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**I Secure**  
EMPOWERING EDUCATION SYSTEMS  
IN INFORMATION SECURITY

**ERASMUS+**

**Cooperation for innovation and the exchange of good practices**

**Strategic Partnerships for school education**

**I SECURE Project**

*Empowering education systems in information security*

**Project Number 2015-1-IT02-KA201-015005**

## **O5-A5. European Report on testing and consultation activities**

***Effebe Association***

**May 2018**

*fb*

*finance & banking*

Associazione  
per lo sviluppo organizzativo  
e delle risorse umane

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# 1. Introduction

## 1.1 I SECURE Project: aim, objectives and results

The main aim of the I SECURE project is to support the strategic use of information and communication technology in teaching and learning programmes as a precondition for the development of innovative pedagogical method at secondary schools level (students of 11-18 years), in the partner countries (Bulgaria, Italy, Spain, The Netherlands).

Therefore, the Consortium aims to develop and disseminate an 'information security culture' to increase the awareness in this field as a crucial step in the digitization process of the educational contexts.

The main results of the I SECURE Project include:

1. Needs and Gaps Analysis. A desk and field research aimed at identifying the concrete problems and challenges and collecting examples of good practices in the field of information security.
2. "I Secure Agent" European Professional Qualification Prototype and the I SECURE curriculum and training materials, including a description of the structure and the content of the I SECURE training programme.
3. (TEL) I SECURE eco-system Platform representing the I SECURE system for learning activities and contents collaborative creation. It includes serious game and other ICT tools as 'ready to use' learning instruments available for teachers. The Platform proposes innovative learning practices and tools to foster an informed and aware use of ICT tools in educational activities to develop key skills as: team work; problem solving; collaborative learning to improve the visual, writing and reading students' skills.

In order to assess the effectiveness of both the Professional Qualification and the Platform for empowering teachers in the field of safe ICT use in school education, these results were piloted and validated during the project piloting phase and will be fine-tuned at the end of the project when the final versions will be made available online, on the project website.

A summary of these results will also be included in a final publication disseminated at national and European level.



## 1.2 The I SECURE Partnership

The I SECURE Project brings together 7 partners from 5 European countries, defining a transnational consortium characterized by a balanced geographical representation of the European regions.

The Project **Coordinator** is the Latium Regional School Office - **Ufficio Scolastico Regionale per il Lazio, USR Lazio** – (Italy).

USR Lazio is a branch of the Ministry of Education, University and Research (MIUR). Usually, it is divided into Local Offices, depending on its duties and local requirements. The USR oversees observance of general provisions for education and minimum performance requirements, the effectiveness of training actions and observance of standards.

The **Partnership** includes:

**Effebi Association** (Italy).

Effebi Association is a non-profit organization that promotes and coordinates studies, surveys and other initiatives for Human Resources Management and development and organisational solutions in the Financial Services Sector. EFFEBI includes the Centre for Research and European Studies (CRESfb) supported by Experts and Professionals to conduct , in collaboration with Universities, researches and studies activities on Quality Assurance and Lifelong Learning.

**E-CO e-learning studio s.r.l.** (Italy).

E-CO is a training company specialized in offering products and services for e-learning conveyed through research and consultancy. E-CO has been operating for about ten years in the education sector, providing solutions and services to public and private organizations. Its experience in the design, implementation and evaluation of training and developing individual and organizational dynamics are based on the integration between R&D and market.

**Open University of the Netherlands, OUNL** (The Netherlands).

OUNL is an independent government-funded institute based in Heerlen. Dispersed over the Netherlands, the Open Universiteit has 12 study centres and 3 support centres, as well as 6 study centres in Dutch-speaking Flanders (Belgium) and 1 study centre in the Netherlands Antilles. Within the OUNL the Welten Institute (Research Centre for Learning, Teaching and Technology), integrates expertise in the learning sciences and technology-enhanced learning.

**University of National and World Economy, UNWE** (Bulgaria).

UNWE is the most prestigious and the largest economic state university in South-Eastern Europe. Having a prestigious faculty of Applied Informatics and Statistics, it has substantial experience in running research and education projects. Until 2014 it

has implemented about 130 such projects supported by international, national and institutional funds and programmes.

### **Inercia Digital S.L (Spain).**

Inercia is an innovative Andalusian social enterprise, established in 2012, with Europe-wide outlets, and focused on fostering training in digital skills in Europe both for organizations and entrepreneurs. Inercia Digital has International and European projects experience, inside and outside the Erasmus+ Programme with several projects where they participate.

### **Multidisciplinary European Research Institute of Graz, MERIG (Austria).**

MERIG' core fields of expertise deal with social, cultural, political, ecological and economic issues in addition to more general topics connected to internal and external relations within the European Union. Connected to education, main fields of interest are education and training systems in Europe, in particular vocational education and training. Members of the Multidisciplinary European Research Institute Graz have extensive experience in evaluating applications, projects and products in a multitude of different projects and programme lines including acting as evaluators for regional and national agencies and on European level for European Commission agencies.

## **2. Testing phase (05)**

### **2.1 Testing methodology and tools**

The testing phase represents a crucial part of the I SECURE project since it allows the examination of the two main outcomes of the project:

- The "I Secure Agent" European Professional Qualification for Teachers (EQF 4)
- The virtual collaborative learning platform TEL I Secure Eco-System.

The piloting phase is aimed at assessing the adequateness and the effectiveness of the contents of the "I Secure Agent" training course. Furthermore, this phase is an extensive beta-testing of the TEL I Secure platform with end-users which contributes to the identification of technical and methodological issues.

Subsequently, in order to assure the achievement of the two goals – the assessment of the I Secure Agent training course's contents and the technical check of the TEL I Secure platform – the testing phase took place in the four Partner countries (BG, IT, ES, NL) and was divided in the following two stages:

#### *Stage 1: 05/A2.National training event*

The National training event was a face to face pilot conducted through training modules with teachers whose aim was the assessment of the training course's contents.



## *Stage 2: O5/A3. Collaborative learning activity on 'social networking'*

The collaborative learning activity on 'social networking' was an online pilot through a collaborative learning exercise whose aim was the test of the TEL I Secure Eco-System platform and its contents.

**Image 1. Piloting structure**



With regards to the target group, a minimum of 15 people were identified in the four Partner countries. The profiles of the target group, according to the spirit of the I SECURE Project, were especially lower and upper secondary school teachers. Furthermore, also other profiles related to the educational and school environment (e.g. headmasters, supervisors, students, parents etc.) were involved in order to promote a constant dialogue with these stakeholders on IT security at school.

The selection of participants has been done according to the following criteria

- From lower and upper secondary level school (11-18years)
- Disciplines: equal distribution among humanistic, scientific and technical disciplines
- Age and sex: equal distribution of age and sex range to have and heterogeneous group
- Teaching experience: 3 years
- Knowledge: generic knowledge on IT Security
- Competences: generic digital competences
- Good English level

The selection process was conducted on the basis of the above mentioned criteria and was recommended the involvement of secondary schools that were already previously involved into the Needs & Gaps Analysis (O2) activity in order to establish a mutual trust and affiliation with the Project.

Each Partner decided how to organize the piloting and involve the stakeholders. A set of Guidelines was developed by Effebi Association in order to support the Partnership in conducting the piloting in their countries.

Furthermore, specific templates and tools were designed by Effebi with the support of the whole Consortium in order to be used during the two stages of the testing phase.



In particular the Toolkit for the Testing phase (O5) includes for the National training events (O5-A2):

- Guidelines
- Invitation Letter template
- Registration and Participation Form
- Agreement Form
- Agenda template
- Informative and introductory material
- Pre-Assessment Questionnaire
- Post-Assessment Evaluation

and for the Pilot collaborative learning activity (O5-A3):

- Guidelines
- Invitation Letter template
- Participation Form
- Evaluation Questionnaire
- Liability Exemption.

## 2.2 National training events (O5-A2) comparative analysis

The National training event corresponds to the first stage of the piloting phase and is a face to face pilot that was conducted in four Partner countries (Bulgaria, Italy, Spain, The Netherlands) in order to check the 'I Secure Agent' curriculum with the support of the interested stakeholders. In particular, the following topics were assessed:

- Structure of the three modules
- Lessons' contents
- Learning methods: blended learning, virtual classroom, e-learning, distance learning
- Learning tools/instruments: video lessons, interview, webinar, serious game, forums, chat and wiki
- Assessment methods: questionnaires, assignment, peer evaluation (Moodle workshop)
- 'I Secure Agent' Professional Qualification.



Furthermore, during the event, the TEL I Secure Eco-System platform was introduced to the participants.

The National training event foresaw the distribution of a Pre-Assessment Questionnaire, the presentation of the two Project's results and an Evaluation Questionnaire at the end of the event.

The Pre-Assessment Questionnaire was aimed at allowing a self-assessment for the involved participants and was hence conducted before the training. It was composed by:

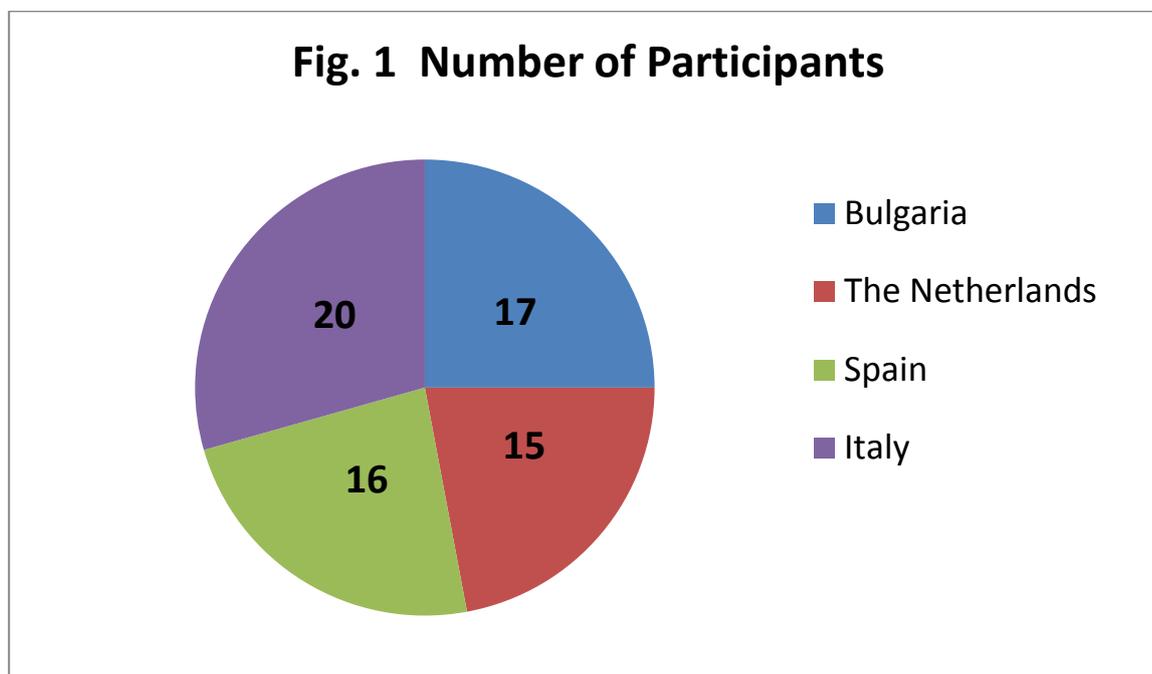
- a set of closed questions where teachers were asked to rate from a scale from 1 to 5, being 1 the lowest rate and 5 the highest, their ICT knowledge, competences and experience;
- a set of closed questions (YES/NO) to directly assess their interest in attending the 'I Secure Agent' Professional Qualification;
- a multiple choice question to rank the topics/modules teachers are more interested in.

The presentation part was then conducted by the Partners who presented a set of informative materials that were translated in their national languages about the course curriculum and structure. Furthermore, a live demonstration was given about the TEL I Secure Eco-System platform: all presents accessed to the Platform that was publicly described to the audience and future users, showing the structure, the activities and the tools available online.

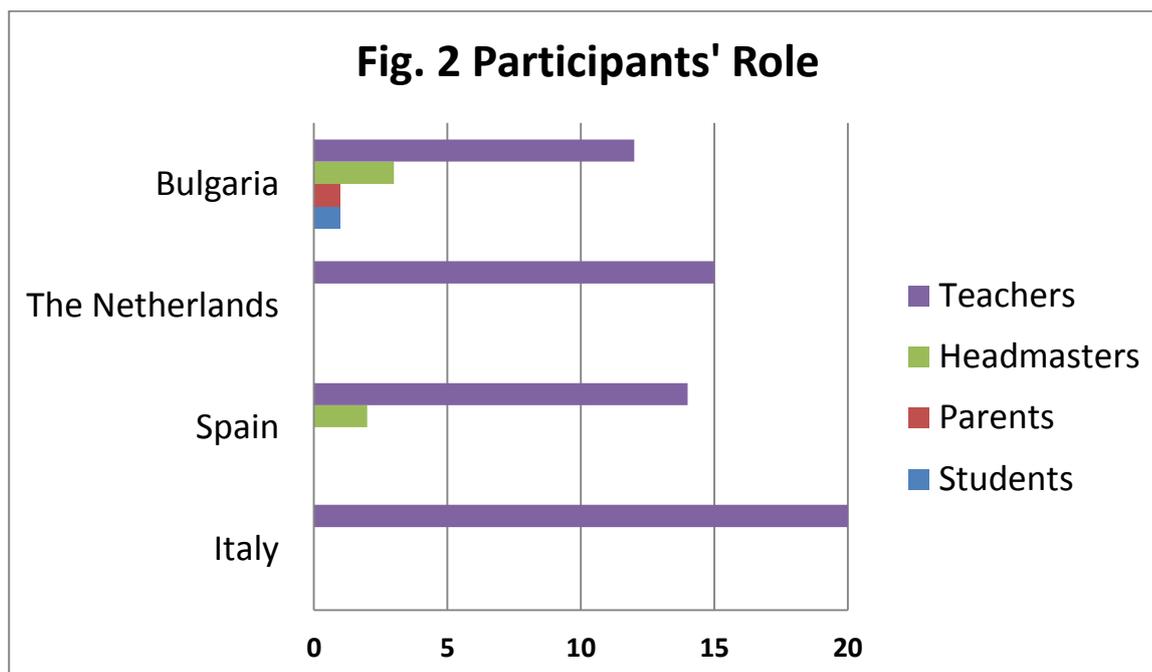
Before the conclusion of the National training event, all participants were asked to evaluate the event with ad hoc questionnaire.

The Evaluation Questionnaire included a set of questions where the audience should express its general satisfaction, rating it on a scale from 1 to 5, being 1 the lowest rate and 5.

### 2.2.1 Composition of target groups



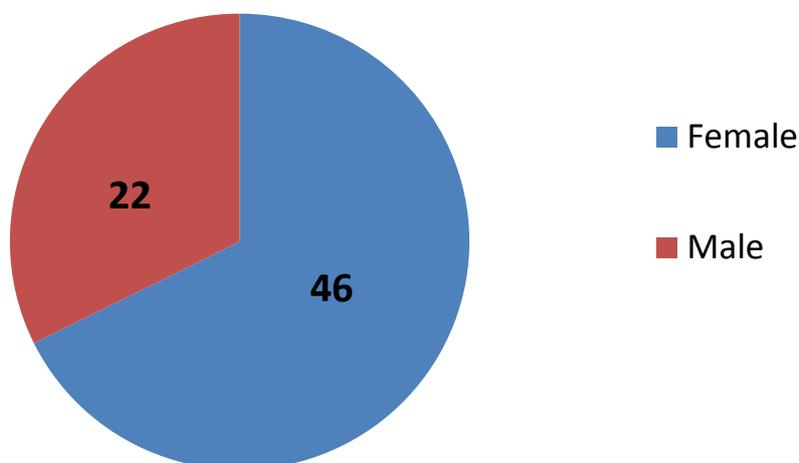
In each country, the Partners involved at least 15 participants (as in The Netherlands) or even more – in Italy, for instance, 20 people took part to the National training event. The provenience of the audience was different from country to country. In Bulgaria and Italy, for instance, were involved participants from different secondary schools. In Spain, the audience was from two secondary schools: Colegio Virgen del Rocío and Colegio Diocesano Sagrado Corazón de Jesús. In The Netherlands, the whole group belonged to the same institute ('Candea College').



As the Project's target group is composed primarily by secondary school teachers, this group represented the main involved one. Furthermore, in Spain and Bulgaria also headmasters – 2 headmasters in Spain and 3 headmasters in Bulgaria – were involved into the testing activity. Their participation, in fact, was warmly recommended at this stage because of the relevant decisional role that headmasters play in promoting IT security initiatives like I SECURE among secondary schools.

In addition to this, in Bulgaria, also one parent and one student took part to the event. This decision perfectly matched with the spirit of the I SECURE Project and its aim of sensitizing parents and students on IT security.

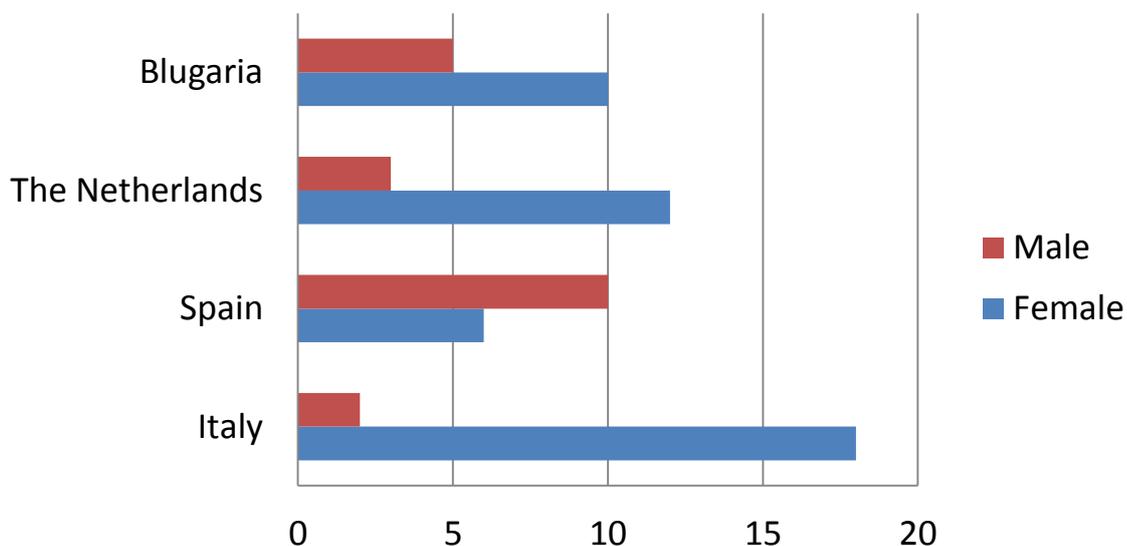
**Fig. 3 Gender Distribution**



The 68% of the participants involved in the four countries were female. The same percentage of distribution was registered in Bulgaria, where the 67% of the involved teachers were women.

In The Netherlands and Italy, the female presence was even higher: respectively 80% and 90% of the presents were female. Only in Spain, instead, there was an inverted trend as more than half of the audience (62,5%) was male (see figure below).

**Fig. 4 Gender Distribution per Country**

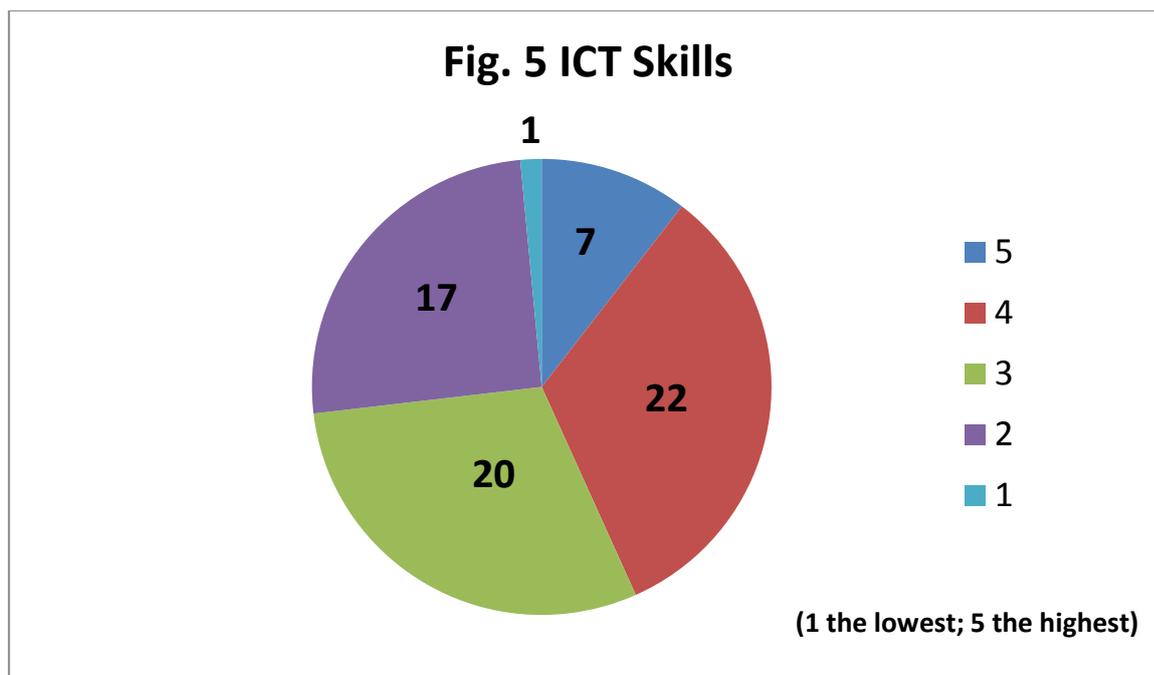


With regards to the age of the target group, the average between the four countries was 46 years old with the lowest rate registered in Spain, whose average is 41,5 years old, and the highest in Italy – the average is 50 years old.

### 2.2.2 Pre-Assessment Questionnaire

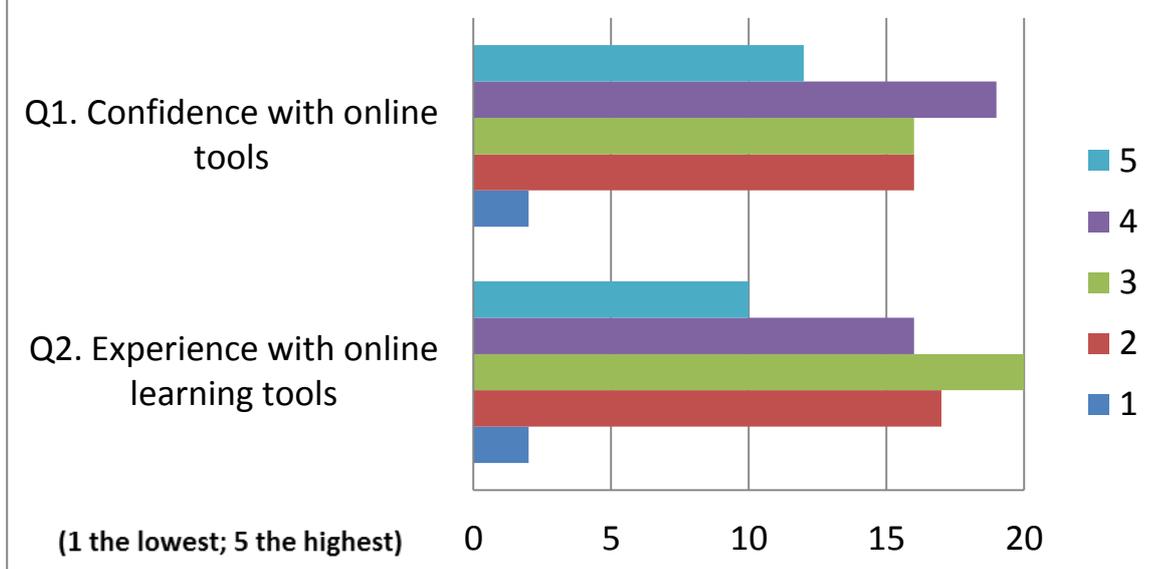
Before the National Training event, all Partners were asked to select and invite participants with basic knowledge on IT security and basic digital competences. At the beginning of the event, the participants were then asked to self-evaluate their ICT experience and confidence in general and with regards to learning activities through a set of closed questions with a rate scale from 1 to 5, being 1 the lowest rate and 5 the highest.

At general level, in the four countries the involved teachers and headmasters declared to have very good level of knowledge and competence on ICT.



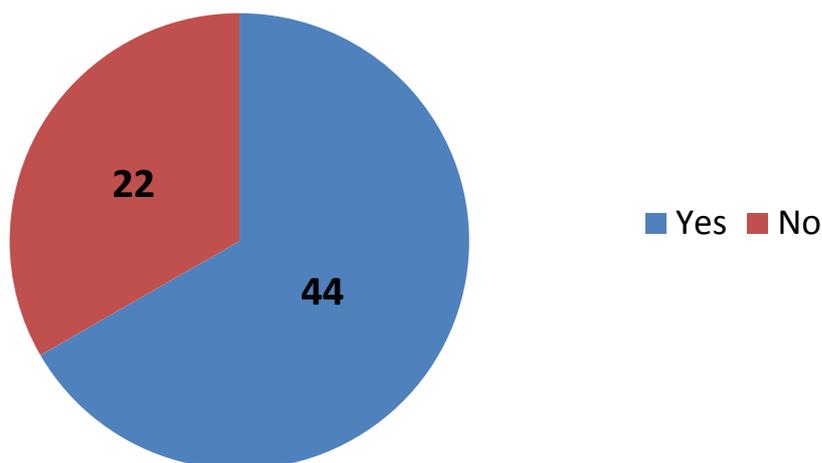
Analysing the country level, in all countries no more than 2 people declared to have excellent ICT skills. In Bulgaria, Spain around half of the participants - respectively 46% and 50% - declared to possess very good ICT skills (Rate 4). In Italy the group with good ICT skills (Rate 3) represented the highest percentage (35%), while in The Netherlands more than half of the participating teachers (53%) declared to have basic ICT skills (Rate 2) and only one person assessed his/her ICT competences as poor.

**Fig. 6 ICT Experience and confidence**



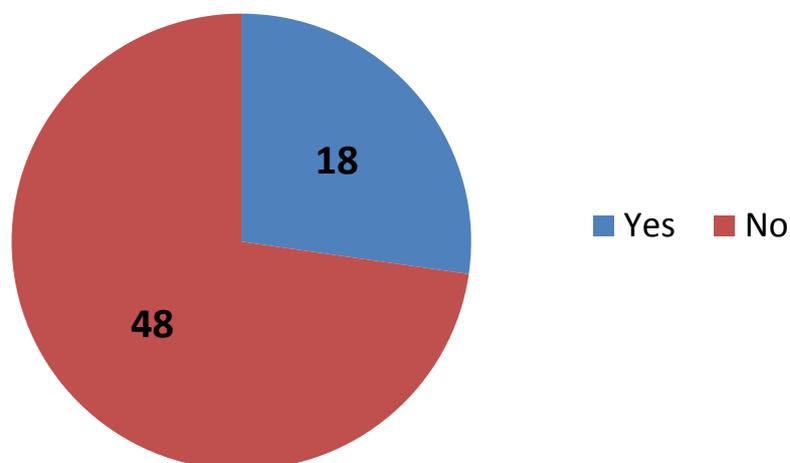
This trend was also confirmed by a good confidence and experience with online tools in general and online learning tools, even if in The Netherlands, for instance, more than 50% (8/15) of the participants declared to have a sufficient and basic ICT experience and confidence (Rate 2), while in Spain half of the participants felt to be mostly confident with technology (Rate 4).

**Fig. 7 Participation to online course**



The majority of the involved people, in fact, affirmed to have already participated to an online course and this proportion was mirrored also in the Partners' country with the only exception of The Netherlands and Bulgaria where 13 teachers out of 15 in the first country and 7 out of 17 answered to have never taken part to an online course.

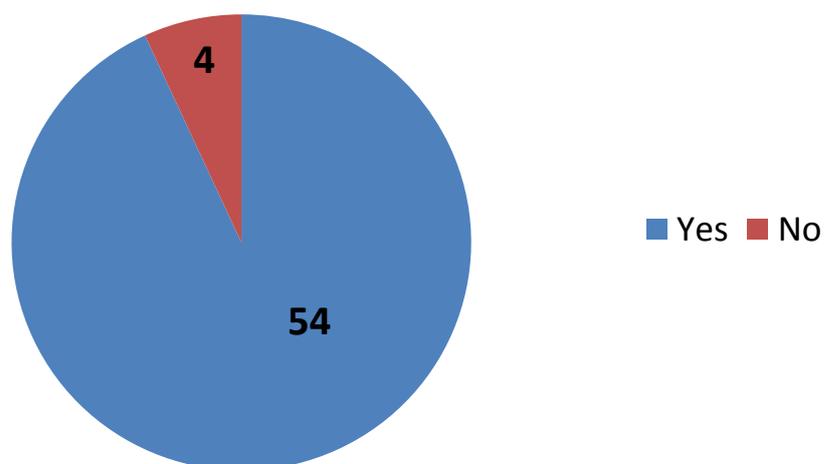
**Fig. 8 Participation to IT safety course**



Nevertheless, the greatest part of the involved participants has never taken part to a training course on the safe use of ICT. This projection is confirmed also in Bulgaria, The Netherlands and Italy while in Spain the situation is inverted as more than half of the target group -around 56% (9/16)- answered positively.

Referring to the I SECURE Project and in particular to the Professional Qualification 'I Secure Agent', the target group was asked about the relevance of the qualification and its topics.

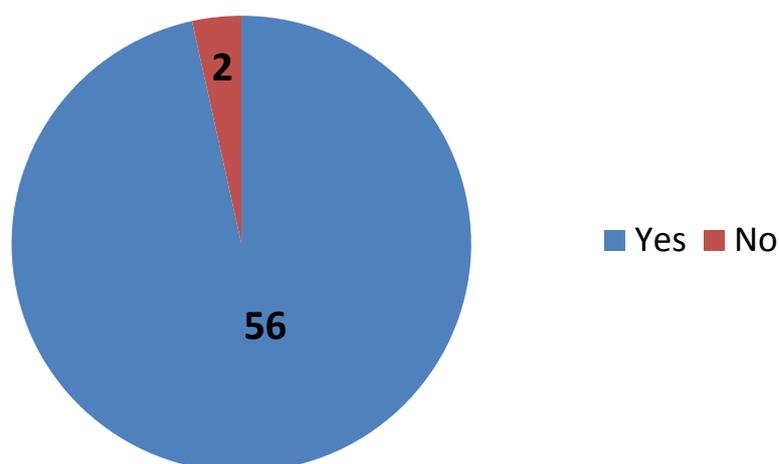
**Fig. 9 Match training needs**



Almost 80% issued that the 'I Secure Agent' Professional Qualification perfectly meets the participants' needs and expectations. Only in Bulgaria and The Netherlands 2

people answered 'No', while in Spain the whole participating group agreed on the Qualification's relevance for their learning needs.

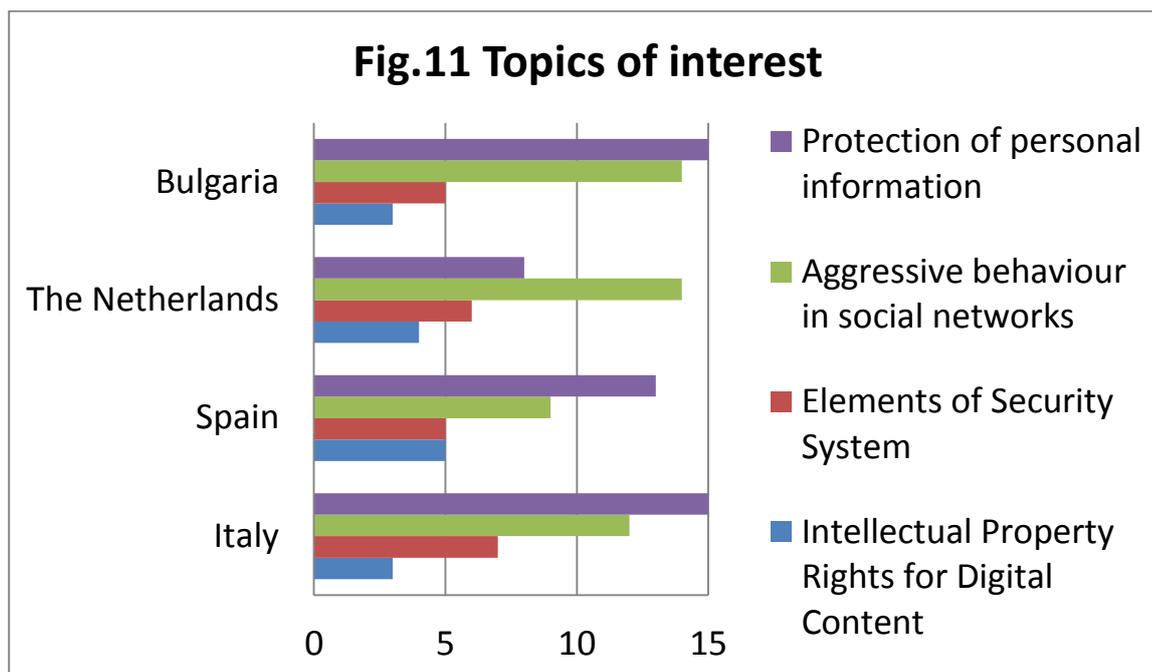
**Fig. 10 Useful for IT safety skills**



With regards to the usefulness of the 'I Secure Agent' Professional Qualification for improving participants' professional skills on IT safety, the consensus was general as more than 80% of the participants gave a positive answer.

In Bulgaria and Spain all the involved people were convinced by the relevance of this Qualification for their professional improvement, while in The Netherlands only 2 people answered negatively.

In order to understand and read the learning needs of the participating teachers and headmasters, Partners also investigated the participants' interest against the four modules of the 'I Secure Agent' Professional Qualification.



In Bulgaria and Italy, the four topics of the Professional Qualification were classified as follows:

The most interesting was, according to the audience, the '**Protection of personal information and communication on the web**', followed by (in order) the '**Identification of aggressive behaviour in social networks**', the '**Elements of Security System**' and the '**Intellectual Property Rights for Digital Content**'. In Spain this classification was confirmed but the two modules '**Elements of Security System**' and '**Intellectual Property Rights for Digital Content**' gained the same number of consents.

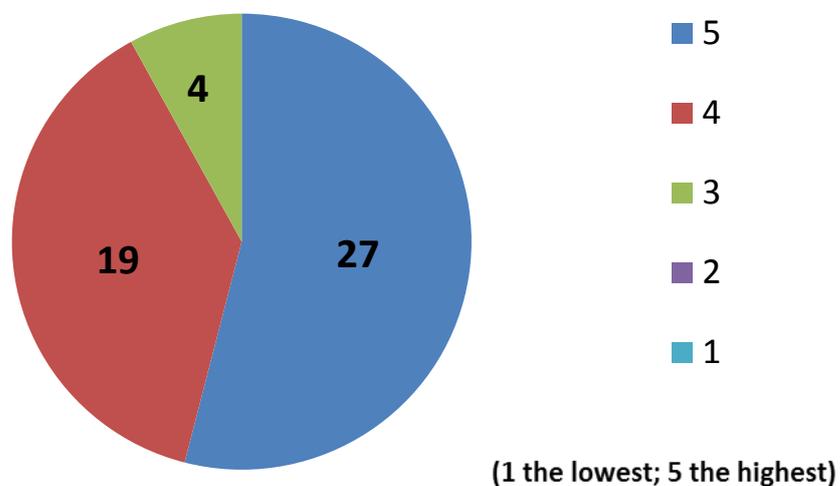
In The Netherlands, instead, '**Identification of aggressive behaviour in social networks**' was considered the most relevant by almost all the participants.

### 2.2.3 Post-assessment evaluation

At the end of the National Training event, participants were asked to evaluate the presentation of the 'I Secure Agent' online course, contents and materials and to express their interest in participating to the second stage of the piloting.

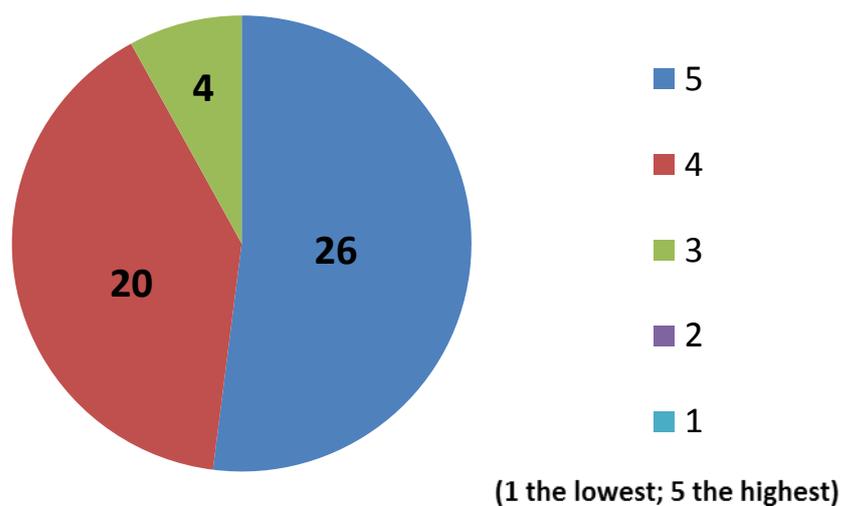
In the four countries all the participants declared to be very satisfied with the National training event. In particular the general presentation of the course and its modules was considered to be very relevant and successful for the audience as it perfectly matched the participants' interest.

**Fig. 12 Presentation of the course**

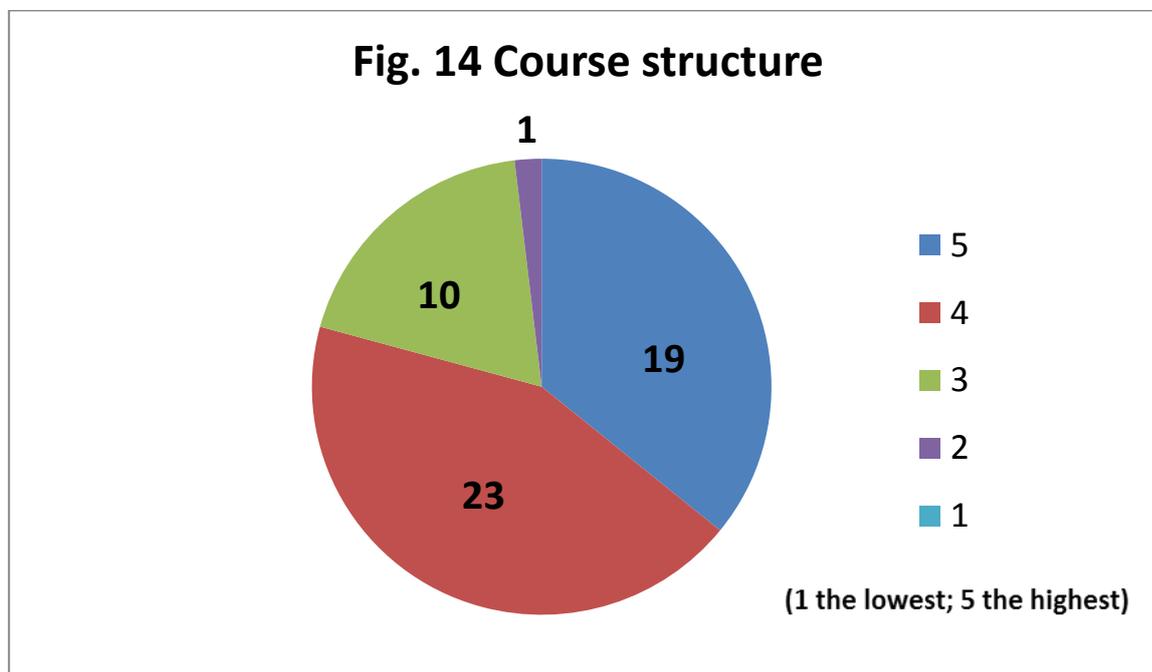


This trend was also confirmed with regards to the topics/modules of the Professional Qualification, which were welcomed by the audience as interesting and in line with teachers' professional needs and with students' educational requirements.

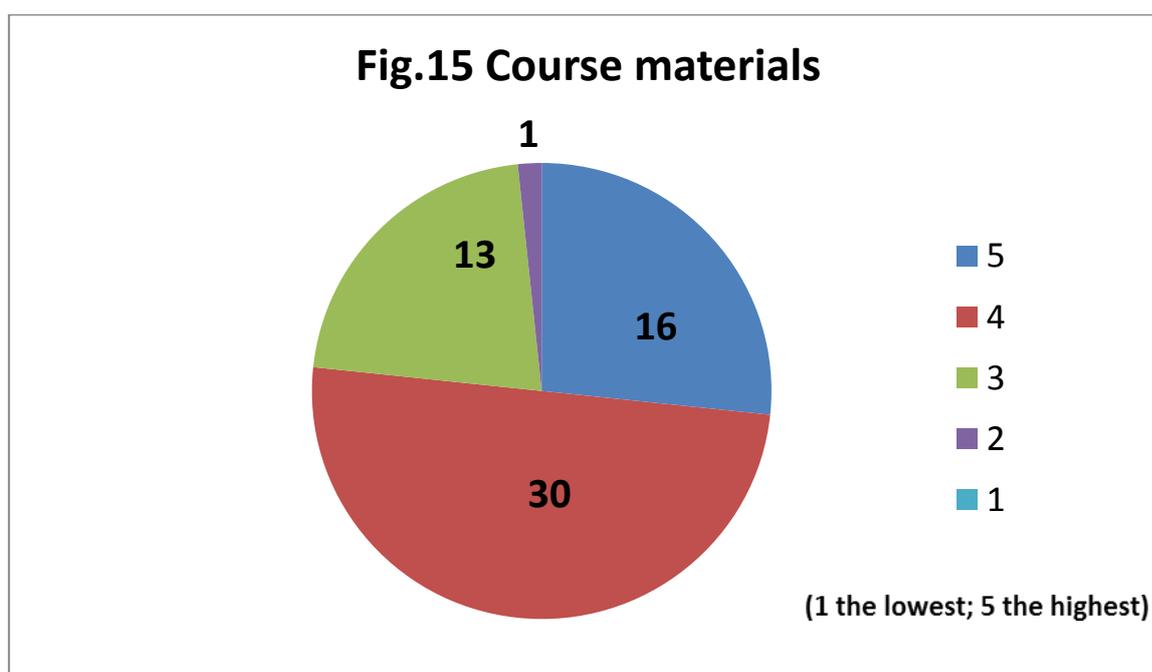
**Fig.13 Topics**



The structure of the course in terms of modules, lessons and assessment methods was agreed to be on average clear and defined easy to navigate and accessible to the participants.

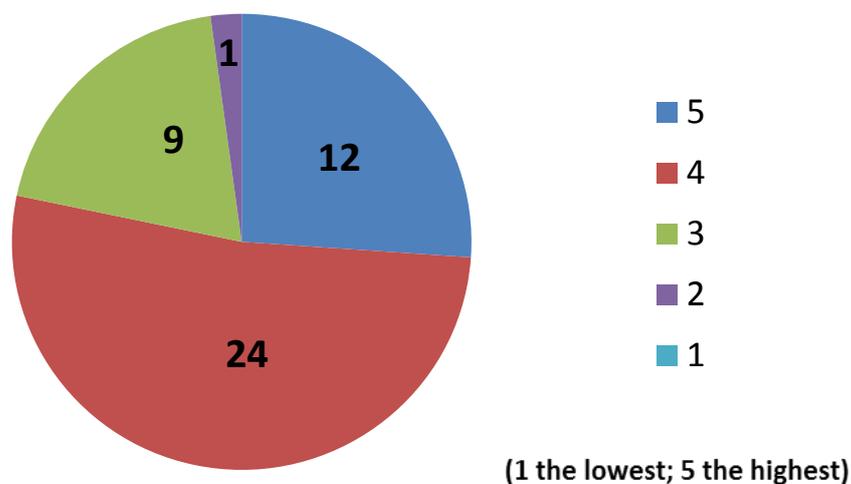


The variety of the didactical offer related to the study materials and supports was declared to be differentiated and in line with the variety of needs a group of participants may arise. Such an offer includes, in fact, not only traditional book and article references, but also interactive resources that are aimed at facilitating the learning process.



All the learning outcomes were presented and described by Partners to the participating teachers and headmasters in order to clarify the aim and the objectives of the whole course 'I Secure Agent' as well as of the single modules. Such a presentation was stated to be precise and relevant for the audience as it matched with their expectations.

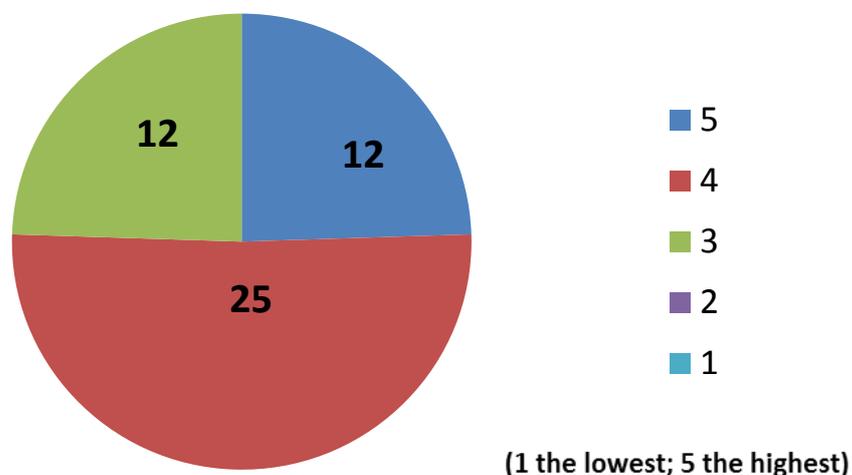
**Fig. 16 Learning outcomes**



As during the National training event also the TEL I Secure Eco-System platform was presented and explored with the support of the Partners, participants were also asked to evaluate the applied technology and its correspondence to the purpose and the activities of the course.

In all countries the answers were positive as the technological architecture (xMOOC) and the technological services and tools included (e.g. video, questionnaires, chats etc.) were agreed to be an appropriate support for the learning process.

**Fig. 17 Tools and technology**

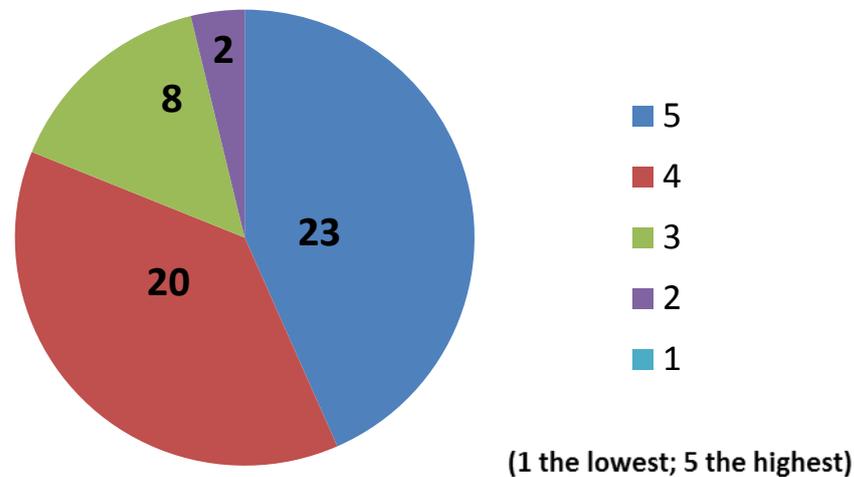


In conclusion, participants in all countries manifested their sincere interest in joining the 'I Secure Agent' Professional Qualification in order to benefit from the free materials and resources and build a supportive network of sensitive teachers and headmasters on IT safety (see figure below).

There was a general appraisal on the I SECURE project. The very few concerns expressed by the audience were considered be normal and healthy at this stage of the piloting and were expected to be clarified with the second stage.

Due to the participants' satisfaction with the National training event as stated in their questionnaires, the Partnership of the I SECURE Project concluded that in the four countries involved, this activity was successful as it met the interest and the approval of their target groups.

**Fig. 18 Interest in 'I Secure Agent'**



## 2.3 Pilot collaborative learning activity (O5-A3) comparative analysis

The Collaborative learning activity represents the second stage of the piloting phase and is an *online* activity which was held by the four Partners in each country (Bulgaria, Italy, Spain, The Netherlands) in order to validate both the 'I Secure Agent' Professional Qualification in terms of learning outcomes and contents and the TEL I Secure Eco-System platform with its functionalities. The validation of the two project's results was conducted in an *asynchronous* way where a 'collaborative' learning activity was organized to be delivered on social networking.

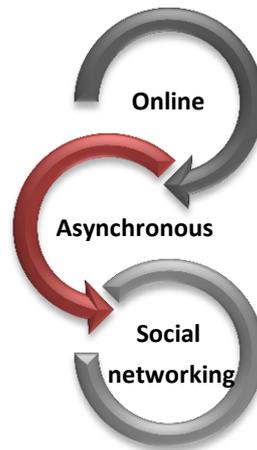
Such a learning activity has a dual aim: on the one hand, it supports the consortium of the project with the identification of potential improvements in terms of course curriculum (learning outcomes, teaching methodology and tools, learning contents) and technology of the relative platform (usability, bugs, performance issues etc.). On the other hand, the implementation of a collaborative activity enhances the creation of an active virtual community, a 'social network' in the field of cybersecurity in education.

The decision to host a stage of the piloting phase online is related to the need of the Consortium to adopt the most efficient and time saving solution to collect data and feedback that simultaneously could fit the objective of the piloting: the test of the contents of the course and the effective usability of the platform. Furthermore, the 'social networking' strategy represents the added value of this event since this will

allow the evaluation not only of the effective technical use of the platform but especially of its social potential.

The practical use of the platform, in fact, allow the users to be trained together on a common topic, work on a common task and create a social network, a virtual space that gave them the chance to learn from each other, build knowledge, discuss, ask questions to experts, exchange useful information and learn from their mistakes, creating an open ecosystem. Such an open learning environment is supported also by the asynchrony of the activity which allowed the participants' access to the Platform when and wherever they want.

**Image 2. Key features of the Collaborative learning activity**



The participants were asked to register and navigate for one month (15 February – 15 March 2018) the 'I Secure Agent' course and the TEL I SECURE Platform and its functionalities. During the piloting period, the learning outcomes (knowledge, skills, competence) were assessed and validated within the 'I Secure Agent' curriculum with *ad hoc* activities (e.g. quizzes, workshops etc.).

For the conduction of the Pilot collaborative learning activity, all Partners agreed to invite the group of participants that was already involved in the National training event and that showed its interest in taking part to the following stage of the testing phase.

One technical supporter from ECO Studio e-learning and one didactical supporter from UNWE, USR Lazio, Inercia and OUNL per country were available to be contacted for any kind of support through e-mail and through the platform (forums, messages and chats).



In particular, the technical supporter was in charge for monitoring and supporting the participants for the registration and access on the Platform and in case of any technical issue with it and its functionalities.

The didactical supporter, instead, was responsible for the pedagogical assistance to the participants during the learning activity with references to the contents of the activity, provision of any useful information, correction of mistakes. Moreover, the didactical supporter monitored the process of social networking in order to implement the methodology of collaborative learning.

All the learners from the four countries were required to fill in an *Evaluation questionnaire* whose completion was mandatory for users in order to receive the Certificate of attendance.

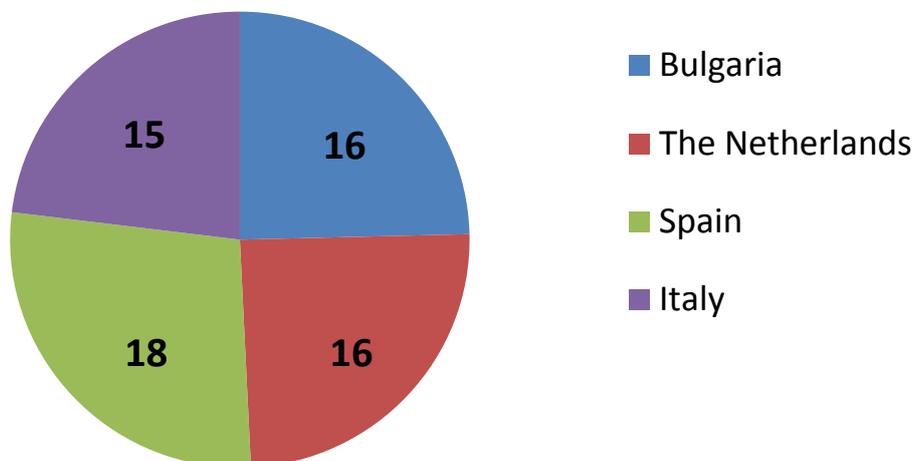
The evaluation questionnaires were distributed both in online version (Google Form) and in paper and were structured in a set of closed questions with a ranking from 1 (the lowest) to 4 (the highest) and two open questions aimed at evaluating:

- Learning outcomes
- Teaching methodology and tools
- Learning contents
- Usability of the platform
- General satisfaction of learners and tutors.

### **2.3.1 Composition of the target group**

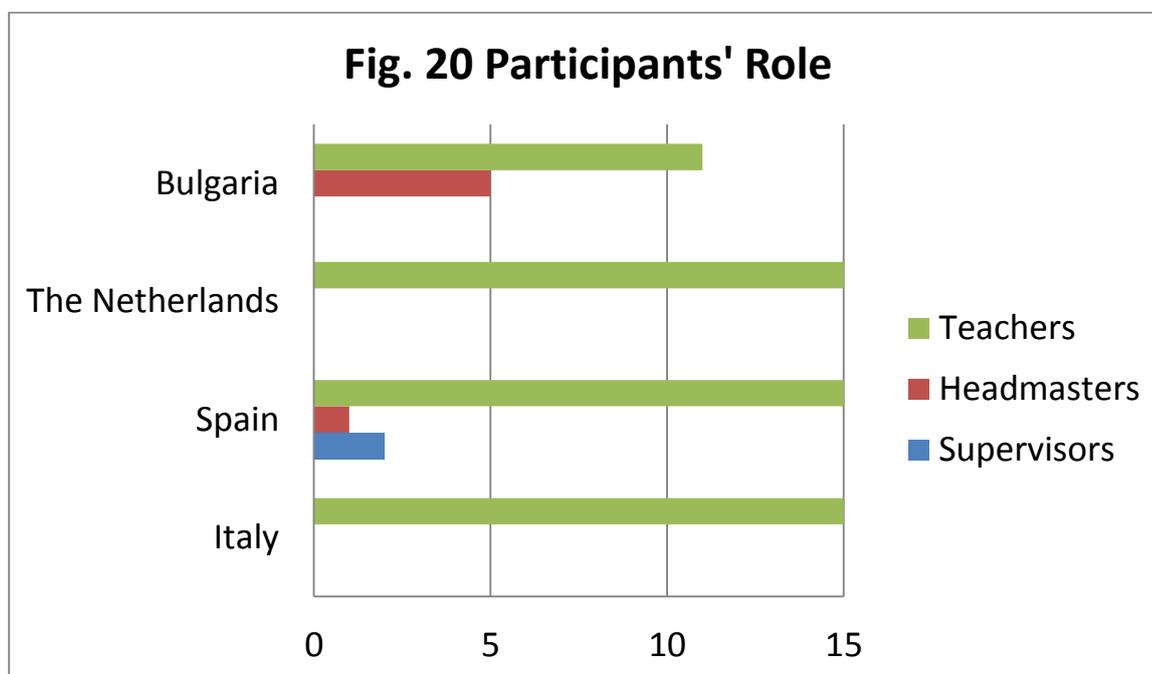
In all countries were involved at least 15 people, with Bulgaria, The Netherlands and Spain that involved some more (respectively 16 and 18). In The Netherlands, the involved teachers, were the same as in the National training event while in Italy they were all from the same institute ('I.T.T. Cristoforo Colombo'). In Bulgaria, again, the composition of the group was heterogeneous as the teachers and headmasters were all from different institutes. **Spain??**

**Fig. 19 Number of Participants**



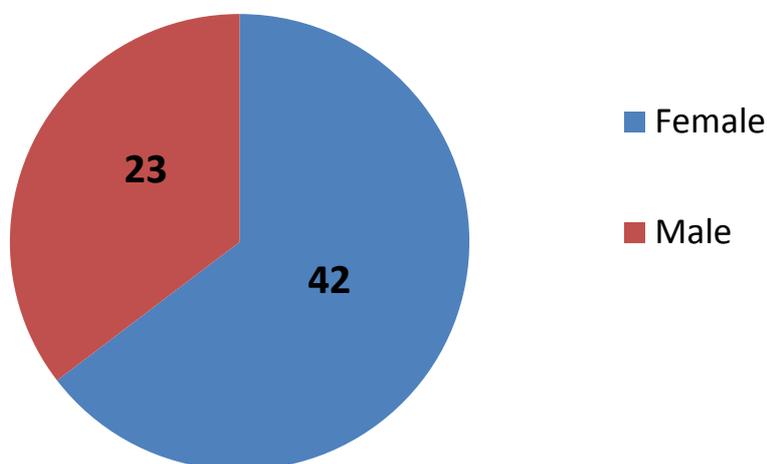
Regarding the role covered by the participants, as defined by the Partnership according to the spirit of the Project, the activity addressed especially teachers and headmasters. In Spain were involved also two supervisors that manifested their interest into the piloting.

**Fig. 20 Participants' Role**



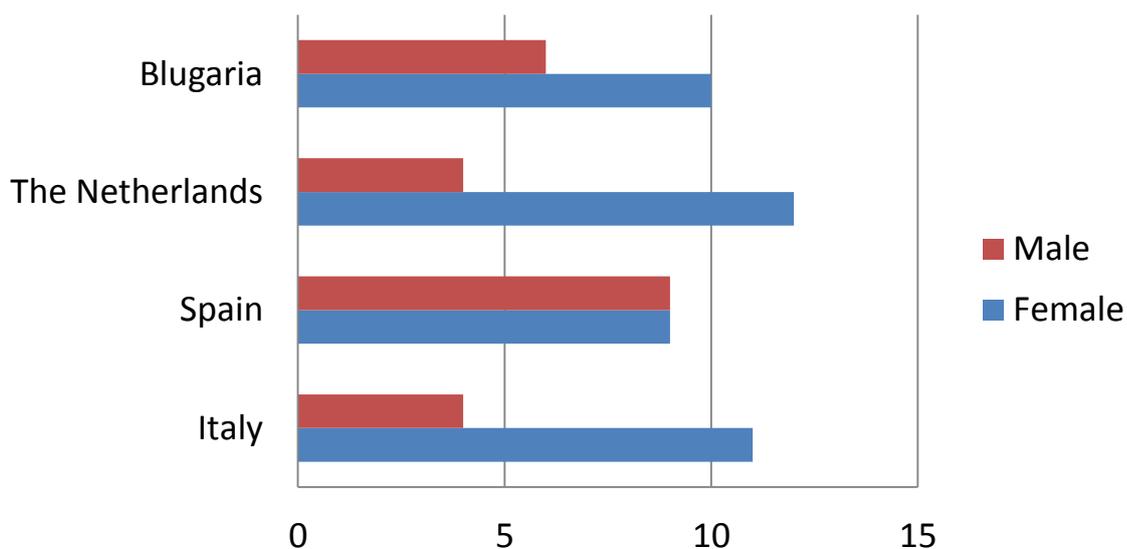
The gender distribution confirmed the trend of the National training event with a majority of female participants but a constant male presence.

**Fig. 21 Gender Distribution**



At country level, the proportion between female and male participants was reflected in Bulgaria, where the female participation represented the 62% of the whole group, while in Italy and in The Netherlands the percentage was even higher (73% and 80%). The only exception to this trend is represented by Spain where there was an equal distribution of participants.

**Fig. 22 Gender Distribution per Country**

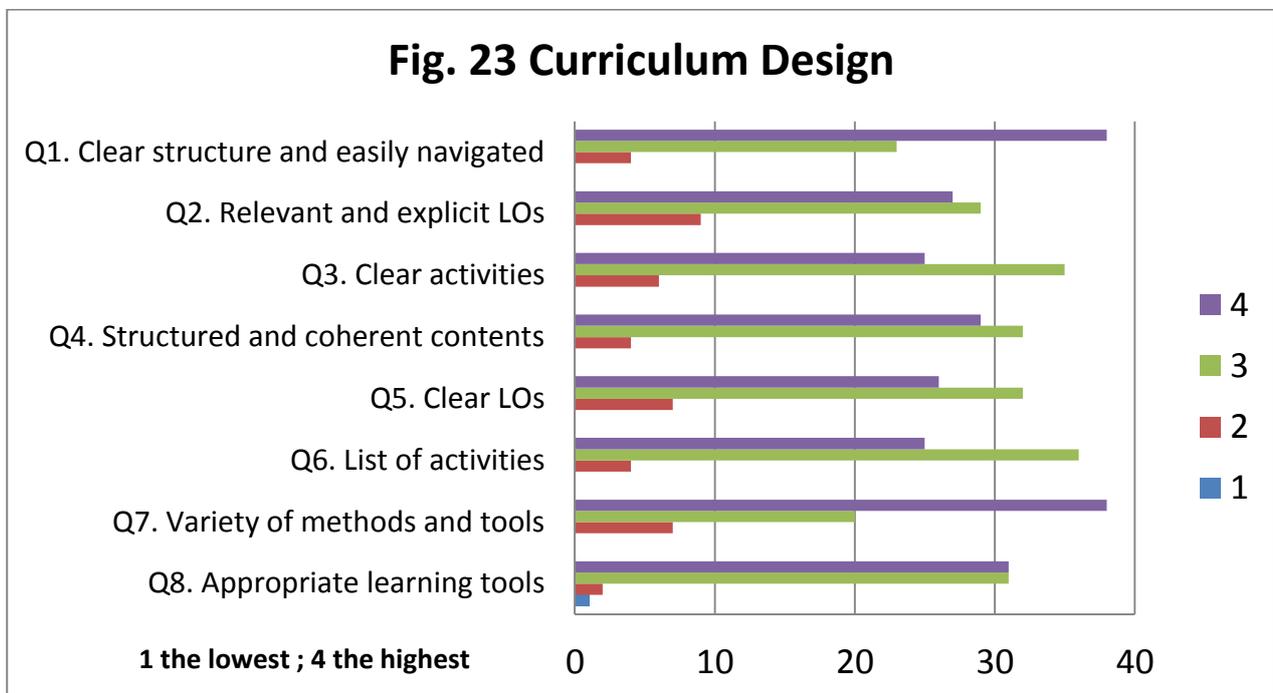


For what concerns the age, the average of participating teachers and headmasters

was again 46 with the lowest age being 25 years old in Spain and the highest in The Netherlands (61 years old).

### 2.3.2 Results of the Pilot collaborative learning activity

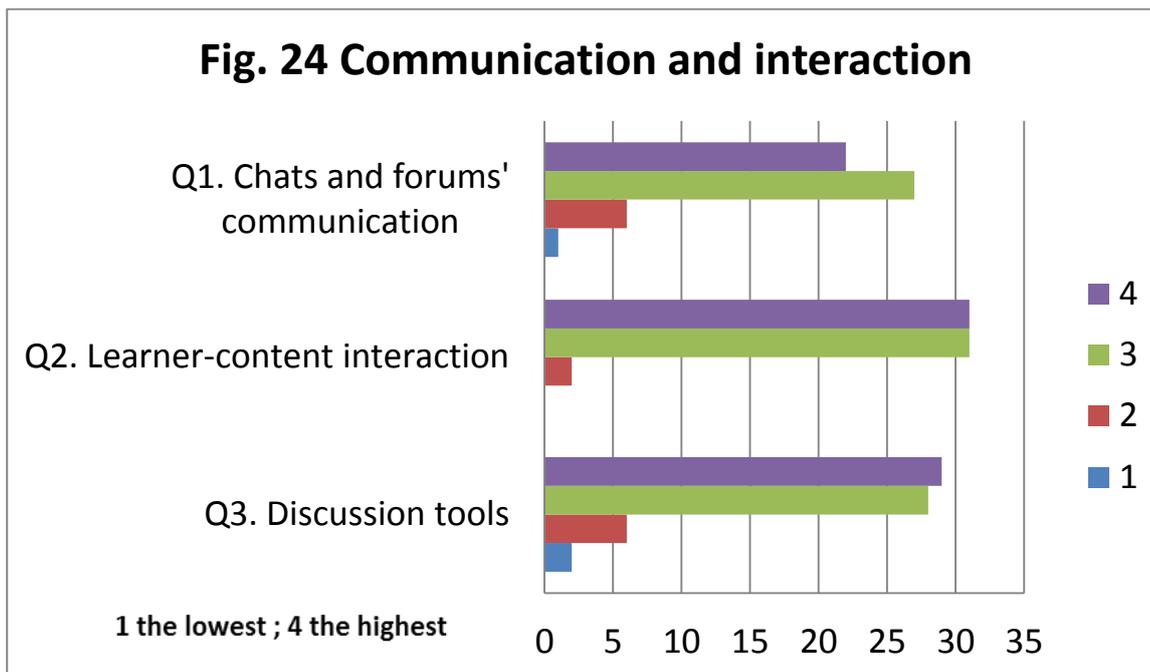
At the end of this piloting period, all participants were asked to fill in an evaluation questionnaire in order to gather feedbacks on the two main outcomes of the project (the 'I Secure Agent' course and the TEL I SECURE Platform) and to adjust them in order to suit the learners' needs.



The design of the course's curriculum received a very positive evaluation from all the participants in the four countries. In particular the structure was considered to be very well defined and accessible, with a clear list of activities in line with the stated learning outcomes and delivered through a variety and very appropriate set of learning methods and tools. Few concerns were raised in Bulgaria, The Netherlands and Italy about the learning outcomes and the relative applied learning tools even if no further comments were presented.

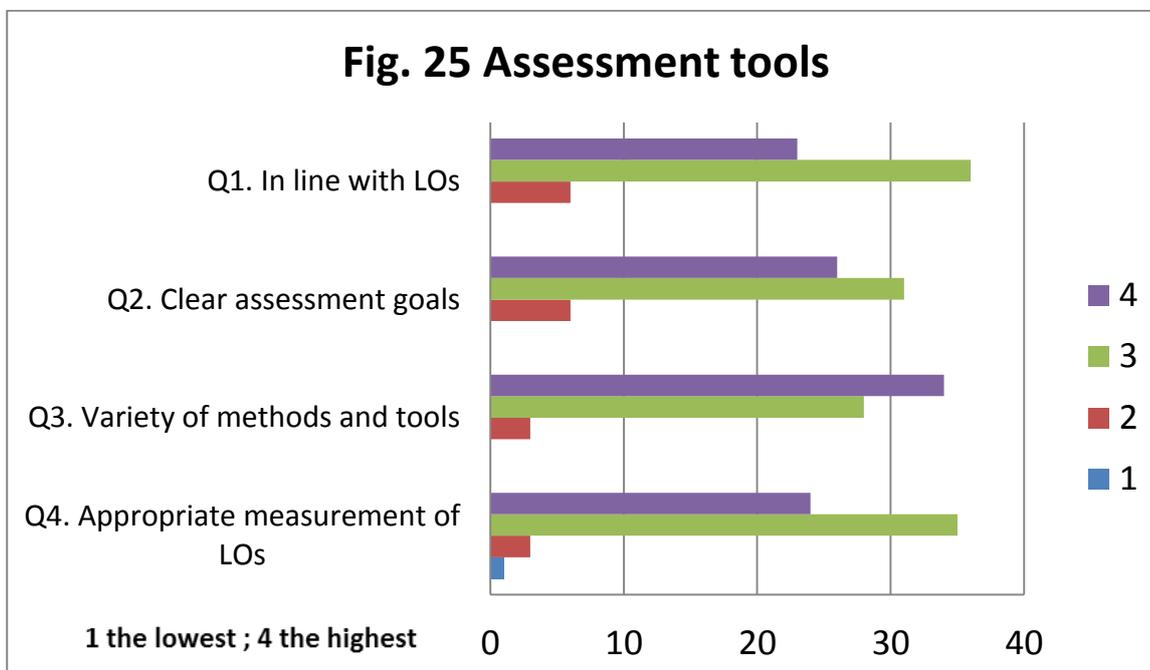
As general statement, the target group was mostly very satisfied about the composition of the curriculum, its offers in terms of contents and activities.

**Fig. 24 Communication and interaction**



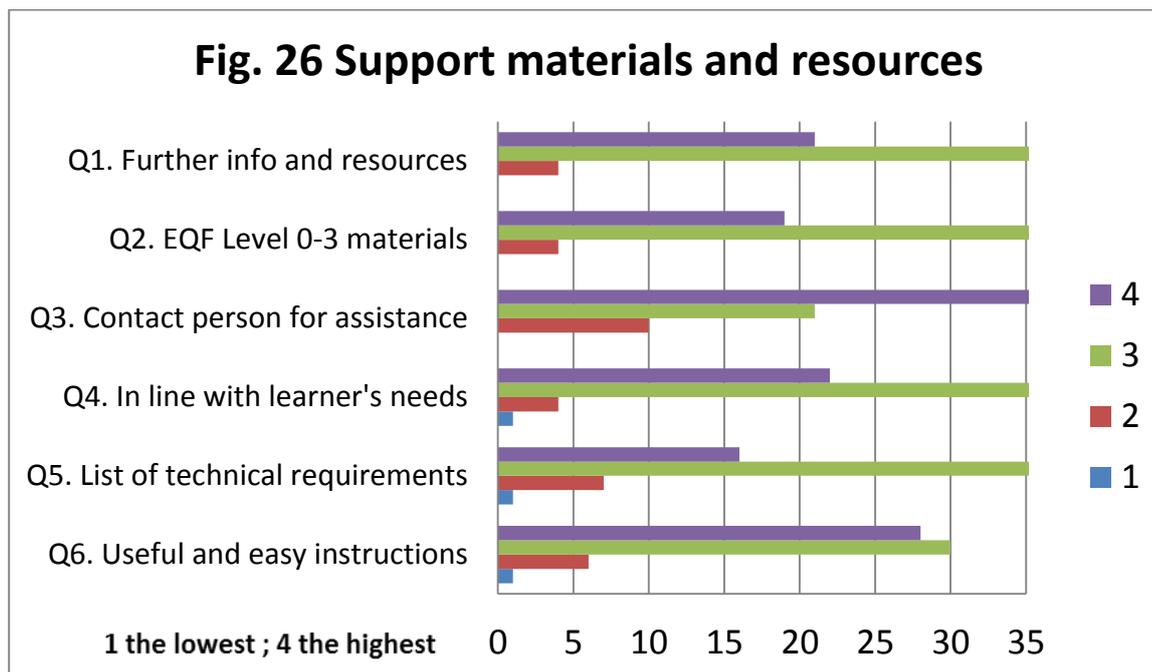
The level of collaboration and interaction allowed by the Platform through a set of communication and discussion tools (chats and forums) was good even if some users were not completely satisfied by the functionalities and the level of participation to these tools. Despite this, their accessibility to the course's contents was considered to be very positive.

**Fig. 25 Assessment tools**



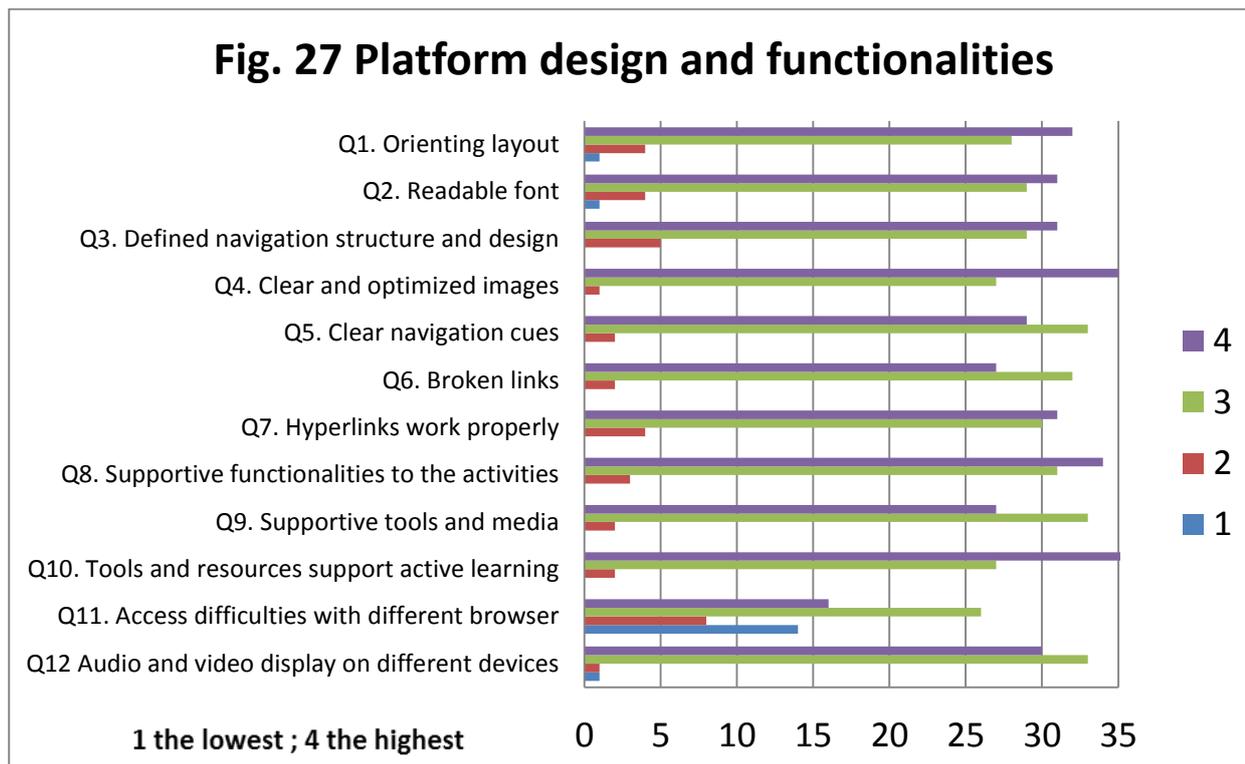
Regarding the set of assessment tools, the target group stated to have accessed to a variety of instruments that ranged from quizzes to serious games and online workshops with a defined assessment purpose and almost in line with the curriculum learning outcomes.

**Fig. 26 Support materials and resources**



As far as the availability of supportive materials and resources, both on the educational and on the technical level, all users assessed them in a positive way. In particular, the involved teachers and headmasters declared to have accessed to a list of additional links and resources that supported also who did not achieve the entry level required by the Professional Qualification (EQF Level 3). The provided assistance was also rated as useful, especially the presence of a contact person for any educational or technical issue. Few expressed concerns with regards to the technical requirements are considered to be related to the remoteness and distance of this piloting activity.

**Fig. 27 Platform design and functionalities**

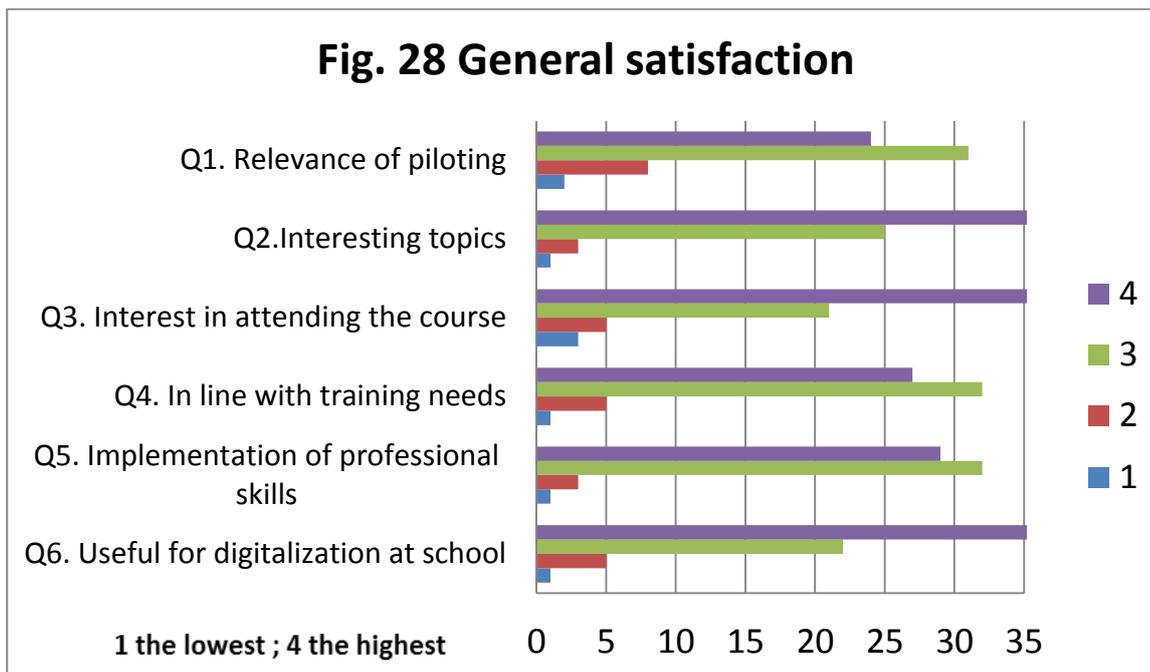


Specifically referring to the TEL I SECURE Platform, it was very well welcomed by the target group in terms of structure, design and layout that are orienting and easy to understand. No problems were registered with the general access to the platform, neither with the images or video loading nor with broken links. However, users in some countries (The Netherlands, Spain and Italy) had some problems in accessing to the Platform or to properly display audio and videos from different browsers. This feedback will be considered for the final fine-tuning of the platform, to be delivered as final version by the end of the project.

Nevertheless, the whole Platform was evaluated as a satisfying one with very supportive functions and tools that were able to support and stimulate active learning.

In conclusion, the involved target group declared to be generally satisfied with the piloting activity they took part, and found it interesting for the topics and almost in line with their training needs and their professional expectations. As a result, they affirmed to be sufficiently interested to achieve this Professional Qualification as they identified this course as an excellent strategy to promote among schools the 'culture of IT security' and familiarize with digitalization.

**Fig. 28 General satisfaction**



### 3. Conclusion and recommendations

At general level, the piloting phase is considered to have met its performance indicators as in both the piloting stages Partners involved a minimum of 15 participants per country.

In all countries there was continuity in the communication and dissemination with the same stakeholders on the project’s progression as the same group (as in The Netherlands) or most of the participants took part to both the National training event and the Pilot collaborative learning activity.

As the main target group of the piloting activities were teachers, these were the main interlocutors identified in all countries even if in some cases also other relevant stakeholders were involved (e.g. headmasters, supervisors, students, parents). Such a composition was perfectly in line with the project’s aim of promoting the strategic and innovative use of ICT at school level through the involvement of the main players (teachers) and the final beneficiaries of education (students).

The selection process of the participants allowed the identification of a group of teachers with a good level of confidence with IT since around the 70% of the target group assessed its ICT competences as pretty advanced and only the 27% (mostly in



The Netherlands) felt to have basic skills. Such a competence, in addition to a previous general experience in online courses granted a good level of familiarity and interest in the topics of the Professional Qualification also because mostly none of the involved participants took part to a MOOC in this field.

The 'I Secure Agent' course, in fact, gained a favorable consensus among its audience: not only the course was defined to be very well structured in terms of learning outcomes and contents but also profitable for the course's final users (the teachers) who felt to have improved their professional skills and relevant for enhancing the digitalization of education programmes in schools.

Also the TEL I SECURE Platform received very positive feedbacks for its architecture and variety of tools and activities. The presence of technical and didactical tutors contributed to the effective functioning of the Platform and guaranteed the suitable support to the users.

In conclusion, the piloting results revealed the success of the initiative, both at the single country level and also at European level because of the partnership composition and regional distribution that covered the main European regions. However, as the piloting phase was aimed at concretely test the course and the platform, this activity not only demonstrated its goodness, but also helped the Consortium in identifying eventual room for improvements.

Based on the participants' suggestions and comments here reported there some recommendations for the Partnership, for the final fine tuning of the qualification and of the platform:

### **1. Learning outcomes and EQF Level.**

The partnership should not only develop a list of additional resources for users who do not meet the entry level but a proper online course to guide them achieving it. This suggestion will be considered by the Consortium for future exploitation activities and projects.

### **2. Contextualized examples.**

In addition to the variety of materials and examples, the Consortium should integrate further examples and case studies directly linked to the educational context in order perfectly target the teachers' needs and trigger the students' interests.

### **3. Social networks.**

The services already included into the Platform such as chats and forums contributed to the users' interaction. However, in order to make this environment a proper 'living' ecosystem with a community that discuss and collaborate on this topic, it would be advisable to correlate the Platform also with some social networks. This would also guarantee a wider dissemination and discussion of the course and the project itself.

### **4. Language.**

The great interest generated by the course in all countries underlined also the need to provide all the contents in the national language in order to reach even wider



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audience. In this regard, Partners agreed that during the further exploitation of the project results, they will introduce subtitles and translation in national languages.

### **5. Complementary course for parents and students.**

If the Professional Qualification and the related online training course were considered to be an effective tool for teachers and headmasters for enhancing the digitalization of schools, it is advisable to widen the target group addressed by these types of courses. Therefore, it was suggested to define this kind of courses also for parents and students in order to guarantee a more concrete impact at school level.