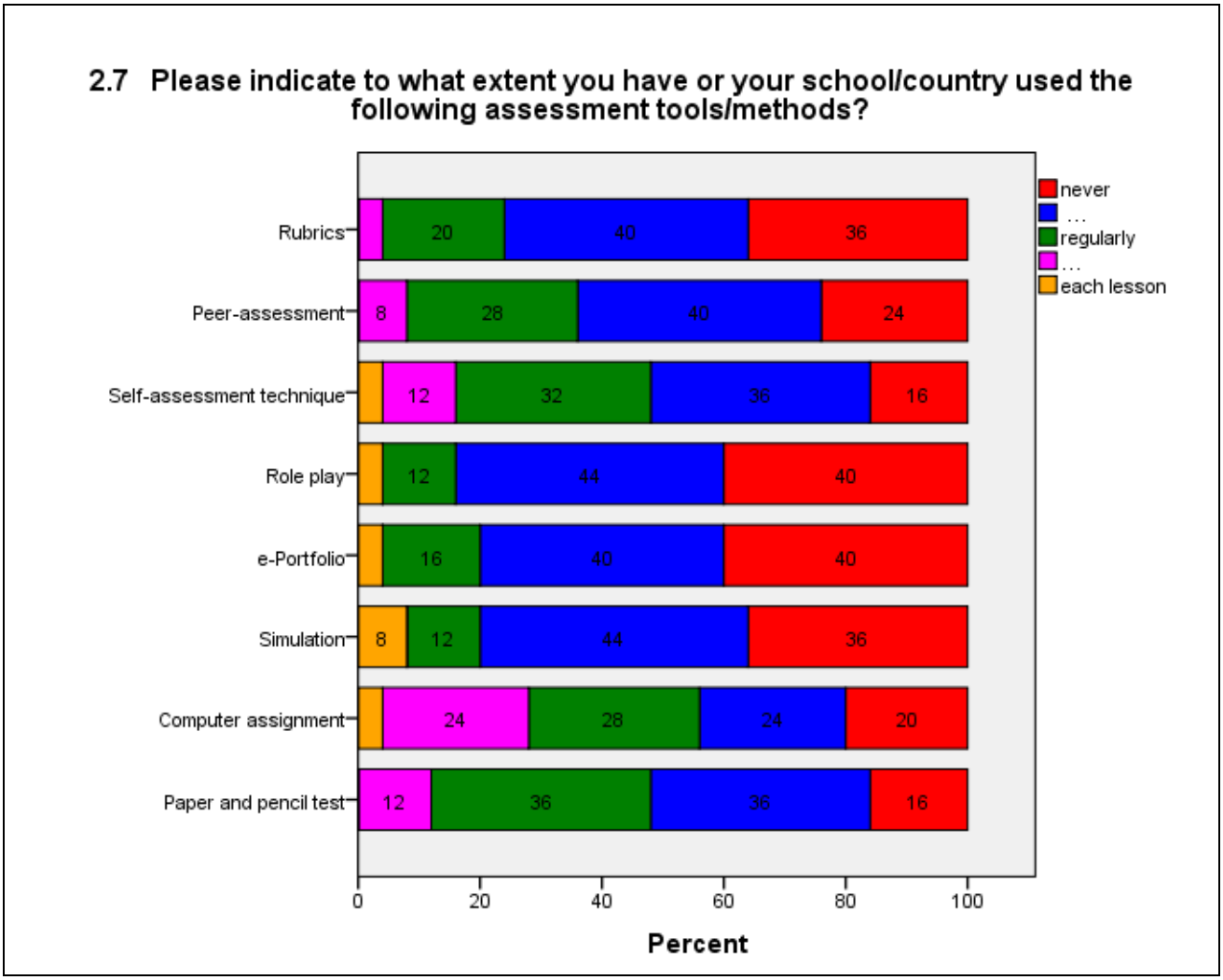

Fig. 98: Distribution of the answers to the question 2.7 of Austrian participants

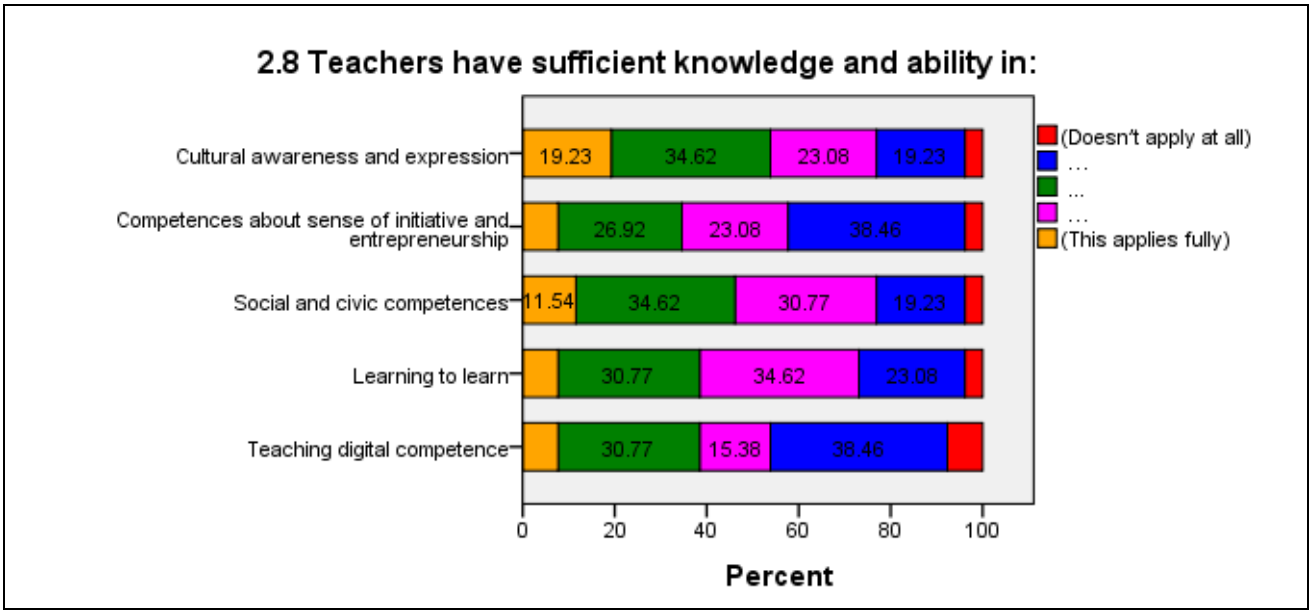

Fig. 99: Distribution of the answers to the question 2.8 of Austrian participants

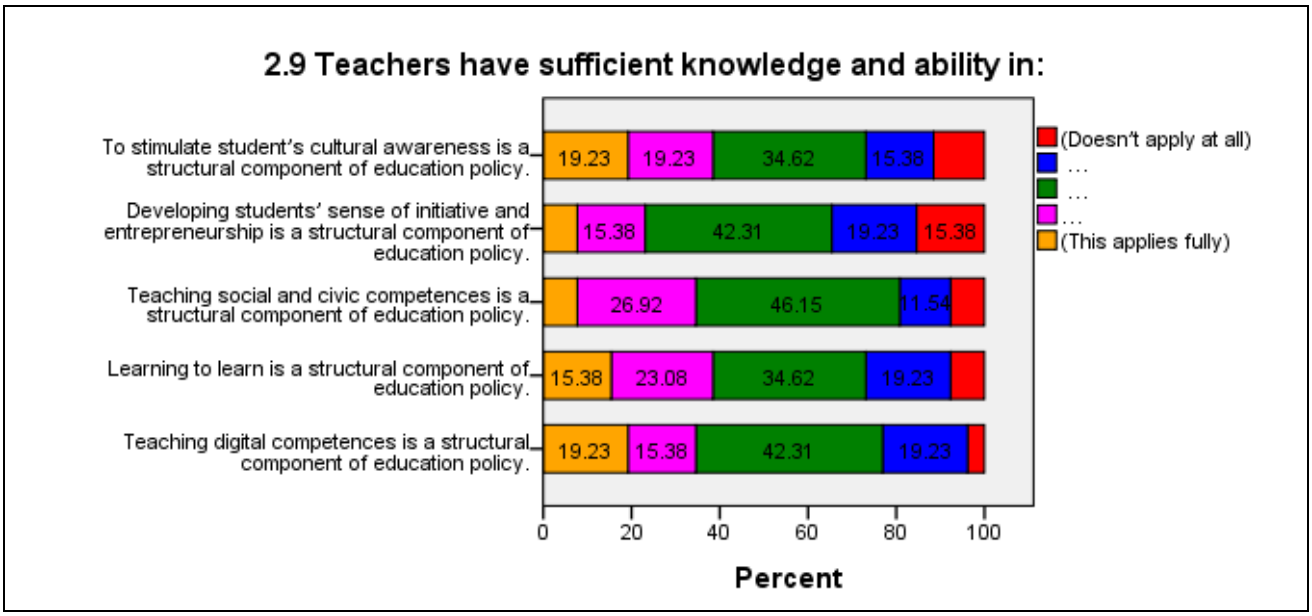

Fig. 100: Distribution of the answers to the question 2.9 of Austrian participants

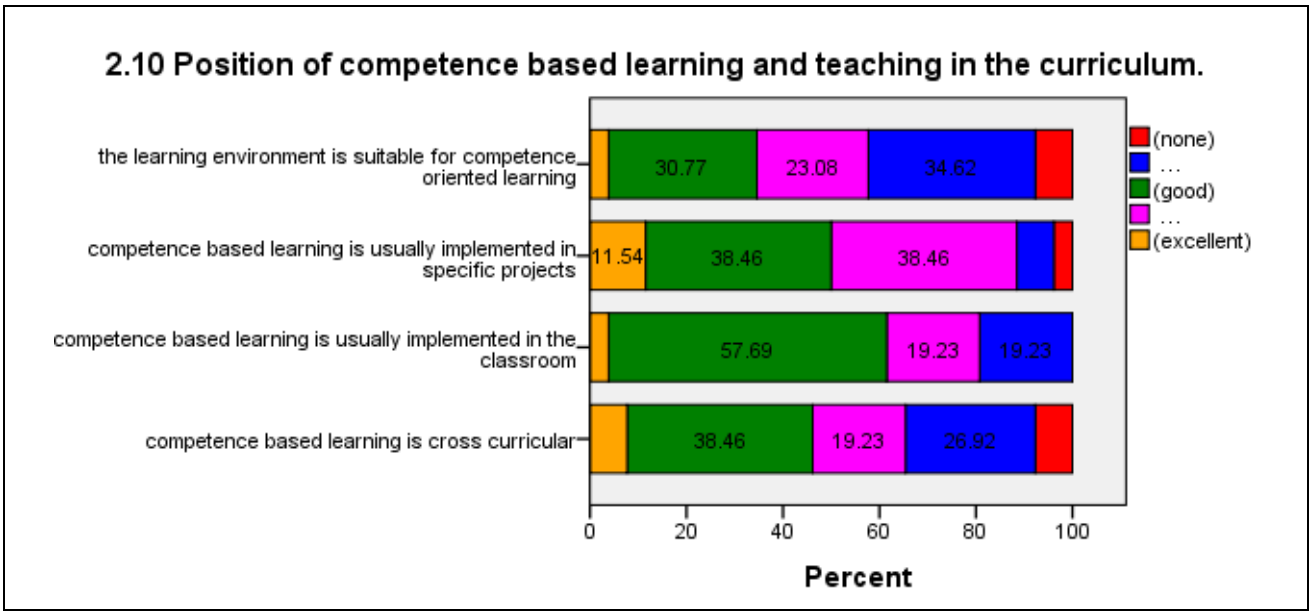

Fig. 101: Distribution of the answers to the question 2.10 of Austrian participants

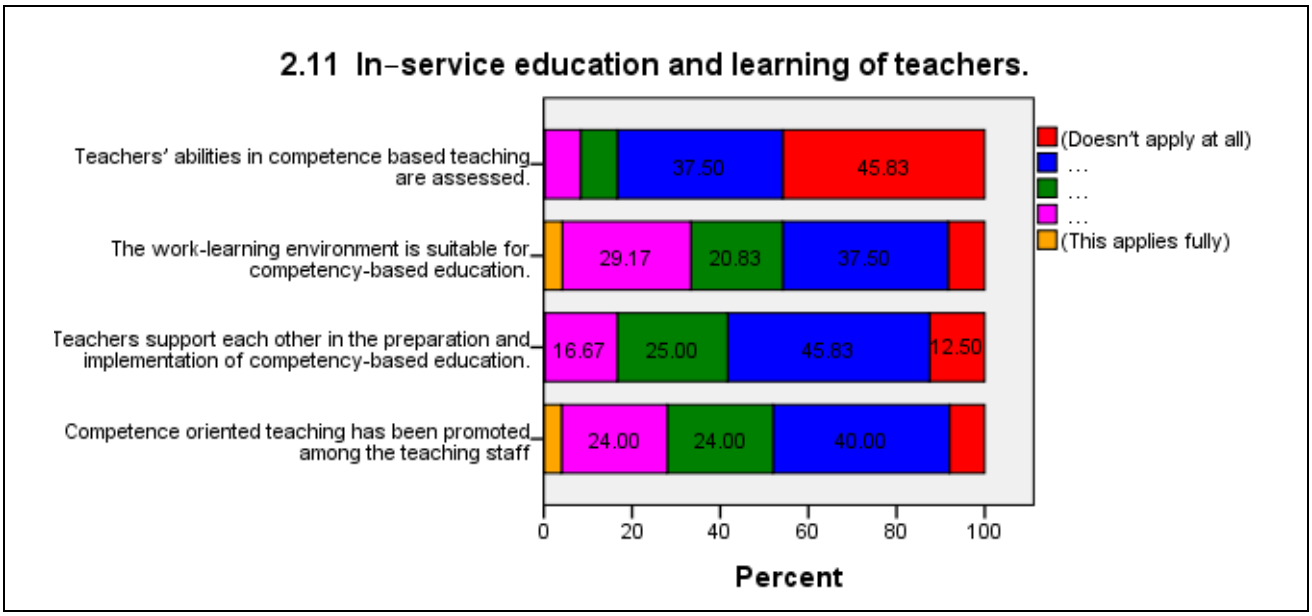

Fig. 102: Distribution of the answers to the question 2.11 of Austrian participants

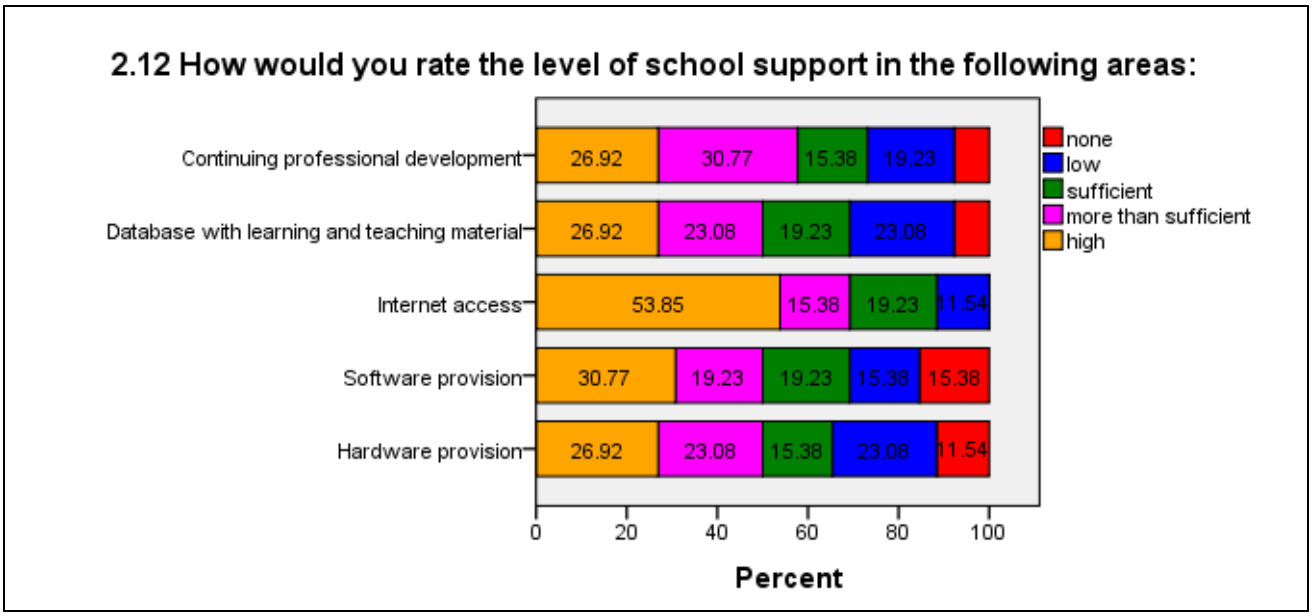

Fig. 103: Distribution of the answers to the question 2.12 of Austrian participants

Requirements: The Austrian respondents label themselves as experienced in teaching in a competence-based way. They have for example a lot of experience in teaching digital competences, learning to learn and social and civic competences. Besides experience, the respondents also indicate that they have a lot of knowledge and ability in teaching social and civic competences, learning to learn and cultural awareness and expression. Knowledge and ability with sense of initiative and digital competences still lie somewhat behind. The majority of respondents label their colleagues as having sufficient knowledge and ability in teaching these competences. But these results are not entirely conclusive. As mentioned in the state-of-the-art, the position of competence based learning and teaching has a central position in primary and secondary education in Austria. At the same time, about 45% of the respondents appoint that the learning environment is not suitable for competence oriented learning. Teachers' abilities in competence based teaching were also assessed seldom. More than 82% of the respondents pointed that the teachers' abilities regarding CBL were almost never assessed.

The didactics and teaching methods used in practice by the Austrian respondents is mostly based on project-based learning and problem-based learning. Interviewing experts, peers or others and using a storyline is a seldom used teaching method. Despite the enthusiasm in using ICT for educational purposes, technologies were seldom used. Software authoring tools, e-portfolios and 3D-virtual environments are some of the tools that were rarely used. Striking is the fact that some respondents (20%) use learning management tools and information searching tools each lesson. Despite the moderate use of ICT tools for the planning and implementation of competence based learning, the respondents use ICT for the assessment of student performance, to support and engage students in reviewing their own learning, to gain information about the progress in student performance and to improve students learning, mostly on regular basis. However, the assessment tools/methods mentioned in question 2.7 were used seldom in Austria. Only computer assignments and paper and pencil tests were used sometimes. The use of the digital tools for the assessment of competences can increase in the near future, because the majority of respondents pointed that the ICT infrastructure in Austria is sufficient.

Open questions: Most Austrian teachers start cross-curricular teaching with collaborative discussions with colleagues, then in consultation with colleagues the objectives will be defined. When the objectives are formulated, several teams of teachers will be formed. They are jointly responsible for the successful implementation of the competence-based learning of students. After finishing the project, the outcomes will be evaluated. Each school has therefore different methods and expect different outcomes. Some obstacles to the successful implementation of competence-based education are: group size, flexibility of the curriculum, lack of resources, insufficient support within the educational institution and time constraints.

4.6.3 Training needs

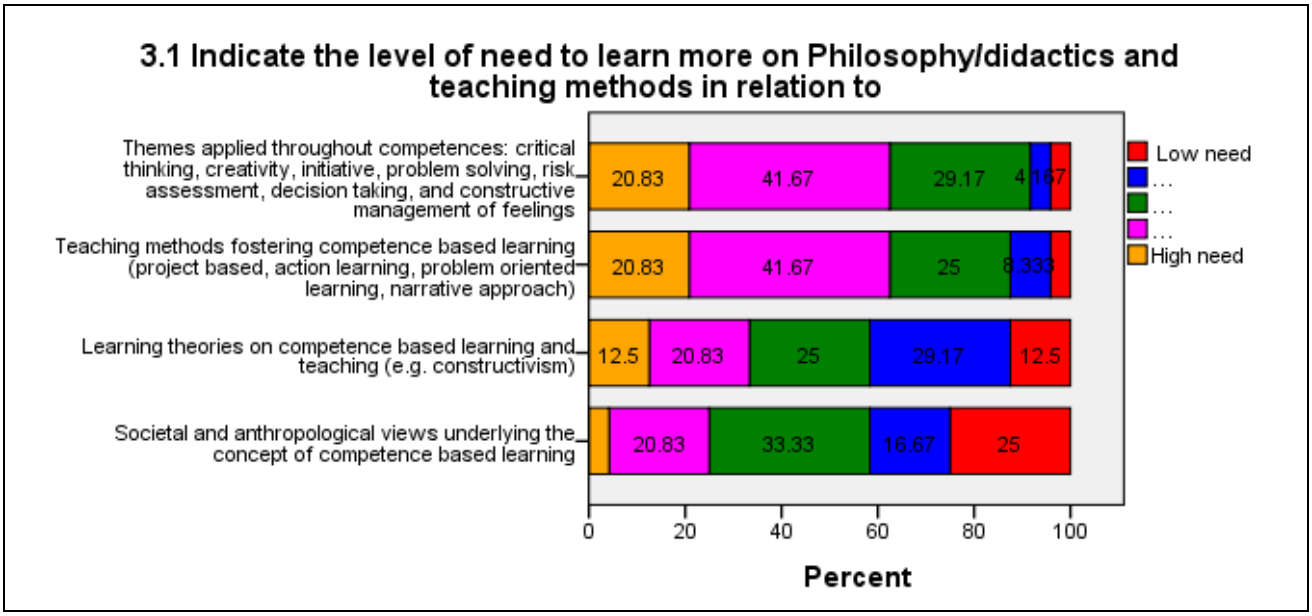

Fig. 104: Distribution of the answers to the question 3.1 of Austrian participants

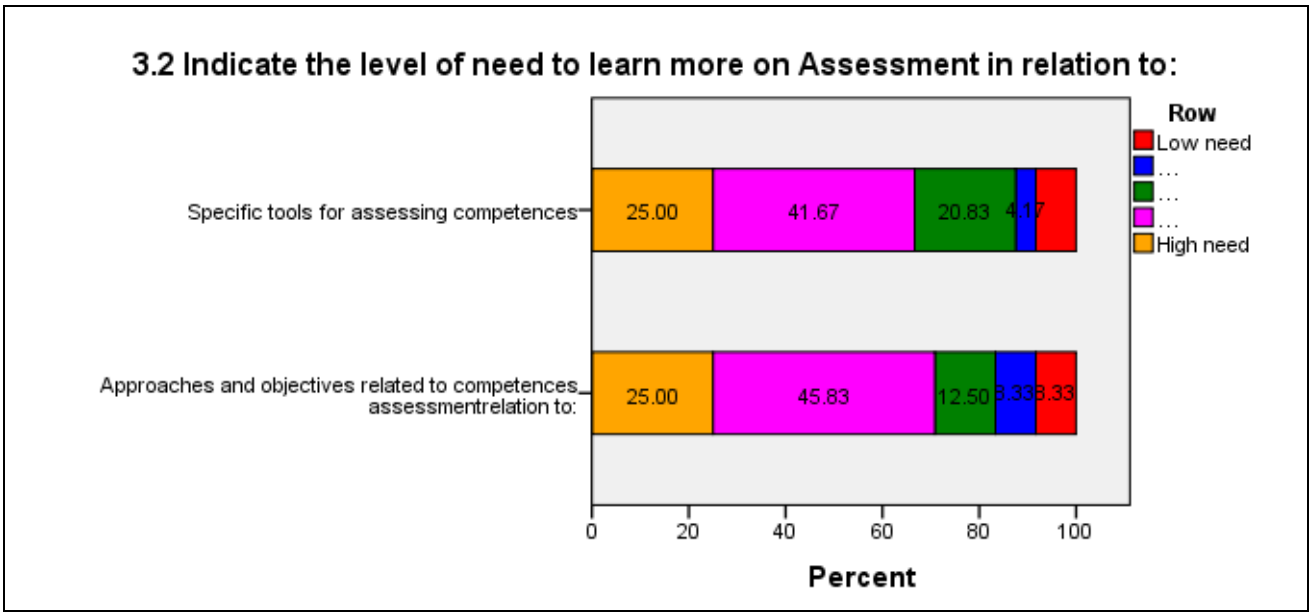

Fig. 105: Distribution of the answers to the question 3.2 of Austrian participants

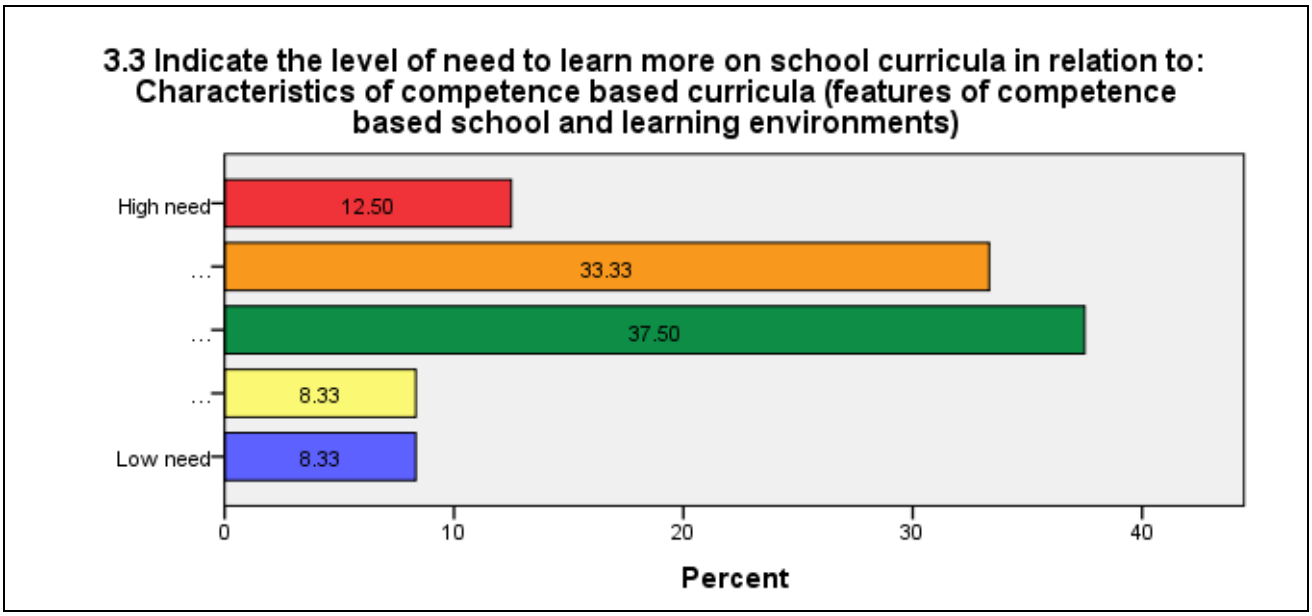

Fig. 106: Distribution of the answers to the question 3.3 of Austrian participants

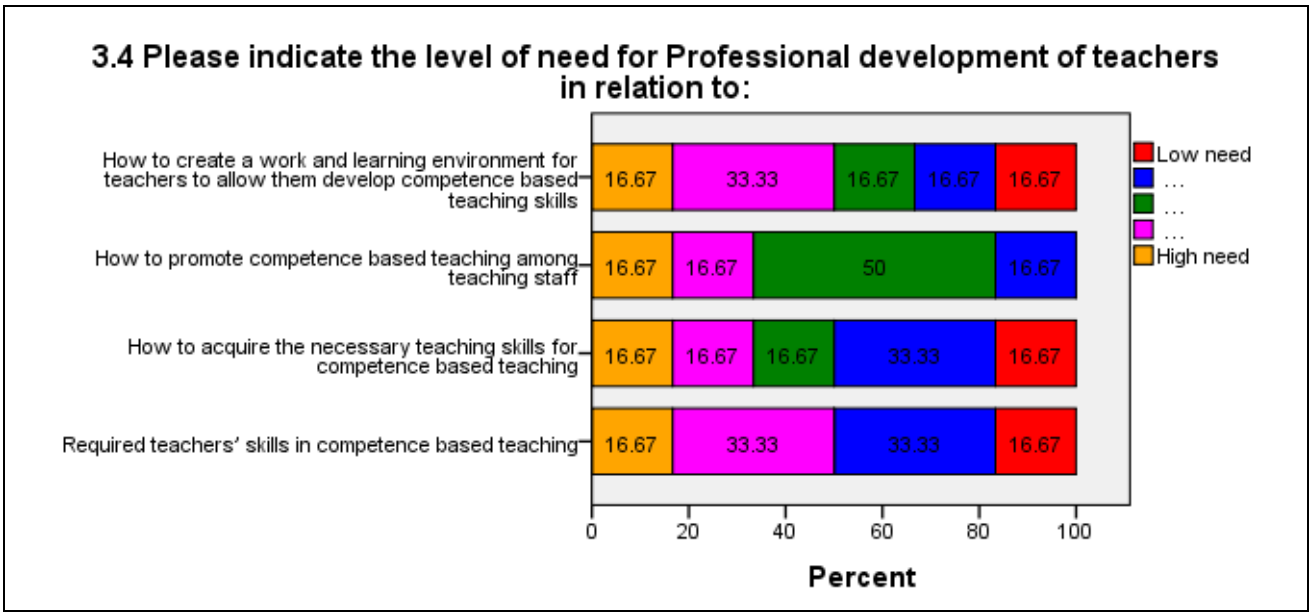

Fig. 107: Distribution of the answers to the question 4.4 of Austrian participants

Requirements: The majority of Austrian respondents in the online survey need to learn more on philosophy/didactics and teaching methods in relation to themes applied throughout competences, like critical thinking, creativity and initiative. Another need is for teaching methods fostering competence based learning, e.g. project based, action learning and problem oriented learning). Beside the general philosophy and didactics related to the teaching methods, the Austrian respondents also mentioned the need for specific tools for assessing competences and approaches and objectives related to competences assessments. Due to the fact that the CBL is partly integrated in the Austrian education programs, the need for more in the curricula in relation to characteristics of learning competency curricula is less pronounced. The answers on question 2.4 indicate that the Austrian respondents have the highest need for information about how to create a work and learning environment for teachers to allow them in developing competence based teaching skills and the need for teachers' skills in competence based teaching.

4.6.4 Availability to participate in the project

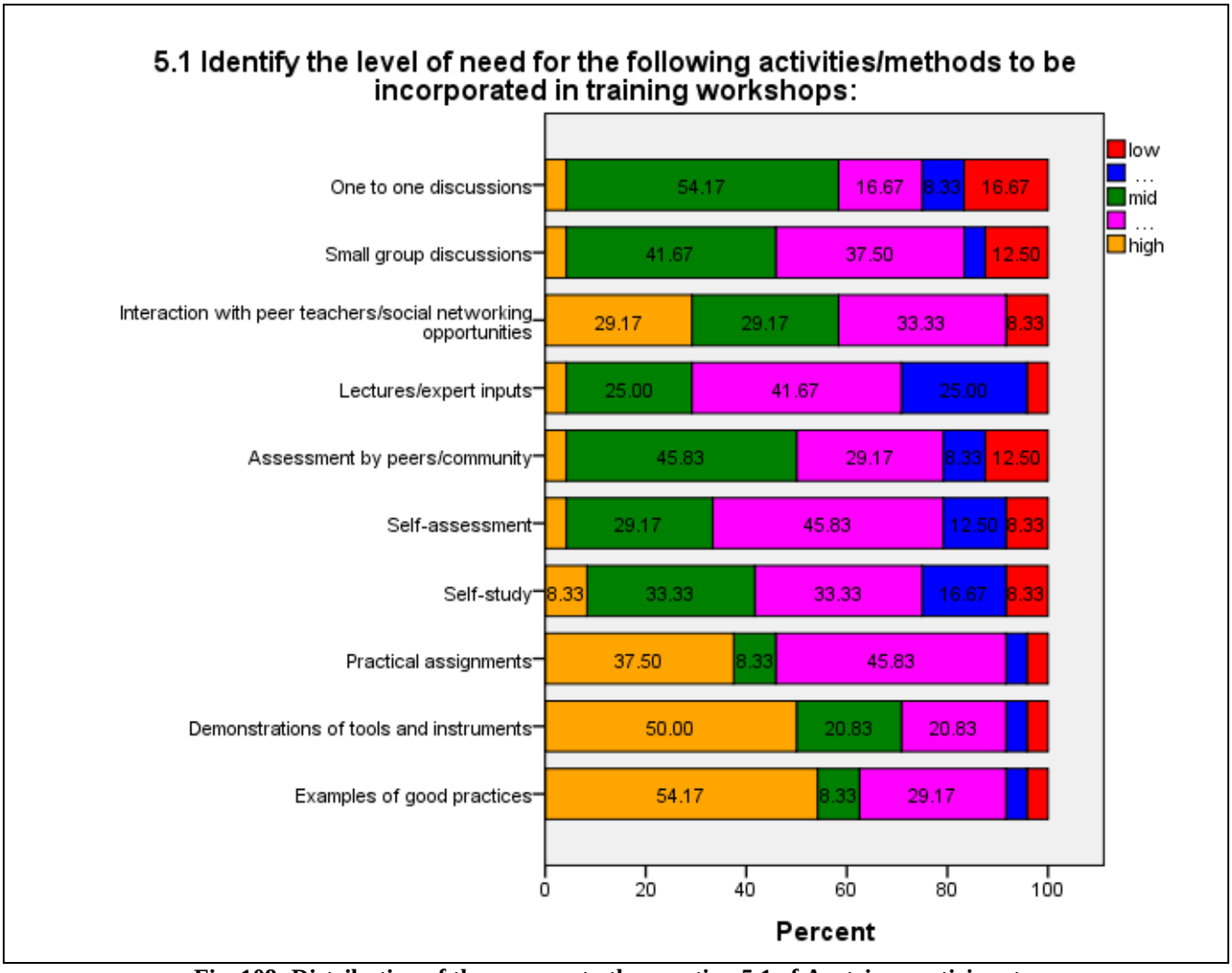

Fig. 108: Distribution of the answers to the question 5.1 of Austrian participants

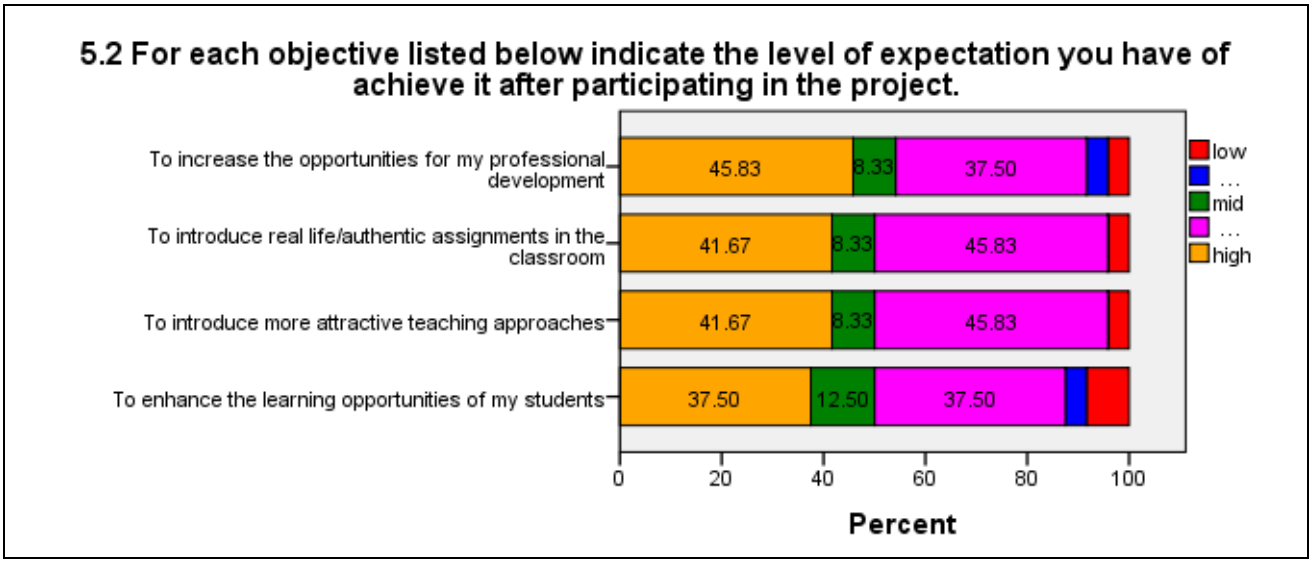

Fig. 109: Distribution of the answers to the question 5.2 of Austrian participants

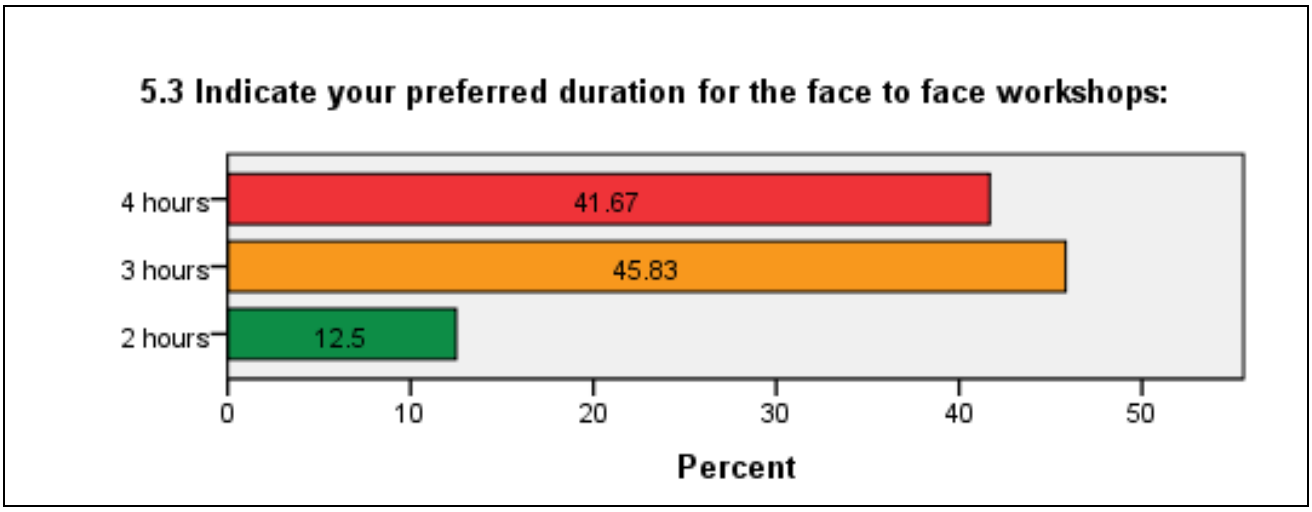

Fig. 110: Distribution of the answers to the question 5.3 of Austrian participants

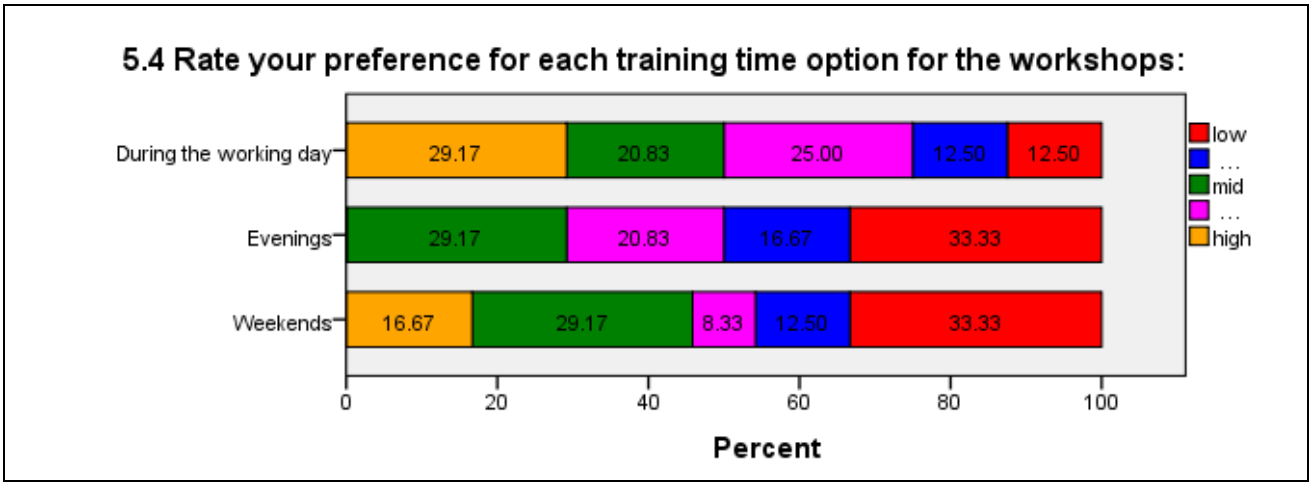

Fig. 111: Distribution of the answers to the question 5.4 of Austrian participants

Most of the Austrian respondents in this survey indicate discreet interest in further participation in the project but as on the one hand the implementation phase and the first pilot workshops will start in the next school year and on the other hand the TRANSIt training modules are not specified up to now nobody was able to make concrete affirmations.

4.7 Summary

The total sample size of teacher participating in the survey (pre-service and in-service) was 1.078. The majority of these respondents come from Greece (n=648). In the next section follows the analysis of all responses is presented. The most interesting results are marked with red frames and arrows.

4.7.1 User profile

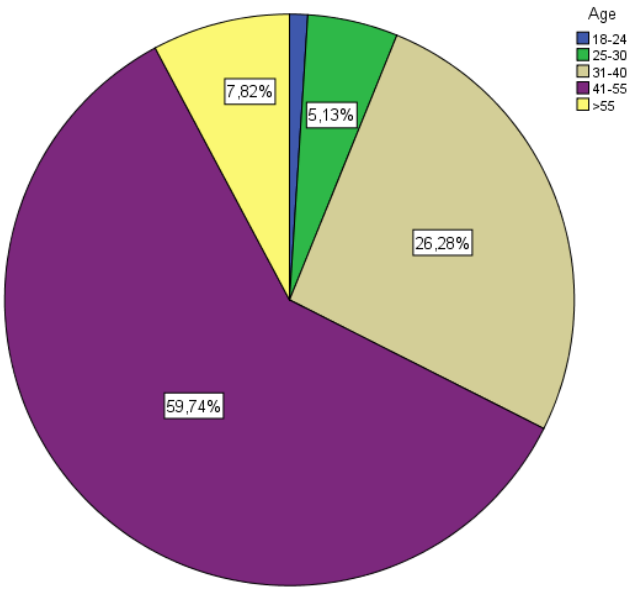

Fig. 112: Age distribution (all participants)

The majority of respondents in this survey are female (65,9%). A quarter of the respondents are teachers at a primary school, 40.8% are teachers at a secondary school and the rest is school leader, curriculum developer, teachers' trainer or educational policy maker. Most of the respondents have more than 5 years of experience (91.2%) in their current profession. 46.9% of them have a bachelors' degree and 41.3% have a masters' degree. Most respondents identify themselves as enthusiastic in the use of ICT for educational purposes (59.3%), only 3.3% is sceptical to the use of ICT for educational purposes, preferring to avoid the use of ICT in classes.

4.7.2 Current implementation of didactic and assessment of key competencies

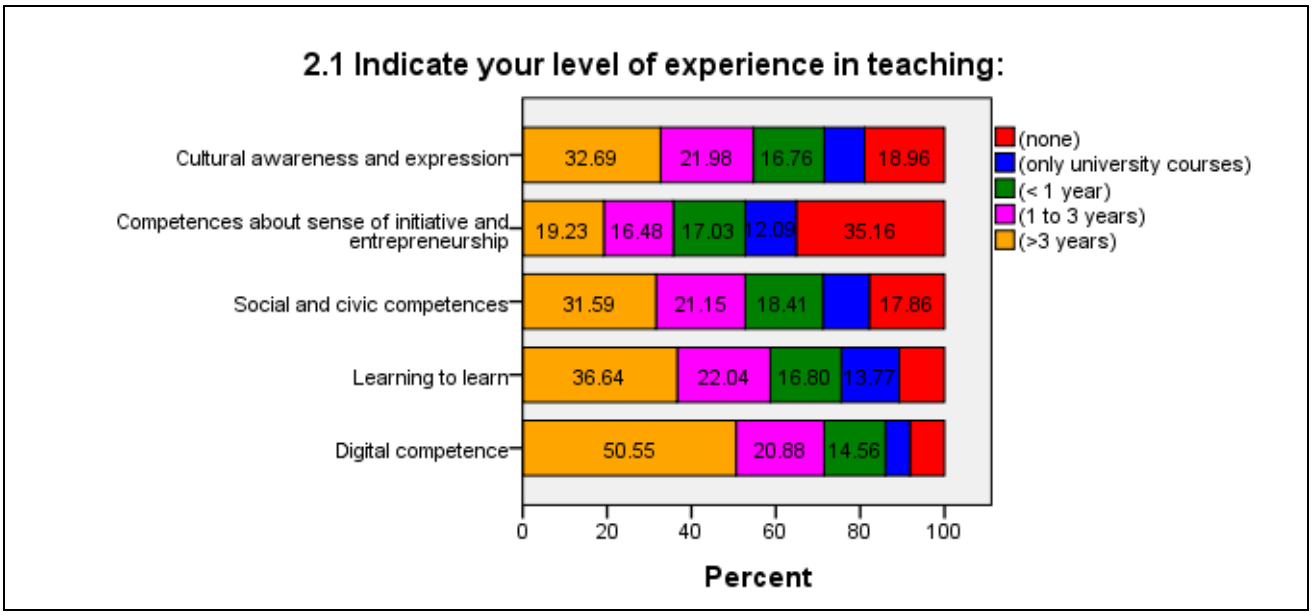

Fig. 113: Distribution of the answers to the question 2.1 (all participants)

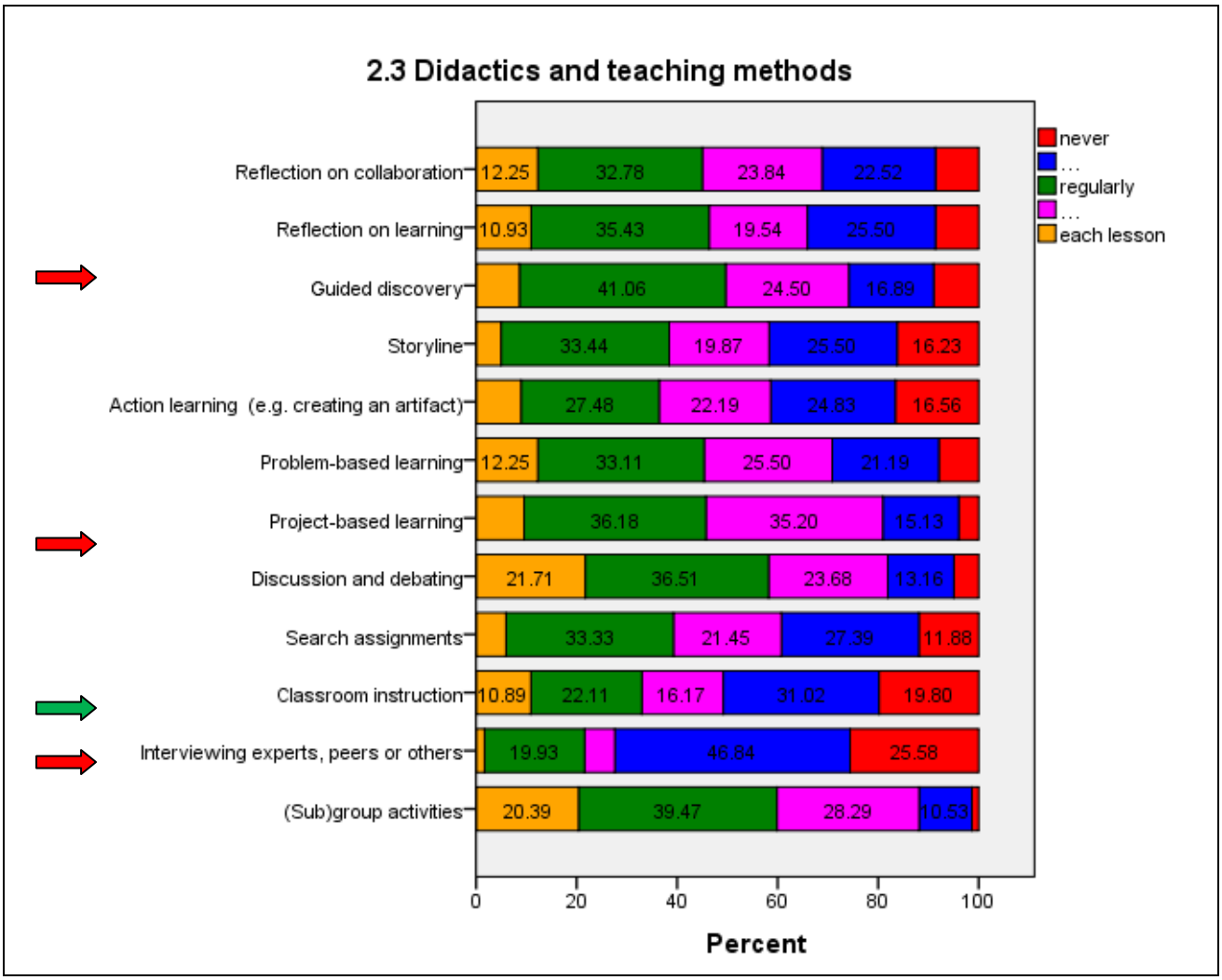

Fig. 114: Distribution of the answers to the question 2.3 (all participants)

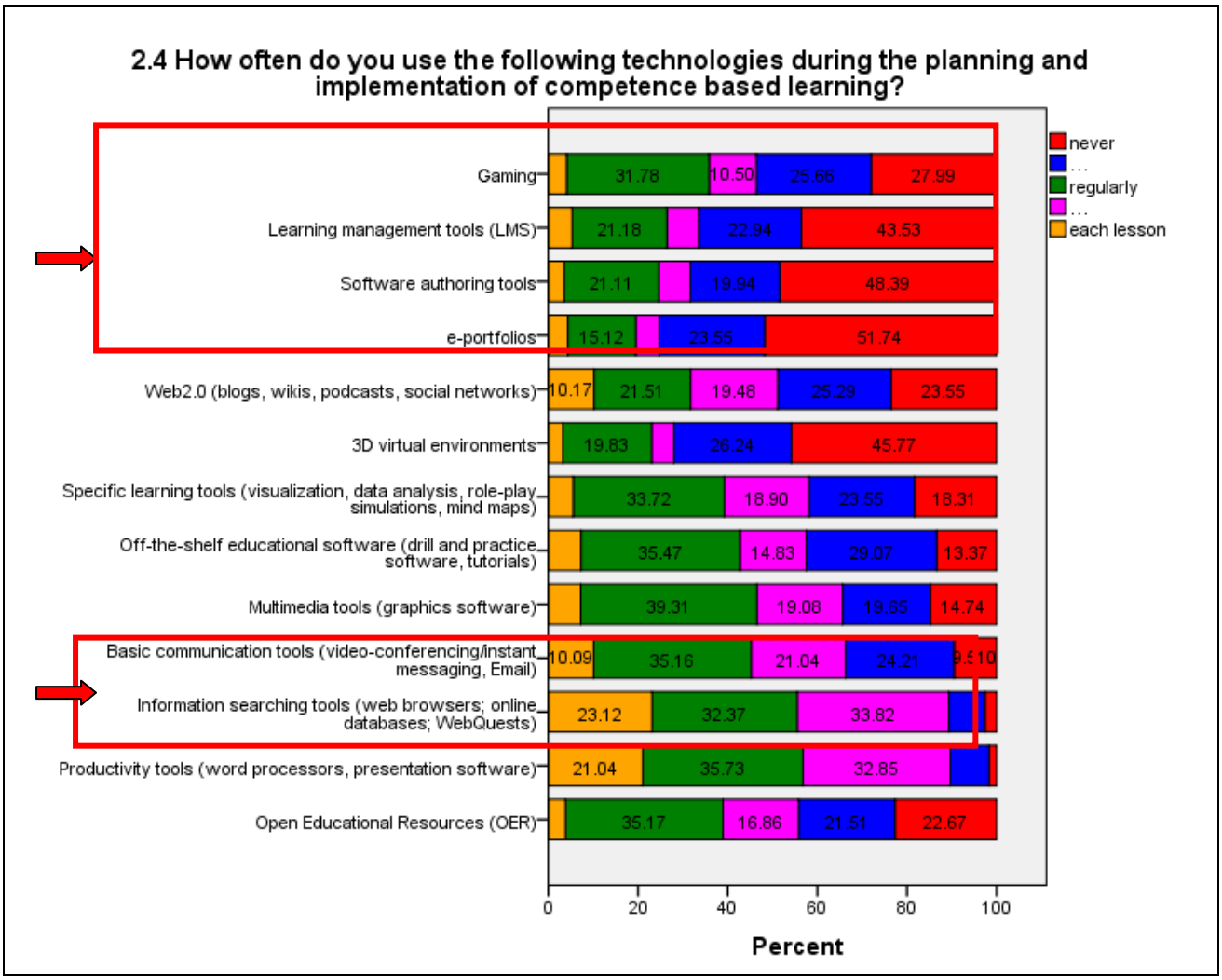

Fig. 115: Distribution of the answers to the question 2.4 (all participants)

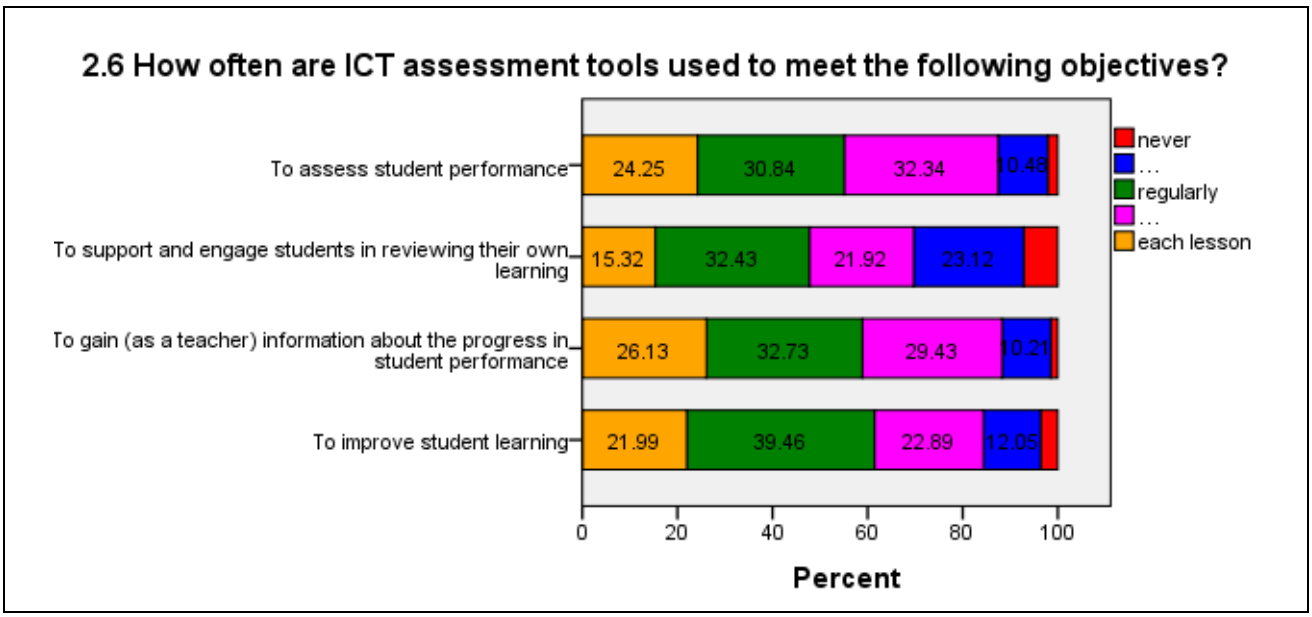

Fig. 116: Distribution of the answers to the question 2.6 (all participants)

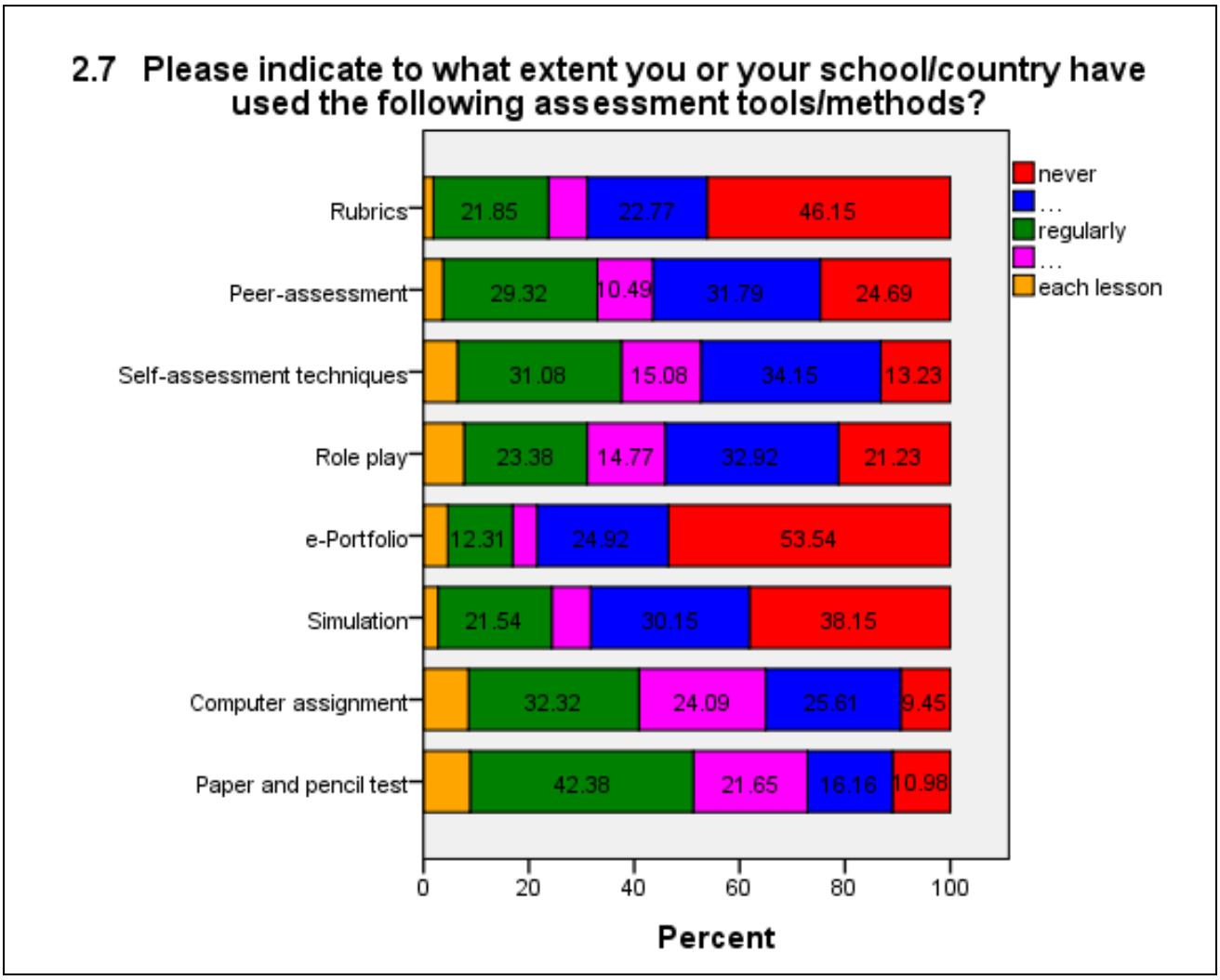

Fig. 117: Distribution of the answers to the question 2.7 (all participants)

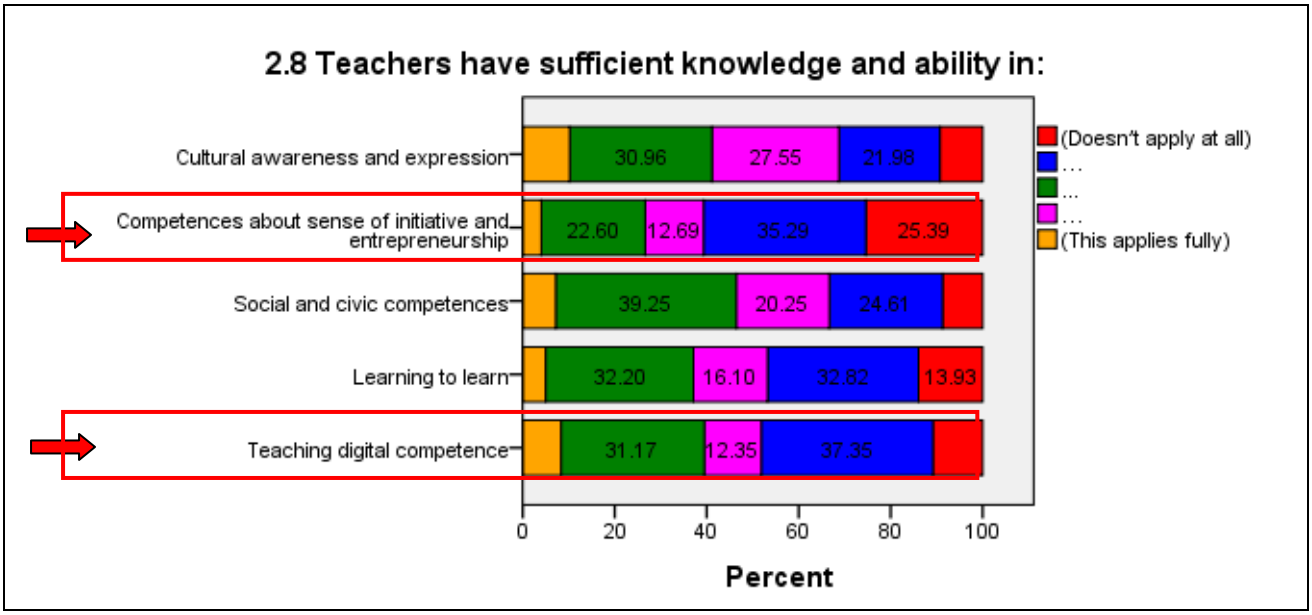

Fig. 118: Distribution of the answers to the question 2.8 (all participants)

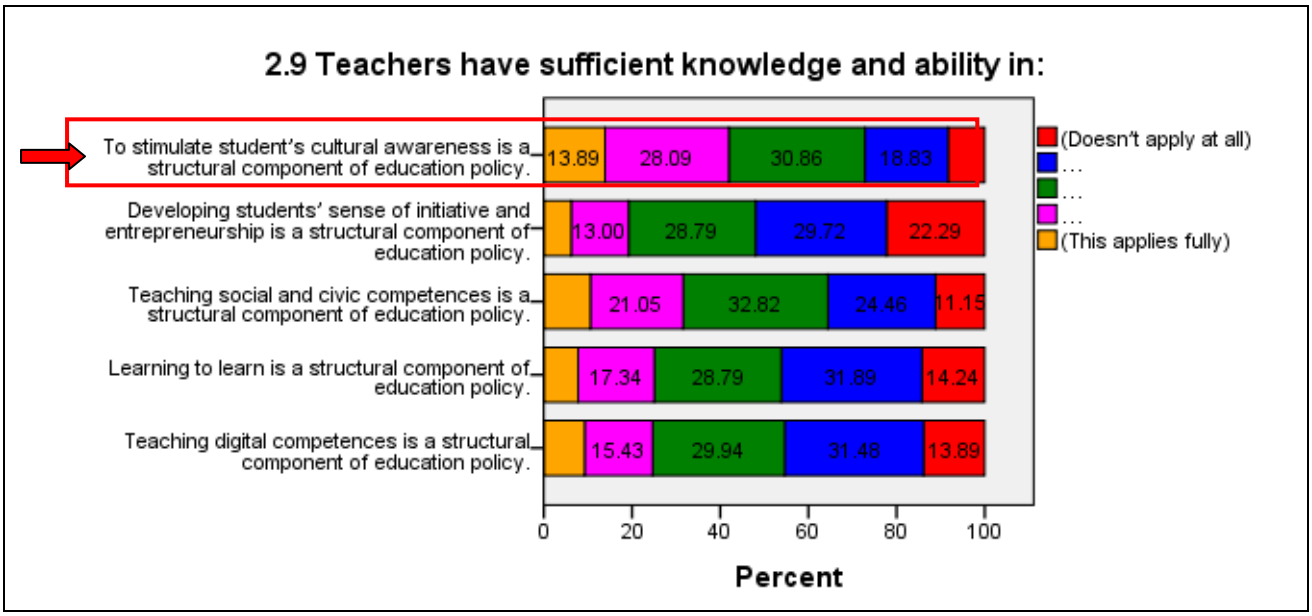

Fig. 119: Distribution of the answers to the question 2.9 (all participants)

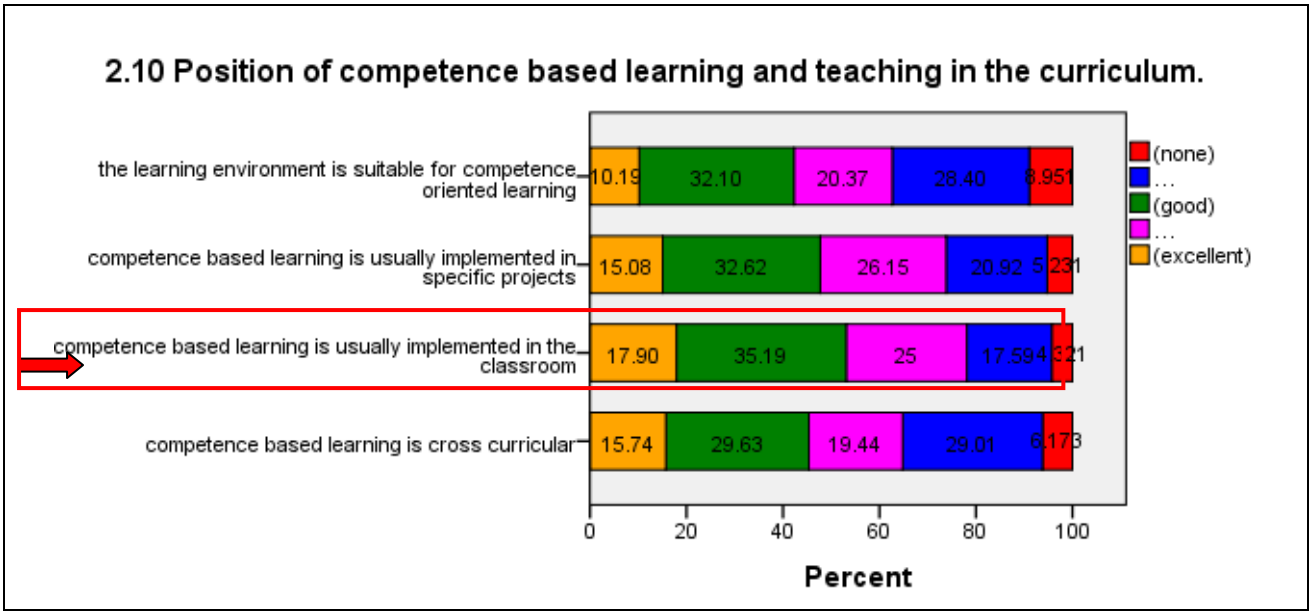

Fig. 120: Distribution of the answers to the question 2.10 (all participants)

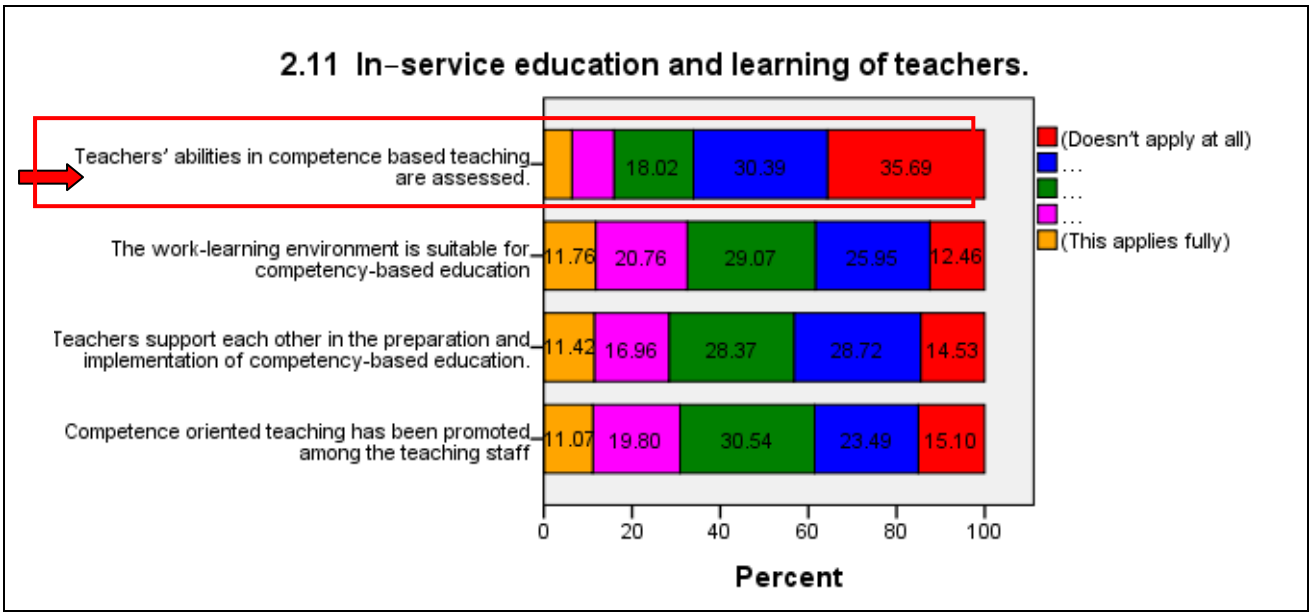

Fig. 121: Distribution of the answers to the question 2.11 (all participants)

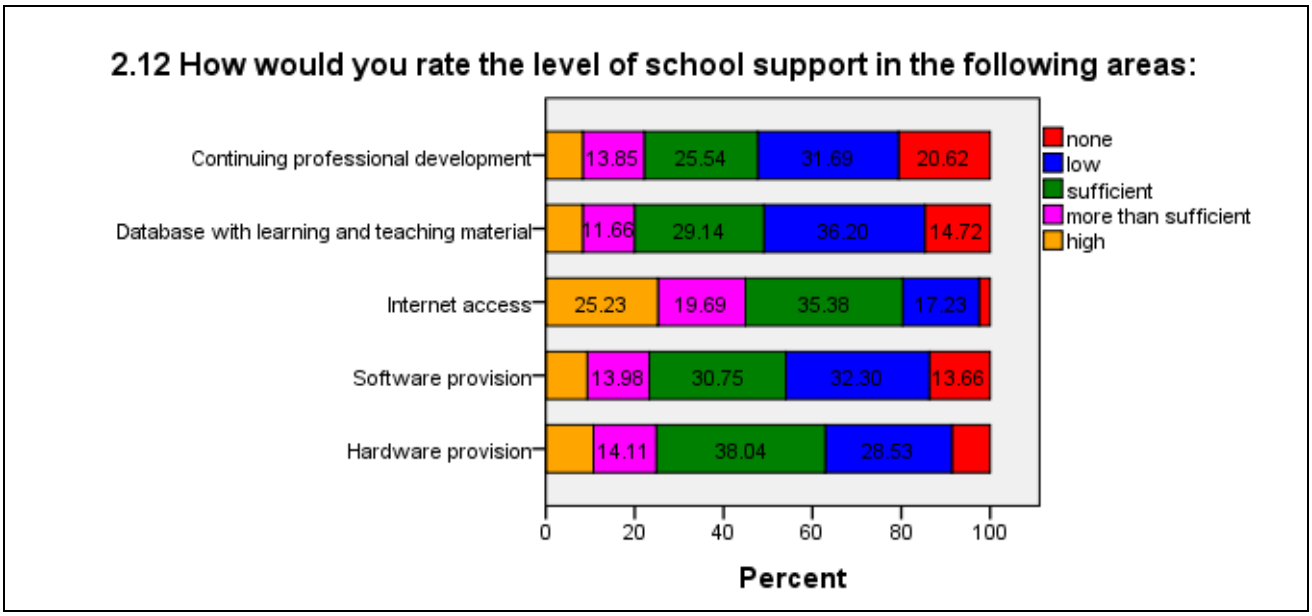

Fig. 122: Distribution of the answers to the question 2.12 (all participants)

Requirements: The majority of the general respondents in this survey have more than one year of experience in teaching digital competency, learning to learn, social and civic competencies and cultural awareness and expression. More than 50% of the respondents have also more than 3 years of experience in teaching digital competencies. Most used didactics and teaching methods are discussion and debating, (sub)group activities and guided discovery. On the side, there is almost no interest for interviewing experts, peers or others as a form of teaching. The respondents in this survey mostly use information searching tools and productivity tools during the planning and implementation of CBL. The latest technological possibilities such as gaming, LMS, software authoring tools and e-portfolios are rarely used in CBL. Most respondents mentioned that they use ICT assessment tools for all four objectives in question 2.6, so in case of assessing students' performances, supporting and engaging students in reviewing their own learning, gaining information about the progress in student performance and improving students' learning. The answers to question 2.8 and 2.9 (Figure 120 & 121) show that teachers have insufficient knowledge and ability in competencies about (developing) sense of initiative and entrepreneurship and teaching

digital competence. The answers to question 2.10 (Figure 122) show that in the current educational situation CBL has a 'central' position in the classroom. However, to improve CBL the teachers should be assessed more in teaching competency based. Currently, teachers were not assessed of their competency based teaching skills.

Open questions: Most teachers start a cross-curricular lesson by selecting a topic, after that they set the learning objectives for the end of the curriculum. The next step is collaboration with colleagues on the content of the curriculum. After that, teams of students were defined and the activities were described and implemented. The evaluation-criteria for assessing the key competences are purely based on the collaboration between teachers, they determine what the final deliverable will be; this can be a presentation, self-evaluation, or product. However, many respondents mentioned that a lack of resources and time constraints cause problems in setting up cross-curricular teaching materials.

4.7.3 Training needs

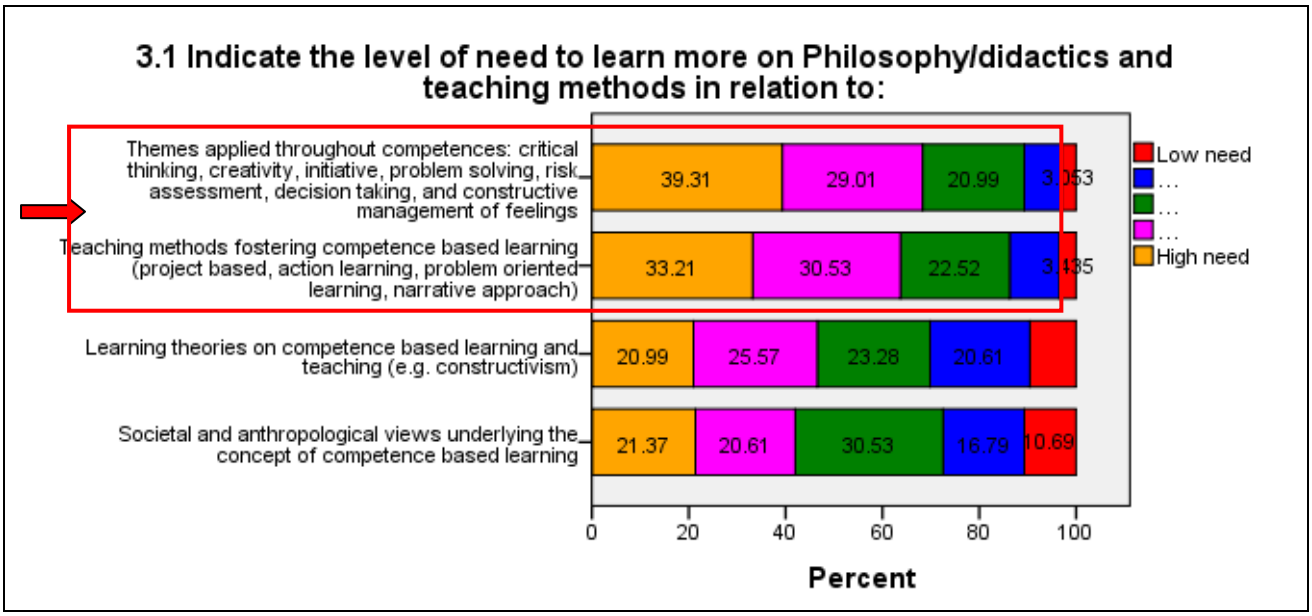

Fig. 123: Distribution of the answers to the question 3.1 (all participants)

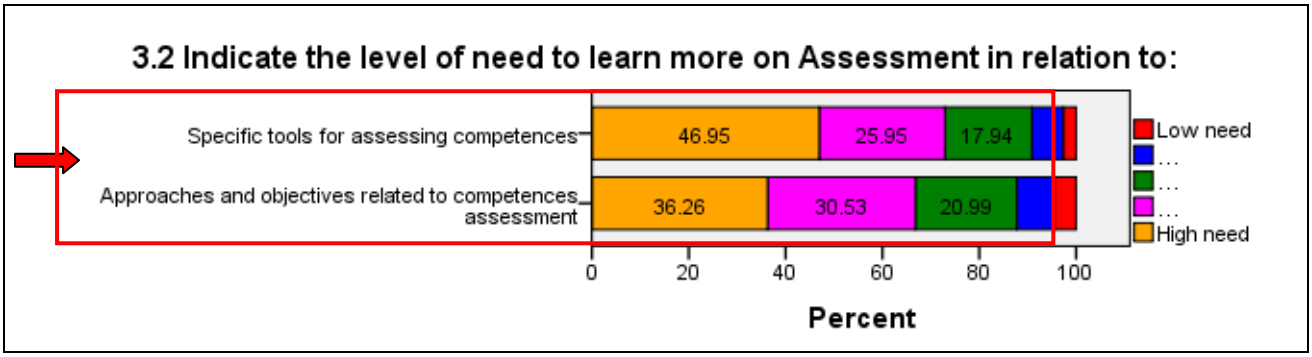

Fig. 124: Distribution of the answers to the question 3.2 (all participants)

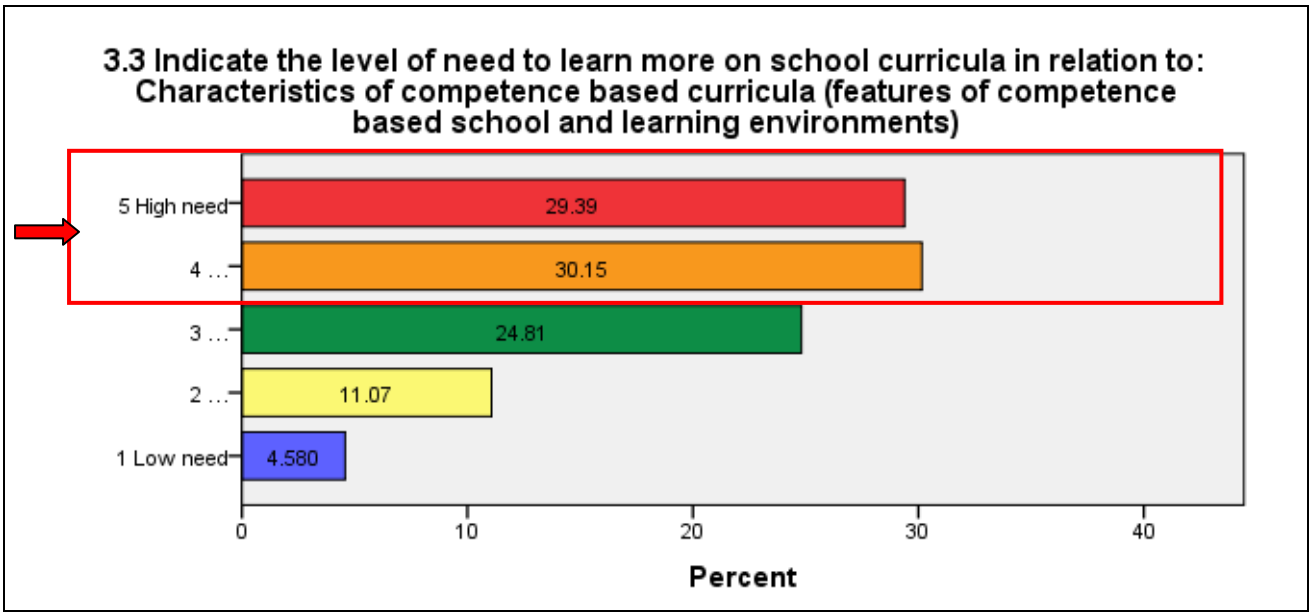

Fig. 125: Distribution of the answers to the question 3.3 (all participants)

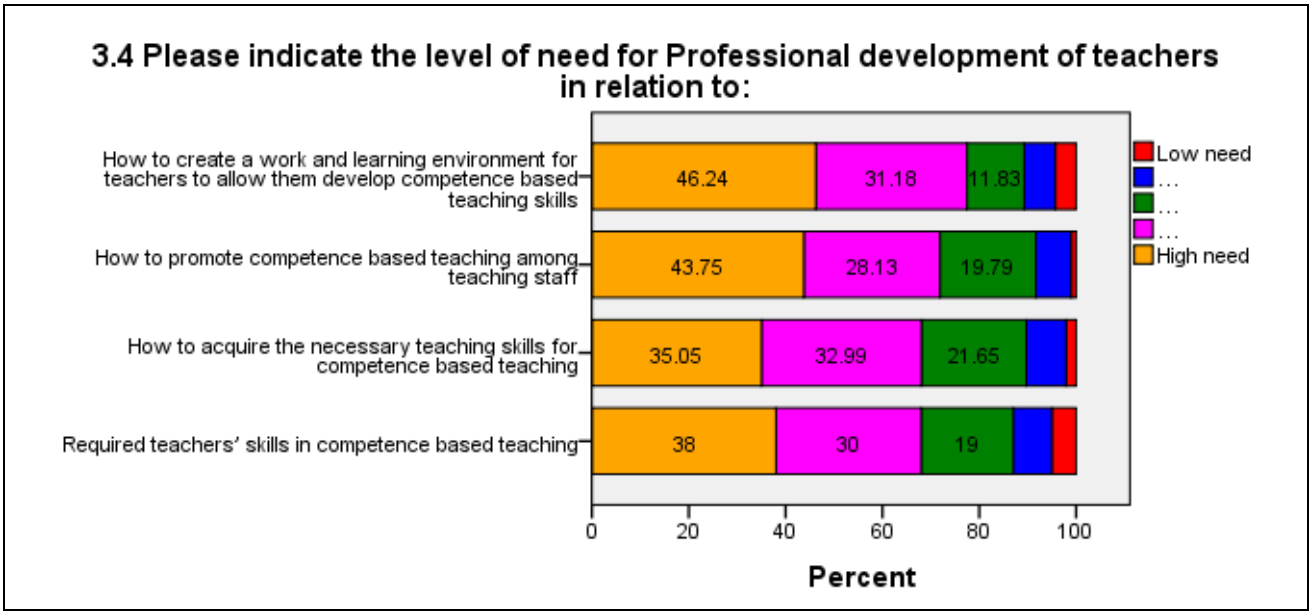

Fig. 126: Distribution of the answers to the question 3.4 (all participants)

Training requirements: The results show that there is a high need for themes applied throughout competencies and teaching methods fostering competency based learning. To assess the (learned) competencies, the respondents point that they first should learn more about the specific tools for assessing competencies and the approaches and objectives related to competencies assessment. There is also a high need to learn more on school curricula in relation to characteristics of competency based curricula (features of competency based school and learning environments). Finally, there is a high need for professional development of teachers in relation to the creation of a work and learning environment for teachers to allow them to develop competency based teaching skills and also for the promotion of competency based teaching among teaching staff. For that reason there should be a better work and learning environment for teachers to allow them for giving competency based teaching, before competency based teaching can be adapted.

4.7.4 Availability to participate in the project

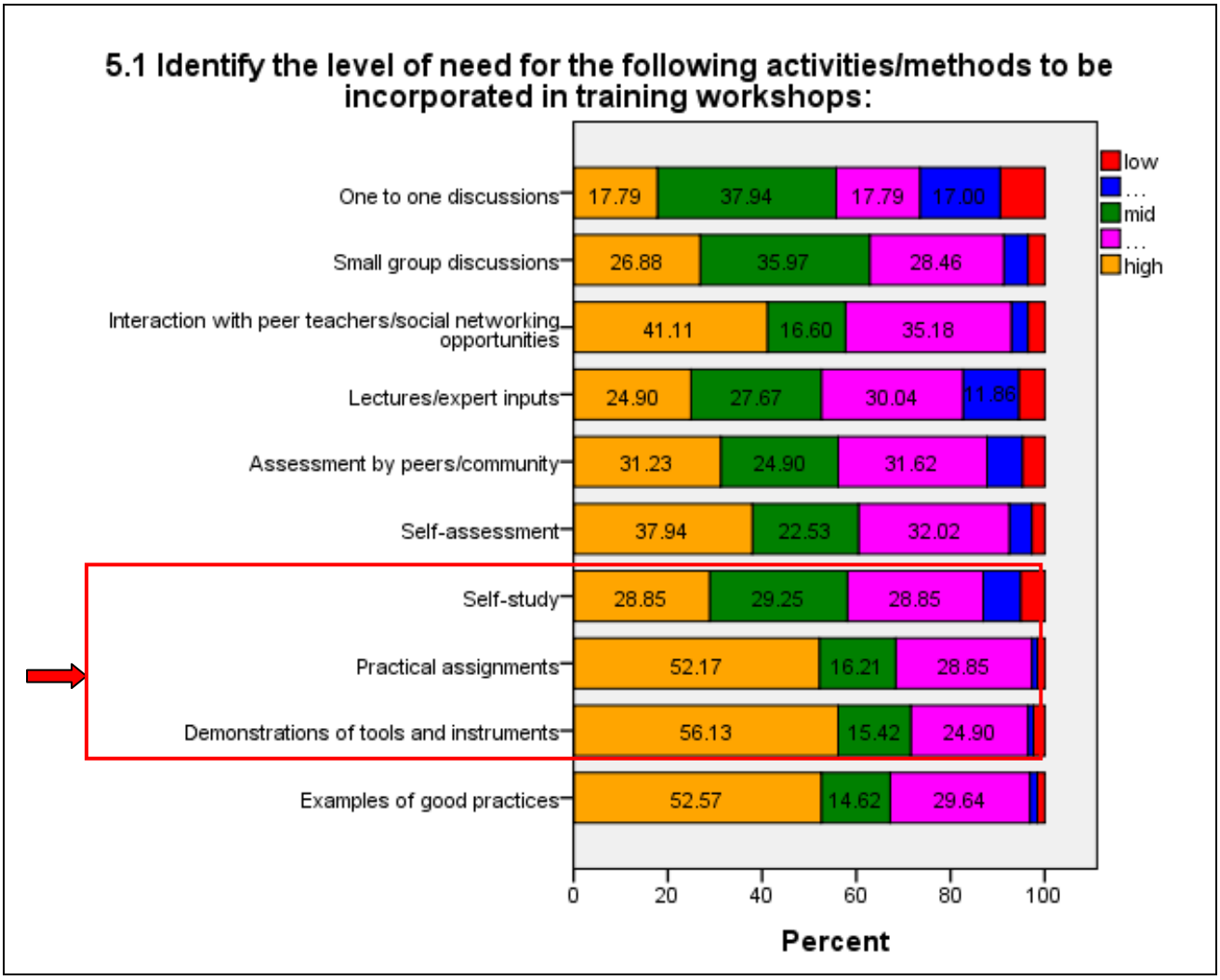

Fig. 127: Distribution of the answers to the question 5.1 (all participants)

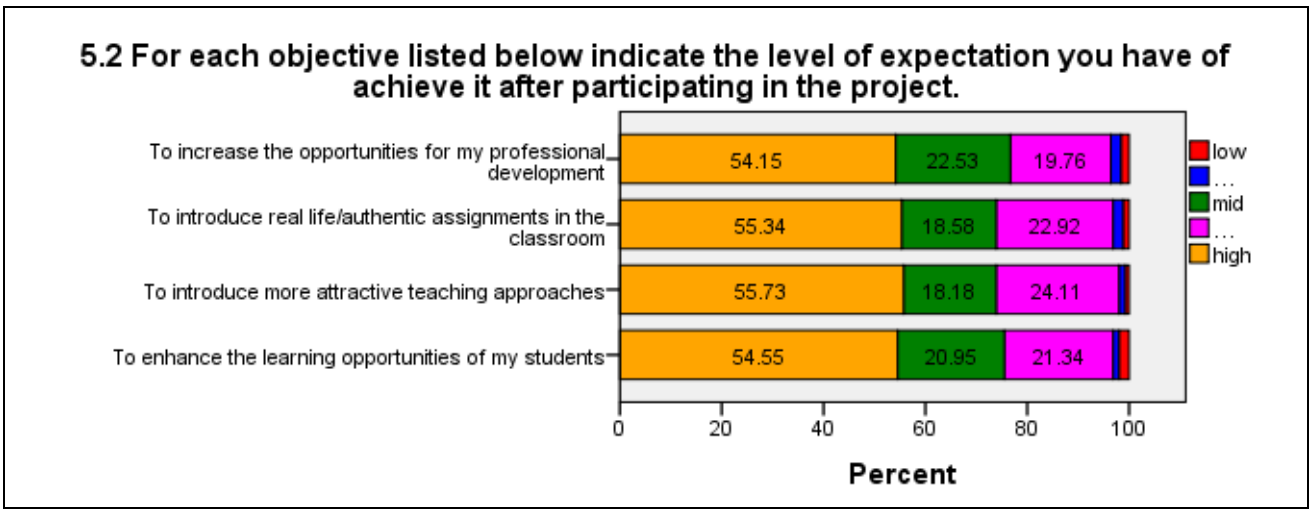

Fig. 128: Distribution of the answers to the question 5.2 (all participants)

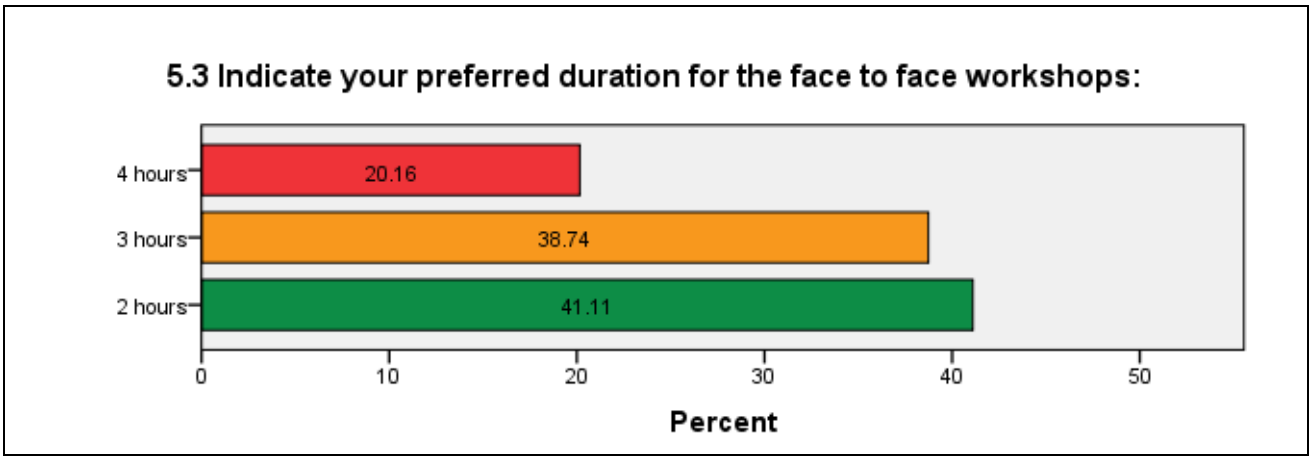

Fig. 129: Distribution of the answers to the question 5.3 (all participants)

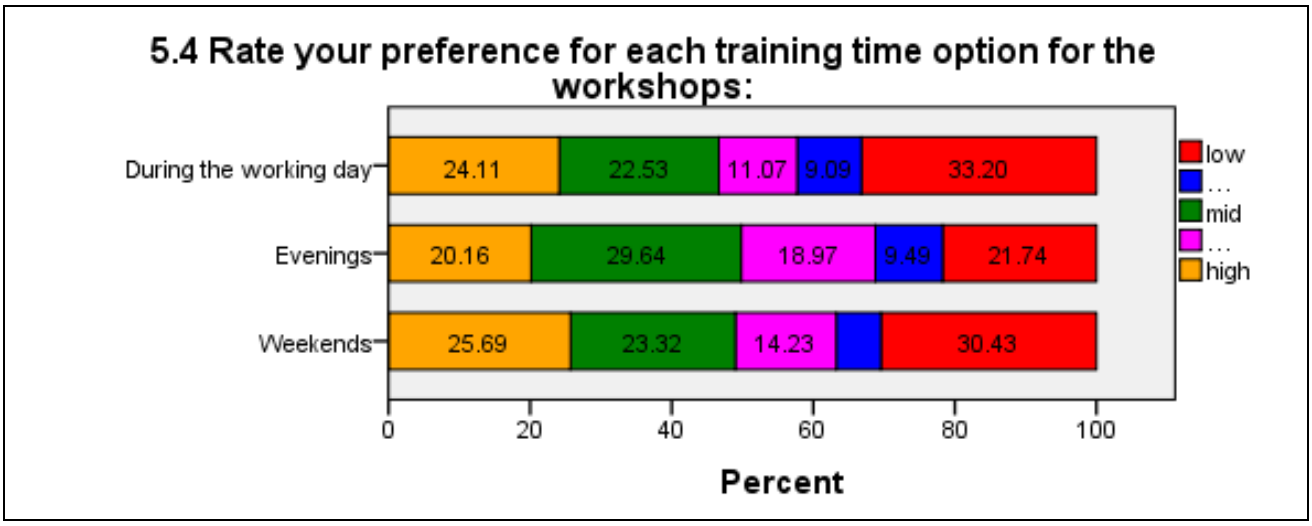

Fig. 130: Distribution of the answers to the question 5.4 (all participants)

Requirements: the majority of the respondents mentioned practical assignments, demonstrations of tolls and instruments and examples of good practices as the activities/methods that are most needed. Just a small part of the respondents points one-to-one discussions as an important need for the training workshops. The respondents expect that they can achieve all the four objectives mentioned in question 5.2. They expect that they can increase the opportunities for the professional development; they expect that they get an introduction to real life/authentic assignments in the classroom, they expect that they achieve more attractive teaching approaches and finally they expect to achieve more learning opportunities of my students. The general picture that emerges is that the respondents expect a lot of the workshops, but that the most important need is to learn more about the way they can teach and assess the key competencies.

Preferred time and location for the workshop: There are no conclusive results on the preferred time for training workshops but duration of 2 to 3 hours is acceptable.

5 Report on the Workshops conducted

5.1 Spain

On the 12th and 14th of March, 2013, two workshops were conducted by the University of Barcelona with the goal to identify user needs from potential TRANSIt participants. During the workshops, participants filled in the TRANSIt needs analysis questionnaire on paper.

Details of discussions during the workshop:
Involvement of the audience in Competence Based Learning (CBL)

Participants are involved in Competence-Based Learning (CBL) activities to various extents. Several participants know very little about competences, but they are aware that public policy is strongly encouraging the change of paradigm towards teaching by competences. They were motivated and have already carried out educational innovations of some kind. Other participants are already implementing cross-curricular educational activities which aim to the acquisition of competences by their students. However, most of these practitioners admit that they aren't implementing them in a systematic way. Rather, they slightly modify their practice in the direction of competence-based teaching. For instance, they carry out one project-based learning activity every year. Another example is a teacher who reported to be working on her students' mathematical competence in her English class. Generally, those practitioners work autonomously and they don't share their practice with their peers.

Regardless of their level of involvement in CBL activities, most participants are concerned about competence-based assessment. They don't know how change to competence-based assessment from a goal-oriented assessment while meeting the official curriculum, following the school policy and pleasing students and parents.

1. Limitations of school practice
Participants are motivated to implement competence-based teaching but they spot several constraints. In their minds, their working schedule doesn't allow for educational innovation as they would wish. For instance, primary school teachers who teach one different subject every hour, often to different groups of students, have difficulties in breaking the boundaries of these subjects. The lack of resources such as a computer room and lack of flexibility to use them has also been mentioned among the biggest obstacles encountered.

2. Curriculum opportunities for applying CBL
Some participants identified enablers to the implementation of Competence-Based Learning (CBL) activities. Several participants believe that the competence based teaching and assessment books published by the Department of Education of the Catalan government are useful "because they let you know what competences your students must acquire and to what extent". In general, they feel that schools have enough freedom to develop an educational policy that meets the goals of the regional curriculum. This is to say, they think that the institutional framework allows for achieving the same educational goals in different ways.

Such freedom is higher in primary than in secondary school, participants think. More specifically, teachers believe that nowadays CBL activities are rather suited for young students within primary school. According to them, as the end of primary school approaches, teachers shift towards content-oriented teaching because they must prepare their students for undertaking secondary education.

Given the constraints of the official curriculum, a number of practitioners from secondary school spotted ways to implement CBL activities, which mainly rely on communication among teachers and support from the management team.

A teacher summarizes the opportunities for CBL activities: *"teachers who have an open mind and will to work can innovate every day".*

3. Training needs to overcome the limitations

Participants implied that if they had a clearer idea on how to teach and assess by competences, they would be more willing to implement it. They wish to learn through examples of success stories and good practices, through interacting with practitioners who teach and assess by competences and by having access to educational materials, especially digital, that they can use.

Most participants wish to undertake hands-on training, which can have a direct impact in their daily practice. They mention competences as a methodology for the training.

4. Tools for supporting CBL teachers

Digital resources seem to be a suitable way to increase teachers and school leaders' skills in competence-based teaching.

5. Conclusions

Participants are generally motivated to change towards competence-based teaching and assessment because they feel that students won't accept old school methods any longer and because it is highly supported by public policy. At the moment, they seem to lack training and resources so to bridge the gap between theory and practice of CBL.

6. Recommendations

A successful training for Spanish teachers and school leaders seems to rely on making it easier for them to implement public policies on competence-based education. Most participants to the workshop are motivated to implement the competence-based teaching and assessment guidelines given in the documents published by the Educational Department of the Catalan government. Others may benefit from being led through the design and implementation of cross-curricular activities oriented to competence acquisition by their students.

The results of the workshops from Spain have been summarised in a national report, a synopsis of which with main results has been sent to participants in local language.

5.2 Austria

- 26 teachers participated in the **face-to-face workshop** in Bad Hofgastein on the 09th April 2013. The workshop in Bad Hofgastein took place in the framework of the Annual Meeting of Advisors of subject portals from the National Austrian School Portal (www.schule.at). The TRANSIt visionary workshop was organized on the basis of workshop materials developed by PLATO, the former WP2 leader of the TRANSIt project. 26 participants filled in the TRANSIt needs analysis questionnaires on paper.
- One **online workshop** was carried through on the 23th June 2013 with 8 participants using Skype and Google.docs. This workshop was planned in order to gain more specific feedback and insight to everyday practice of CBL and especially to do the SWOT analysis on internal and external factors that support or constrain CLB in the educational system in Austria.

Most of the participants of the 2 workshops are teachers working in secondary education. It has to be pointed out that teachers of different types of school have been involved:

- the so-called "NMS" (Neue Mittelschule = New Secondary School; see http://www.bmukk.gv.at/enfr/school/gen_edu/new_secondary_school.xml) is a newly established Austrian school for lower secondary education (students 10-14 years),
- the so-called "AHS" (Allgemein bildende höhere Schule = Secondary Academic School, see http://www.bmukk.gv.at/enfr/school/gen_edu/secon.xml) lasts for eight years and is divided in a lower level (students 10 – 14 years) and an upper level (students 15 – 18 years) and leads students to the "Austrian Matura" (maturity exam).
- Besides there are different school types for Secondary Technical and Vocational Education (see http://www.bmukk.gv.at/enfr/school/secon/basic.xml).

Most of the workshop participants work either in NMS or in AHS teaching a broad spectrum of subjects, only 4 teachers are primary school teachers. Most of the participating teachers have been in their profession for more than 5 years but the main part of participants did not participate in professional development activities for key competence acquisition up to now.

User profile in detail (including data from the 2 workshops conducted)

Gender:	**Male**: 13 **Female**: 21
Age:	20-30 (3 participants) 30-40 (8 participants) 40-50 (9 participants) 50-60 (8 participants) >60 (none) 6 missing items
School information	
I work in:	Primary education (4 participants) Secondary education (26 participants) Vocational education Other: 4 teacher trainers, teacher educators……
Student numbers:	<200 (5 part.) 200 – 350 (4 part.) 350 – 500 (6 part.) 500 – 750 (6 part.) 750 – 1000 (5 part.) 1000 – 1250 (1 part.) 1250 – 1500 (1 part.) > 1500 6 missing items
Experience	
Main Professional activity	Teacher (26 participants) School leader (2 participants) Teachers trainer (6 participants) Pre-service teacher (none) Curriculum development (none) Other: ------
For how many years have you been in this profession?	0 - 2 years (4 part.) 3 - 5 years (3 part.) 6 - 10 years (6 part.)

	11 - 15 years (8 part.) more than 15 years (12 part) --1 missing item
Did you take part in continuing professional development activities on the theme of key competence acquisition? **If yes: How would you describe the main objectives and topics of the activities?**	Yes (9 participants) No (20 participants) --- 5 missing items e.g. Mathematics competences, e-learning, chemistry, curriculum development, competence-based learning
If you are a teacher: which subjects do you teach?	A broad spectrum of subjects was mentioned (German, English, maths, biology, chemistry, geography, ICT, music, arts, nutrition etc.)
If you are a teacher: what is the age of your students?	4 - primary school children (6-10) 26 - secondary I (10-14) and secondary II (14-18) 4 - teacher education (adults)

1. Current implementation of didactic and assessment of key competences

The results of the TRANSIt Needs Analysis workshops in Austria indicate that in general most of the participants of these workshops seem to be familiar with competency based learning (CBL) to a high degree. Most of the participants think that competency based learning is cross curricular, usually done in the classroom and also done in specific projects. Especially the profound discussions in the online workshop indicate that transversal key competencies have become structural components of the educational policy of several schools illustrated by a lot of best practice examples presented by the participants.

Most of the participants state that the learning environment in their own school is suitable for competency based learning, but especially AHS teachers who participated in the online workshop mentioned that still some internal factors like the lack of "team-hours" for planning cross-curricular activities with other teachers as well as the inflexible time-table and administrational constraints hinder the extension of CBL cross-curricular activities. In contrast teachers of the NMS appreciate the fact that they have "team-hours" and a rather flexible administration that does not constrain even short-term initiated projects or cross-curricular activities.

It can be assumed that most of the teachers that participated in the TRANSIt Needs Analysis workshops are experienced in planning and carrying through CBL activities, either in their own subject lessons and classes or on a superior level in cross-curricular learning activities planned and conducted together with colleagues as well as in the framework of CBL school projects.

Participants of the workshops picture that the term "competency" has reached the minds of the bigger part of Austrian teachers, but there are still some colleagues in the own schools of the workshop participants that do not support CBL activities – this fact is perceived as an obstacle not easy to overcome. Another important aspect in this context is that teachers in the AHS seem to feel themselves more bound to the "content/topic demands" of the subject-specific curriculum than to the "competency-based demands", whereas teachers in the NMS think that the "competency-aspect" is equally important. This maybe can be explained by the differences of the school types, as the AHS is leading students to the maturity exam which is a school-leaving certificate that provides access to studies at institutes of higher education.

Teachers in both workshops mentioned that from the institutional side they perceive same kind of "extensive use" of the "term" competency, but some teachers also stated that it is not easy for them to define specific competencies and as a consequence of that they do not really have a clear picture about how to assess specific competencies. Some participants of the online workshop pointed out that up to now they feel a little bit like "pioneers on finding concepts for assessing competencies". This seems to be more relevant in the upper secondary level in the AHS where currently an extensive reform of the maturity exam is on its way, affecting all teachers and subjects. Teaching practices in the upper secondary level in the AHS actually have to undergo severe changes by switching from the main focus on subject matters and topics to the focus on subject-specific competencies. The *new standardised competency based maturity exam* will be established within the next two years, and as this is an ongoing process AHS teachers feel somehow insecure concerning competency assessment, not only concerning key competencies but also subject-specific competencies.

On the other side NMS-teacher state that they become more and more familiar with the new education standards and competency models as well as the respective competency diagnosis tools of the Austrian BIFIE (https://www.bifie.at/ikm). But these diagnosis tools exist only for English (foreign language), German (mother tongue) and Maths and only for the lower secondary level (up to 7th year of school).

In general it can be summarised that currently the implementation of CBL is on its way in Austria, as well in the lower secondary level as in the upper secondary level. For most teachers the process indicates a paradigm change from *teaching subject-specific content* to *foster transversal and subject-specific competencies*. Most teachers that participated in the workshops seem to be familiar with CBL but they are also aware that there is still a need for training - for themselves and also for their colleagues. Most participants of the face-to-face workshop regard the acquisition of teaching competencies for competency based teaching as important element of professional development of teachers. Participants in the online workshop stated that they have a strong need to learn more about effective concepts for competency-assessment.

2. Training needs

In Austria the initial teacher education is not uniform up to now, teachers in the AHS and the NMS have passed different types of teacher education. The ministry is working on a teacher education reform to harmonize initial teacher education in the future.

The profound discussions in the online workshop reveal that teachers in the NMS seem to be more trained to teach in a competency based way than their colleagues in the AHS, and especially AHS teachers in the first year of practice feel themselves not trained enough to foster CBL. Although most of the more experienced teachers declare that they feel familiar with CBL teaching practices they indicate that there is still a need to learn more about specifics of the transversal key competencies and competency based didactics and teaching methods. Special training needs have been mentioned for effective concepts on how to assess competencies, but also for specific "soft skills" as e.g. collaborative working, creative teamwork or digital tools.

3. Availability to participate in the project

Most of the proposed components listed in the questionnaire (that have been filled in by participants of the face-to-face workshop) for the TRANSIt training (expert inputs, interactions with peer teachers, demonstrations of tools and instruments, examples of good practice, hands-on training, follow up action planning etc.) are highly appreciated and should be included in the TRANSIt training modules.

6 Report on the Delphi-study results

To identify the training needs of teachers around competency-based education in Europe, a Delphi-study was conducted. This Delphi-study was conducted both online and offline. The Delphi study makes it possible to gather qualitative data.

6.1 The Netherlands

The interview sessions with the eleven (11) teachers, policy makers and curriculum developers in the Netherlands has yielded eight (8) different training needs:

1. General introduction of competency based education;
2. A structural design/training;
3. Focus on the broad competencies of the student;
4. Training on good rubrics and assessments;
5. Development of meta-competency skills;
6. Development of learning objectives with students;
7. Context-based competency-learning training;
8. Creating (valid) assessment on all educational levels

The results of the first round in the Delphi study suggest that there is no consensus in the training needs of the participants. Some participants request a general introduction of competency-based learning, other participants ask for a structural design and training and some participants ask for clear assessment methods. In the sample of eleven participants, nine of them are willing to participate in the project's activities.

6.2 Austria

Two interviews based on the Delphi study were conducted with Austrian teachers that did not take part in the workshops conducted (via Skype). The answers in the Delphi study resulted in six training needs:

1. Teachers need to understand the whole process of CBL;
2. Gain understanding for the process and its practical implementation;
3. Training teachers in the necessary competences to conduct CBL activities;
4. Training in instructional design methodologies;
5. How to assess the competences;
6. Creative learning techniques

Due to the limited number of participants in the Austrian Delphi study there is no consensus in the different needs. However, the results are due to the qualitative nature particularly valuable for the construction of the training framework for competence based teaching.

7 SWOT analysis

In Fig. 135 the SWOT analysis derived from questionnaire survey and workshop discussions is presented. A systematic analysis of the results from the questionnaire survey and workshops resulted in the strengths, weaknesses, opportunities and threats. The main Strengths, Weaknesses, Opportunities and Threats (SWOT) of future training workshops are depicted.

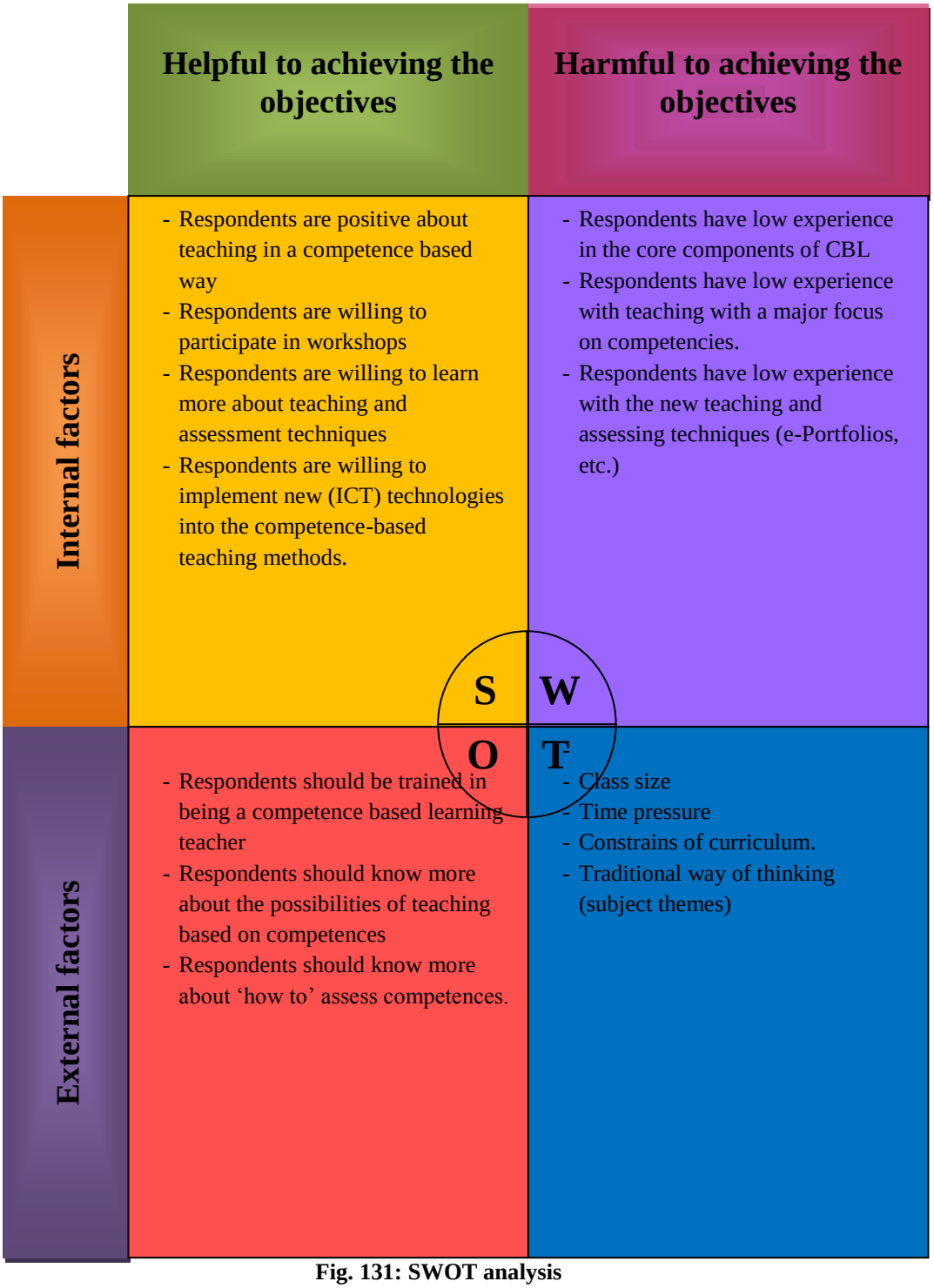

Fig. 131: SWOT analysis

8 Conclusions/Contributions to the TRANSIt Training Framework

8.1 Findings from the needs analysis survey

The Needs Analysis Report highlights the training needs of the project's target groups. Many of the needs are common to all countries, but indeed there are some differentiations between the partner countries.

Identified needs	Greece	The Netherlands	Ireland	Spain	France	Austria
***Themes* applied throughout competences: critical thinking, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings.**	√	√	√	√	√	√
***Teaching methods* fostering competence based learning (project based, action learning, problem oriented learning, narrative approach)**	√	√	√	√		√
***Learning theories* on competence based learning and teaching (e.g. constructivism)**	√	√			√	
Societal and anthropological views underlying the concept of competence based learning.			√			
Assessment in relation to specific tools for assessing competences	√	√	√	√		√
Assessment in relation to approaches and objectives related to competences assessment.	√	√	√	√	√	√
Need to learn more on school curricula in relation to characteristics of competence based curricula (features of competence based school and learning environments)	√	√	√	√		
Need for professional development of teachers in relation to the creation of a work and learning environment for teachers to allow them to develop competence based teaching skills	√	√	√	√	√	√
Need for professional development of teachers in relation to the promotion of competence based teaching among teaching staff	√		√	√	√	
Need for professional development of teachers in relation to acquiring the necessary teaching skills for competence base teaching	√	√	√	√	√	

Need for professional development of teachers in relation to the required teachers' skills in competence based teaching.	√	√	√		√	√
Need for one to one discussions (in the training workshops)	√		√	√		
Need for small group discussions (in the training workshops)	√		√	√		
Need for the interactions with peer teachers/social networking opportunities	√	√	√			√
Need for lectures/expert inputs	√	√	√			
Need for assessment by peers/community	√		√			
Need for self-assessment	√	√	√			
Need for self-study	√		√			
Need for: practical assignments	√	√	√	√		√
Need for the demonstration of tools and instruments	√	√	√	√		√
Need for examples of good practices	√	√	√	√	√	√

Table 1: Users' training requirements per country

8.2 Conclusions

The goal of the needs analysis was to identify, classify and analyse the needs of European educational staff regarding competence based teaching. Within the needs analysis we identified user training needs in terms of educational theories, models and frameworks, ICT tools and other learning design processes that may prove useful to teachers. The results of this survey will be used for the development of a training framework to improve teachers' capacity on competence oriented education.

Our survey has shown that teachers are generally open and positive towards teaching based from a competency based perspective. They are interested in courses and workshops that can help them expand their knowledge about how to teach in a competency based way and how to assess the possible acquired competencies.

The respondents in this survey – with a majority of Greek descent – appoint themselves as experienced in teaching four out of the five transversal competences. Most of them have more than 1 year of experience in teaching them. 47% of the respondents have minimal experience in teaching the sense of initiative and entrepreneurship competence. This key competence is for that reason an important one to consider for the training framework. However, despite the experience of the respondents, they didn't feel that they have sufficient knowledge and ability in most of the competencies. Stimulating student's cultural awareness is a structural component of education policy. The didactics and teaching methods that were used in the different countries are mostly

discussion and debating and the sub-group activities, while the storyline and interviewing experts, peers or others were methods that were used rarely.

The majority of survey respondents (59.3%) call themselves enthusiastic in the use of ICT. However, the use of new technologies during the planning and implementation of competency based learning is still at a very low level. Only the 'traditional' ICT-skills like information searching tools and productivity tools were used very often. The 'progressive' tools like gaming, learning management tools (LMS), software authoring tools and e-portfolios were rarely used. We should be alert regarding these results. Because the chances are that the teachers use these technologies very seldom because of the fact that they are not familiar with these types of software. Creating awareness of the possibilities of these ICT-tools and then skills to use them in a competency-based context should be an important part of the training framework.

The same phenomenon can be identified in the assessment tools or methods. More than half of the participants never or almost never used rubrics (68%), peer assessment (56%), role play (54%), ePortfolios (78%) and simulation (68%) as tools to measure the knowledge and skills of the students. The paper and pencil tests and the computer assignments are still the most commonly used assessment methodologies. This emphasizes the disturbed relationship between the willingness to use ICT for educational purposes and the actual use of ICT within education.

The majority of respondents pointed that CBL has an important position within the curriculum. Especially in the classroom it has a central position. However, there is no consensus about the situation of the learning environment. Approximately half of the participant in this survey mentioned that the learning environment in which they work is suitable for competence oriented learning. But the other half has doubts about that. In the framework we need to take in consideration that the framework will only work if all learning environments are suitable for CBL. Another important point is the lack of assessment of the teacher abilities in case of competency based education. More than 65% of the respondents indicate that they are not assessed for their abilities.

In the sample of respondents is a high need for training in themes applied throughout competences, i.e. critical thinking, problem solving, decision taking etc. Beside that they need more training in teaching methods fostering competence based learning, like project based learning, action based learning etc. They also have a high need for more training in the assessment of competencies. They have insufficient knowledge and skills in the specific tools for assessing competencies and the different approaches and objectives related to competencies assessment. To fulfil these needs, it is important to account for giving best practices in the field of competency-based curriculum.

The training framework should also contain activities like: how to create a work and learning environment for teachers to allow them in developing competency based teaching skills, how to promote competency based teaching among teaching staff, how to acquire the necessary teaching skills for competency based teaching and required teachers' skills in competency based teaching. Adding these four needs in the training framework is of importance.

There is a certain trend in the results of the survey. The participants in this survey mentioned that they don't have the possibilities to adjust CBL in the current educational setting. For that reason they pointed a lot of different training needs within the upcoming workshops. From practical assignments to good practices to self-assessment and interaction with peer teachers and /social networking opportunities.

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Annex A: Questionnaire Form

TRANSIt: Questionnaire for needs analysis on competency based learning and education

Introduction

Dear teacher/student,

The aim of our project is to help teachers acquire and reinforce such skills and knowledge so that they can design cross-curricular activities that support the key competency acquisition (KCA) of their students. In this context, it is necessary to gain understanding of the needs related to competency based learning, teaching and assessment.

To that end, we would kindly like to ask you to fill in this questionnaire. It should take no more than 15 minutes of your time and it will greatly help us in our goal.

All information provided by you will only be used to the development of the TRANSIt training framework aimed to fit your needs and will be treated with confidentiality.

Thank you very much for your help!
The TRANSIt Project Team

Background information

The main aims of the TRANSIt project are:
- to help teachers acquire and reinforce skills and knowledge to design cross-curricular activities that support the development of key competencies by their students;
- to support teachers in the process of assessing competencies with the use of e-portfolios;
- to raise school administrative staff awareness to support teachers in bridging the gap between policy and practice (e.g. curricular reforms in order to support cross-curricular competency driven activities);
- to promote teacher collaboration with colleagues, in order to become innovation leaders in their institutions.

Key Competencies
The *European Framework for Key competencies for Lifelong Learning* identifies 8 key competencies necessary for personal fulfilment, active citizenship, social inclusion and employability in a knowledge society.
1. Communication in the mother tongue;
2. Communication in foreign languages;
3. Mathematical competency and basic competencies in science and technology;
4. Digital competency;
5. Learning to learn;
6. Social and civic competencies;
7. Sense of initiative and entrepreneurship;
8. Cultural awareness and expression.

1 User profile

1.1 Gender Male ☐ Female ☐

1.2 Age

18-24 ☐
25-30 ☐
31-40 ☐
41-55 ☐
>55 ☐

1.3 Role **subject(s)**

Teacher (Primary education: students age 6-10) ☐ _____
Teacher (Secondary education: students age 10-17) ☐ _____
Teacher student/Pre-service Teacher ☐ _____
School leader ☐ _____
Teachers' trainer ☐ _____
Curriculum developer ☐ _____
Educational Policy Maker
Other ☐ _____

1.4 For how many years have you been in this profession?

☐ 0 - 2 years
☐ 3 - 5 years
☐ 6 - 10 years
☐ 11 - 15 years
☐ More than 15 years

1.5 Country

Austria ☐
Netherlands ☐
France ☐
Greece ☐
Ireland ☐
Spain ☐
Other ☐ please specify _____

1.4 Qualification level

Initial teacher education ☐
Bachelor ☐
Master ☐
Phd ☐

1.5 Profile. How would you characterize yourself?

☐ early adopter, enthusiastic with ICT
☐ sceptical, if put in a digital environment I try to use the tools
☐ cautious, trying to avoid the use of digital tools and TEL pedagogies as much as I can

1.6 Have you taken part in continuing professional development activities on the theme of competency acquisition?

☐ yes
☐ no

If yes: How would you describe the main objectives and topics of such training activities?

2 Current practice

In this part of the form, current practice questions are asked regarding various topics on teaching key competencies. On most of the topics you will find a list of statements or items. Please indicate to what extent these statements or items apply to you. You may do so by scoring the statements or items with a score ranging from 1- 5.

2.1 Describe your experience in teaching:

	1 (none)	2 (only in university courses)	3 (less than 1 year)	4 (between 1 and 3 years)	5 (More than 3 years)
Digital competency	☐	☐	☐	☐	☐
Learning to learn	☐	☐	☐	☐	☐
Social and civic competencies	☐	☐	☐	☐	☐
competencies about sense of initiative and entrepreneurship	☐	☐	☐	☐	☐
Cultural awareness and expression	☐	☐	☐	☐	☐

2.2 Please tell us in a few sentences what general steps you take when you plan a cross-curricular lesson that promotes key competency acquisition of your students.

2.3 Didactics and teaching methods
<u>If you are a teacher:</u> Indicate to what extent you have been using the following didactics and methods:
<u>If you are not a teacher:</u> Indicate to what extent the following didactics and methods are being used in your school/country:

	1 never	2 …	3 regularly	4 …	5 each lesson
(Sub)group activities	☐	☐	☐	☐	☐
Interviewing experts, peers or others	☐	☐	☐	☐	☐
Classroom instruction	☐	☐	☐	☐	☐
Search assignments	☐	☐	☐	☐	☐
Discussion and debating	☐	☐	☐	☐	☐
Project-based learning	☐	☐	☐	☐	☐
Problem-based learning	☐	☐	☐	☐	☐
Action learning (e.g. creating an artifact)	☐	☐	☐	☐	☐
Storyline	☐	☐	☐	☐	☐
Guided discovery					
Reflection on learning	☐	☐	☐	☐	☐
Reflection on collaboration	☐	☐	☐	☐	☐
Other (please specify):	☐	☐	☐	☐	☐

2.4 How often do you use the following technologies during the planning and implementation of competency based learning?

	1 never	2 …	3 regularly	4 …	5 each lesson
OER resources	☐	☐	☐	☐	☐
Productivity tools (word processors,	☐	☐	☐	☐	☐

presentation software)					
Information searching tools (web browsers; online databases; WebQuests)	☐	☐	☐	☐	☐
Basic communication tools (video-conferencing/instant messaging, Email)	☐	☐	☐	☐	☐
Multimedia tools (graphics software)	☐	☐	☐	☐	☐
Off-the-shelf educational software (drill and practice software, tutorials)	☐	☐	☐	☐	☐
Specific learning tools (visualization, data analysis, role-play simulations, mind maps)	☐	☐	☐	☐	☐
3D virtual environments	☐	☐	☐	☐	☐
Web2.0 (blogs, wikis, podcasts, social networks)	☐	☐	☐	☐	☐
e-portfolios	☐	☐	☐	☐	☐
Software authoring tools	☐	☐	☐	☐	☐
Synchronous/asynchronous e-learning technologies	☐	☐	☐	☐	☐
Learning management tools (LMS)	☐	☐	☐	☐	☐
Gaming	☐	☐	☐	☐	☐
Other (please specify):					

2.5 Do you experience constraints when planning competency based teaching? If yes, what are these constraints (e.g. constraints relating to resources, class size, time, knowledge and experience, or school's priority is low)?

2.6 Assessment
To what end assessment tools are usually being applied at your school?

	1 never	**2 …**	**3 regularly**	**4 …**	**5 each lesson**
To improve student learning	☐	☐	☐	☐	☐
To gain (as a teacher) information about the progress in student performance	☐	☐	☐	☐	☐
To support and engage students in reviewing their own learning	☐	☐	☐	☐	☐
To assess student performance	☐	☐	☐	☐	☐
Other (please specify):	☐	☐	☐	☐	☐

2.7 Assessment
<u>If you are a teacher:</u> Please indicate to what extent you have used the following assessment tools/methods
<u>If you are not a teacher:</u> Please indicate to what extent the following assessment tools are being used at your school/country

	1 never	**2 …**	**3 regularly**	**4 …**	**5 each lesson**
Paper and pencil test	☐	☐	☐	☐	☐
Computer assignment	☐	☐	☐	☐	☐
Simulation	☐	☐	☐	☐	☐
e-Portfolio	☐	☐	☐	☐	☐
Role play	☐	☐	☐	☐	☐

Self-assessment techniques	☐	☐	☐	☐	☐
Peer-assessment	☐	☐	☐	☐	☐
Rubrics	☐	☐	☐	☐	☐
Other (please specify):					

2.8 Transversal key competencies: experience and education policy					
In our school among teachers, there is sufficient knowledge and ability in:	**1 (Doesn't apply at all)**	**2 …**	**3**	**4 …**	**5 (This applies fully)**
Teaching digital competency	☐	☐	☐	☐	☐
Learning to learn	☐	☐	☐	☐	☐
Social and civic competencies	☐	☐	☐	☐	☐
competencies about sense of initiative and entrepreneurship	☐	☐	☐	☐	☐
Cultural awareness and expression	☐	☐	☐	☐	☐

2.9 Transversal key competencies: experience and education policy					
In our school	**1 (Doesn't apply at all)**	**2 …**	**3**	**4 …**	**5 (This applies fully)**
Teaching digital competencies is a structural component of education policy.	☐	☐	☐	☐	☐
Learning to learn is a structural component of education policy.	☐	☐	☐	☐	☐
Teaching social and civic competencies is a structural component of education policy.	☐	☐	☐	☐	☐
Developing students' sense of initiative and entrepreneurship is a structural component of education policy.	☐	☐	☐	☐	☐
To stimulate student's cultural awareness is a structural component of education policy.	☐	☐	☐	☐	☐

2.10 <u>Position of competency based learning and teaching in the curriculum.</u> Please indicate to what extent the following statements apply to competency based education in your school					
	1 (none)	**2 …**	**3 (good)**	**4 …**	**5 (excellent)**
competency based learning is cross curricular	☐	☐	☐	☐	☐
competency based learning is usually implemented in the classroom	☐	☐	☐	☐	☐
competency based learning is usually implemented in specific projects	☐	☐	☐	☐	☐
the learning environment is suitable for competency oriented learning	☐	☐	☐	☐	☐

2.11 <u>In – service education and learning of teachers</u>. Please indicate to what extent the following statements apply to in-service education and learning of teachers in your school.					
In our school	**1 (Doesn't apply at all)**	**2 …**	**3**	**4 …**	**5 (This applies fully)**
Competency oriented teaching has been promoted among the teaching staff	☐	☐	☐	☐	☐
Teachers support each other in the preparation and implementation of competency-based education.	☐	☐	☐	☐	☐
The work-learning environment is suitable	☐	☐	☐	☐	☐

for competency-based education.					
Teachers' abilities in competency based teaching are assessed.	☐	☐	☐	☐	☐

2.12 Does your school support:				
	1 none	**2 low**	**3 sufficient**	**4 high**
Hardware provision	☐	☐	☐	☐
Software provision	☐	☐	☐	☐
Internet access	☐	☐	☐	☐
Database with learning and teaching material	☐	☐	☐	☐
Continuing professional development	☐	☐	☐	☐

3 Questions about training needs

In this part of the form you are asked to indicate to what extent you feel the need to learn more on the topics related to competency based learning, teaching and assessment.

3.1 Philosophy/didactics and teaching methods					
	1 Low need	**2 …**	**3**	**4 …**	**5 High need**
Societal and anthropological views underlying the concept of competency based learning	☐	☐	☐	☐	☐
Learning theories on competency based learning and teaching (e.g. constructivism)	☐	☐	☐	☐	☐
Teaching methods fostering competency based learning (project based, action learning, problem oriented learning, narrative approach)	☐	☐	☐	☐	☐
Themes applied throughout competencies: critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings	☐	☐	☐	☐	☐

3.2 Assessment					
	1 Low need	**2 …**	**3**	**4 …**	**5 High need**
Approaches and objectives related to competencies assessment	☐	☐	☐	☐	☐
Specific tools for assessing competencies	☐	☐	☐	☐	☐

3.3 School curricula					
	1 Low need	**2 …**	**3**	**4 …**	**5 High need**
Characteristics of competency based curricula (features of competency based school and learning environments)	☐	☐	☐	☐	☐

3.4 In case you are not a teacher: Professional development of teachers

	1 Low need	2 …	3	4 …	5 High need
Required teachers' competencies in competency based teaching	☐	☐	☐	☐	☐
How to acquire the required teaching competencies for competency based teaching	☐	☐	☐	☐	☐
How to promote competency based teaching among teaching staff	☐	☐	☐	☐	☐
How to create a work and learning environment for teachers to allow them develop competency based teaching competencies	☐	☐	☐	☐	☐

4 Availability to participate in the project

This part of the form includes questions on the methodology of the TRANSIt training programme, as well as your requirements for the project workshops and your willingness to participate in the project activities.

4.1 Preferred activities/methods used in training workshops:					
	1 low	2 …	3 mid	4 …	5 high
Examples of good practices	☐	☐	☐	☐	☐
Demonstrations of tools and instruments	☐	☐	☐	☐	☐
Practical assignments	☐	☐	☐	☐	☐
Self-study	☐	☐	☐	☐	☐
Self-assessment	☐	☐	☐	☐	☐
Assessment by peers/community	☐	☐	☐	☐	☐
Lectures/expert inputs	☐	☐	☐	☐	☐
Interaction with peer teachers/social networking opportunities	☐	☐	☐	☐	☐
Small group discussions	☐	☐	☐	☐	☐
One to one discussions	☐	☐	☐	☐	☐
Other Please specify _____					

4.2 Your expectations from your participation in the project:					
	1 low	2 …	3 mid	4 …	5 high
To enhance the learning opportunities of my students	☐	☐	☐	☐	☐
To introduce more attractive teaching approaches	☐	☐	☐	☐	☐
To introduce real life/authentic assignments in the classroom	☐	☐	☐	☐	☐
To increase the opportunities for my professional development	☐	☐	☐	☐	☐
Other Please specify _____	☐	☐	☐	☐	☐

4.3 Preferred duration for the project face to face workshops:	**2 hours**	**3 hours**	**4 hours**
	☐	☐	☐

4.4 Preferred training times for the project workshops:					
	1 low	**2 …**	**3 mid**	**4 …**	**5 high**
Weekends	☐	☐	☐	☐	☐
Evenings	☐	☐	☐	☐	☐
During the working day	☐	☐	☐	☐	☐
Other Please specify _____					

5 Impressions from the workshop: Bringing competency based learning to my classroom

5.1 What aspects did you like about the presentation of educational resources/scenarios in this workshop? Was the case presented inspiring and helpful for you? Why?

5.2 How would you adapt such a scenario to your teaching? What kind of help/training would you need?

Thank you for your collaboration!

Annex B: Delphi Study questions

Structure of the first round in the Delphi study

The structure of the Delphi study will be as follows:

- 1st round: Interviews with teachers and student teachers from primary and secondary schools. These interviews can be held either online (Skype) or offline (face-to-face). The interview scheme will consist of the following open-ended questions (based on the needs analysis questionnaire, Annex A).

    - What are your experiences with competency based teaching?
    - What competencies do students need within the contemporary education?
    - What didactics and methods do you use in competency based teaching?
    - If you have experience with competency based teaching, have you ever used various technologies in the planning and implementation of competency based teaching? If yes, what kind of technologies did you use?
    - Did you assess the competencies of students? How?
    - To what extent do you think that there is sufficient knowledge to provide competency-based education?
    - Do you face any limitations when planning competency based education? What are the limitations? (e.g. restrictions regarding resources, group size, time, knowledge and experience, or lack of support from the school)
    - If you need training in competency based teaching, what should be treated during these trainings?
    - Are you willing to participate in training for improving your competency based teaching skills?

- **2nd round:** Questionnaire with closed questions to find consensus about the needs. These questionnaires were distributed online. The questionnaire scheme consists of the closed questions based on the questionnaire (Annex A: Questionnaire Form) and of the results in the first round.

Annex C: Delphi Interviews conducted

Date: 23.06.2013
Offline (Skype, phone)

- *What are your experiences with giving competence based teaching?*

As a teacher trainer and educational training facilitator I mainly work with teachers or trainers in the field of the educational use of digital resources and blended-learning approaches enabled through competency based learning. The most consistent experience is that teachers often have problems to design competence based teaching activities; they can either not turn theory into practical learning activities or don't know how to follow an instructional teaching design. I have also observed that teachers who were mainly educated in a knowledge-gaining education system are less familiar with the whole concept of competence based learning than their students are. Or in other words the students use social web tools to create their own e-Content and to design their own activities while teachers are often more orientated towards the learning outcomes and not the learning process.

- *What competencies do students need within the contemporary education?*

Students need to be better prepared for the highly-specified job market which requires the acquaintance of a broad range of very specific competencies (job market preparation).

Digital competencies are gaining more and more and more importance. Students need to learn how to use and reflect on new media and social web tools.

Critical thinking, problem-solving, analytical, reasoning, and reflection skills are very important on cross-curricular level.

Social and collaborative competencies are necessary for the social development of the students and facilitate competence based learning.

In my opinion creative competences should be highlighted as they further the understanding of process orientated learning (individual, creative learning approaches).

- *What didactics and methods do you use in competence based teaching?*

Instructional Design Approaches

Five principles of instruction (Merrill, 2002):
- Analysis
- Design
- Development
- Implementation
- Evaluation

Didactical methods:
- Collaborative working techniques (i.e. collaborative writing, story writing)
- Interdisciplinary methods
- Project work and project planning methods (To-Do Lists, PM-tools)

- Use of web tools (research and collaborative techniques)

- *If you have experience with competence based teaching, have you ever used various technologies in the planning and implementation of competence based teaching? If yes, what kind of technologies did you use?*

  Social web tools:
  Wikis for collaborative learning
  Google Drive
  Google+, Facebook

  Online Platforms:
  LMS, i. e. Moodle for group work, for assessing the learning outcomes
  Educational Online repositories (www.osrportal.eu)

- *Did you assess the competencies of students? How?*

I have used or developed evaluation criteria depending on the competency; the students and the learning design. Important is that each student/learner can present his/her learning outcomes and receives feedback from the teacher and other learners.

- *To what extent do you think that there is sufficient knowledge to provide competence-based education?*

As mentioned earlier (1st question), I think that teachers need more training particularly in instructional design methodologies.

- *If you have any limitations when planning competence based education? What are the limitations (e.g. Restrictions regarding resources, group size, time, knowledge and experience, or lack of support from the school)*

There are currently two contradictory EU-wide developments, the fostering of individualized learning, of competence based learning on one side and a standardization of curricula on the other side. The second disables competency based teaching. Well designed and implemented CBL activities require a lot of time. Currently there are very few well designed learning activities /scenarios available, which consequently demand a lot of development efforts from teachers. Teachers still lack the necessary competencies to conduct CBL activities and are often overwhelmed by the complexity of the approach.

- *If you need training in competence based teaching, what should be treated during these trainings?*

As already mentioned I believe that teachers need to understand the whole process of CBL. In my opinion they should be trained in using one or two instructional learning design theories to gain an understanding for the process and its practical implementation rather than learning how to teach single competencies.

- *Are you willing to participate in training for improving your competence based teaching skills?*

Yes.

Date: 23.06.2013
Offline (Skype, phone)

- *What are your experiences with giving competence based teaching?*

I am teacher (in leave) and teachers trainer for "Self-directed learning" (partly based on the approach of Klippert, see http://www.bmukk.gv.at/medienpool/15601/mat_eva.pdf and http://homepage.univie.ac.at/rudolf.beer/Eigenverantwortliches_Arbeiten_und_Lernen_nach_Heinz_Klippert_2008.pdfm, but adapted to my own needs) which is a didactic approach to fosters personal responsibility and autonomy in learning. Student´s activity is in the foreground and the teacher arranges activity-oriented learning situation and acts himself as mentor and coach. Students work in different team-constellations and use varying methods to plan and work out their tasks.

- *What competencies do students need within the contemporary education?*

It is not easy to define, students need to be flexible and able to solve problem-oriented tasks so they need all competences that enable them to find their individual "problem-solving style": this means for example to be competent in analysing the given tasks, in planning ways to find solutions, in organizing the workflow, in researching and extracting relevant information and in presenting the results in an adequate manner. Further it is indispensable that students are able to cooperate with others in an efficient and agreeable way.

- *What didactics and methods do you use in competence based teaching?*

  - different types of collaboration and communication techniques
  - visualization techniques
  - presentation techniques
  - self-reflection and feedback
  - "learning spirals" (specific arrangements that combine individual work and teamwork)
  - Research techniques
  - Creative techniques (e.g. role play, creative writing)

- *If you have experience with competence based teaching, have you ever used various technologies in the planning and implementation of competence based teaching? If yes, what kind of technologies did you use?*

Yes, see answer point 3

- *Did you assess the competencies of students? How?*

It is hard to find an adequate way to do so, because it is hard to define "this student is competent to this or that degree". I tried out and adapted diverse "monitoring grids" based on my own experiences – but in most cases self-assessment of students was an integral part of grading.

- *To what extent do you think that there is sufficient knowledge to provide competence-based education?*

I am not able to judge this…..

- *If you have any limitations when planning competence based education? What are the limitations (e.g. Restrictions regarding resources, group size, time, knowledge and experience, or lack of support from the school)*

In most cases time is the restriction: problem-solving learning arrangements and self-directed learning require time and sometimes the "overload of the curriculum" is hard to handle.

- *If you need training in competence based teaching, what should be treated during these trainings?*

How to assess competences is the most crucial aspect for me, this is really hard to do. Further I would like to learn more about creative learning techniques.

- *Are you willing to participate in training for improving your competence based teaching skills?*

That depends on what the training program comprises….