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Maria Potes Barbas

Escola Superior de Educação do Instituto Politécnico de Santarém, mariapbarbas@gmail.com

Pedro Matos

Escola Superior de Educação do Instituto Politécnico de Santarém, pedro.matos@ese.ipsantarem.pt

Cristina Novo

Escola Superior de Educação do Instituto Politécnico de Santarém, cristina.novo@ese.ipsantarem.pt

José Maurício Diais

Escola Superior de Educação do Instituto Politécnico de Santarém, jose.mauricio@ese.ipsantarem.pt

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Innovative resources and models for learning e-skills for young people with disabilities

Maria Potes Barbas, Escola Superior de Educação do Instituto Politécnico de Santarém, Portugal,
mariapbarbas@gmail.com

Pedro Matos, Escola Superior de Educação do Instituto Politécnico de Santarém, Portugal,
pedro.matos@ese.ipsantarem.pt

Cristina Novo, Escola Superior de Educação do Instituto Politécnico de Santarém, Portugal,
cristina.novo@ese.ipsantarem.pt

José Maurício Diais, Escola Superior de Educação do Instituto Politécnico de Santarém, Portugal,
jose.mauricio@ese.ipsantarem.pt

Abstract

The present study focuses on the analysis of a series of resources and innovative models created within an European project called "#TV T21 Community# e-Skills, social inclusion and employability" with the objective of understanding their use in learning contexts for young people with disabilities.

An analytic description of the different elements developed such as: guides, games, mobile applications, practical models and even workshops will be given. In addition to the research that has been carried out, and its theoretical basis, questionnaires, group dynamics and observation were also implemented.

At the end of the research, we can conclude that the present project, known as a strategic partnership for youth, meets the fundamental requirements to apply a set of innovative and necessary resources to meet the criteria of inclusion, equality and digital employability. These aspects are outlined as priorities by the European Disability Strategy 2010-2020 and the World Report on Disability.

Keywords: Digital inclusion; Digital skills; European project; Innovative resources; Adapted models

1. INTRODUCTION

Nowadays, society is characterized by the constant evolution of its systems. The reality of everyday life, practiced by millions of citizens, is supported by technological resources that have transformed and by proxy, eased up, in some cases, different basic actions such as going to a supermarket and shopping or strolling to a park and enjoying the natural landscape. These and other examples are just a few that have been helped by digital experimentation. Thanks to a massive use of the Internet and access to a computer and a location with a network (e.g. Wi Fi), shopping is possible without having to leave the house or the comfort of the home. Still, with the emergence of innovative systems, such as virtual reality, users have access to a simulated experimentation of scenarios or environments built to their liking or recreating aspects of the real world. In fact, this technological reproduction allowed the individual infinite possibilities on a personal, creative and professional level allowing the creation and interaction by users to the digital society through blogs, web pages, online forums, emails, online social networks and even resumes and digital portfolios (Martin, 2008), enriching the technological identity of our society.

However, the reality here indicated does not apply to all individuals. In fact, contemporary society has few conditions for the diffusion of this kind of services or technological models to disadvantaged target groups and even to those who suffer from disabilities. Although some efforts have been made by some countries such as Australia, Canada, USA, Ireland and Finland to make some aspects of the digital society more inclusive and available for citizens with disabilities (Gasset & Herrero, 2016), strategies are still needed for a greater inclusion of these citizens in the labour market and digital society.

In this sense, this paper presents some good practices developed in terms of innovative features and technological models for learning electronic skills to young people with disabilities. This study is part of a European project called "#TV T21 COMmunity # e-Skills, social inclusion and employability (intercultural dialogue in tourism)". The project was created through a funding program of the European Commission, specifically a key action 2 for the strategic promotion of partnerships for youth and counts as partners Portugal, Croatia and Italy.

1.1. Project Framework

As any study that is initiated, implemented, reviewed and finalized it is important to understand the context in which it was inserted or somehow led it forward as a proposal for research or project. Thus, this project is born from a European initiative that, after an analysis of the current state of the art, regarding its challenges, difficulties and existing solutions, it was verified that it was relevant to implement a proper strategy. This strategy was brought by a European project that would fill the

shortage of strategies that promote social, labour and digital inclusion of young citizens with disabilities, specifically trisomy 21 or Down syndrome.

In this way, the T21 Community project was made of three multidisciplinary institutions. Specifically, a HEI (Higher Education Institution) with experience in the areas of digital literacy and vocational training and two associations of young people with Down syndrome. The created team focused on promoting and facilitating the social inclusion and employability of young European citizens with Down syndrome through the usage of innovative resources and models for the apprenticeship of digital and electronic skills.

It is also important to mention that the study carried out by the T21 Community project allowed a great investment in training areas of information and communication technologies. Given the technological advancement and the position of the digital industry vis-à-vis the labour market, it is essential that these citizens have the basic knowledge of this type of digital skills. In addition, the work team responsible for the implementation of the project strongly agree that ICT skills (even if basic or intermediate) to citizens with Down syndrome, together with other innovative models and resources, could decisively help social, digital and labour inclusion for these citizens in the mid-long term.

1.2. Project characteristics and potential

This project, as well as the study carried out, are aspects endowed with their own characteristics and potentials. Knowing that the target group of this research are young Europeans with disabilities, a strategic work plan has been established and adapted to their needs. In this sense, methodologies and methods have also been adopted to achieve the best results and the desired potential. Thus, this project provided an opportunity to contribute to the development of innovative and good practices in non-formal education and information systems as an element of a multi- disciplinary support structure. Further insight and international co-operation contributed to the exploration of new educational environments embedding online opportunities as interactive digital content adapted to the needs of the participants with disabilities. These new environments could be based on a range of settings and incorporate a range of social and emotional supports for learning and progression plans for vulnerable and at-risk groups of young people.

In concrete terms, the project as well as the study had the following potential on the participants and participating organizations:

- It offers the opportunity to identify learning materials through an interactive platform to establish "Community of Practice" with the HUB where ideas and innovations can be shared by the people who are currently working with inclusive practices;

- It gathers the information needed to identify innovative and inclusive methodologies to successfully train and integrate the target group in the society, especially in the digital labour market. This opens the unique possibility to improve the learning (formal and / or non-formal) methodologies in various organizations both nationally and internationally;
- It offers an opportunity to give more active role to the Down syndrome citizens both in terms of their learning and in terms of their presence in society (e.g. employment).

Other relevant stakeholders such as special educators and partners had the opportunity to be part of the network and to share experiences, ideas and innovations. This project allowed them to use the educational contents produced as part of their developmental strategy in terms of learning solutions. As for this, these contents gain an open access status to be used by other interested parties with their own focus groups. Through the usage of these tools, their opportunities to develop and improve practices designed for marginalized students both nationally and internationally have been enhanced. Finally, and most importantly, the target group of this project and study, the vulnerable and at-risk groups of Down syndrome young people had a better opportunity to study in new and innovative learning environments that are designed to help them overcome their educational challenges.

2. PRACTICAL CASES: INNOVATIVE MATERIALS, RESOURCES AND MODELS

One of the objectives of the research and study developed around this project "#TV T21 Community # e-Skills, social inclusion and employability (intercultural dialogue in tourism)" is the fact that this results in the development of practical and tangible cases. Particularly in the design of innovative learning materials, open technological resources and models adapted to the digital needs of each participant with disabilities. It is important to understand that in the view of the development of this type of initiative or program, as in the case of this project, that the whole component related to information systems and learning of electronic competences fits in with a set of specific "conceptual frameworks". For this, it is essential to trace and perceive the vision of some authors and even works carried out previously from the perspective of the user with special needs. Thus, it is a matter of interpreting some definitions that serve, given their genesis, as fundamental standard for the applicability of this study and of the digital products developed.

Having said that, let us begin by introducing the first practical case of this study. In this case it was assumed the importance of a digital element considered fundamental for the implementation of the remaining resources and innovative models giving to the training of young people with disabilities. To this end, the importance of including a learning method for distance learning, that is, an online platform was one of the first steps to be taken in the project. In fact, the importance of an adapted and integrating environment of different technologies such as distance teaching is an enabler for the learning of information systems. For, not only allows the user to use a digital tool as it integrates into

the tool itself as a student learner. In fact, some studies point out that in certain aspects of software environments have the potential to strengthen trainees with disabilities. People who are unable to walk directly to a teaching institution to attend classes may use this type of technological means to make effective contributions to learning activities. (Douce, Porch & Cooper, 2010).

Thus, having this online platform assumed as an innovative and open learning model, the next step would be the creation of electronic content, as you can see further on at Figure 1 and Figure 2. These, also called e-modules, would follow the guidelines indicated by the European Commission when developing them. That is, the study adopted the European position when it comes to learning and training in face-to-face or online digital contexts. Having said that, and following the construction process defined by the EU4ALL framework, this project aims to explore how to present content and training materials for participants with disabilities (Douce, Porch & Cooper, 2010), the following study was based on this good practice and developed the following approach:

- A) Open model for learning in e-skills, divided into different levels:
 - a. Basic level
 - b. Intermediate level
 - c. Advanced level

Secondly this same approach had followed another example of developing innovative open models for supporting the teaching environments of the involved participants with disabilities, thereby reaching the following status:

Open model for methodological and pedagogical guidelines to support the learning of participants with disabilities. These guides include a step-by-step teaching process in both written and video format.

These were the initial innovative resources, models and approaches that this study implemented to train young students with Down syndrome their apprenticeship in e-skills. Given the importance of being included towards the nowadays digital about market these e-contents provided the basic, intermediate and advanced requirements for an initial knowledge of digital skills. Thus, and to have a more generic comprehension find below how the platform and contents were visually presented to the trainees with special needs.

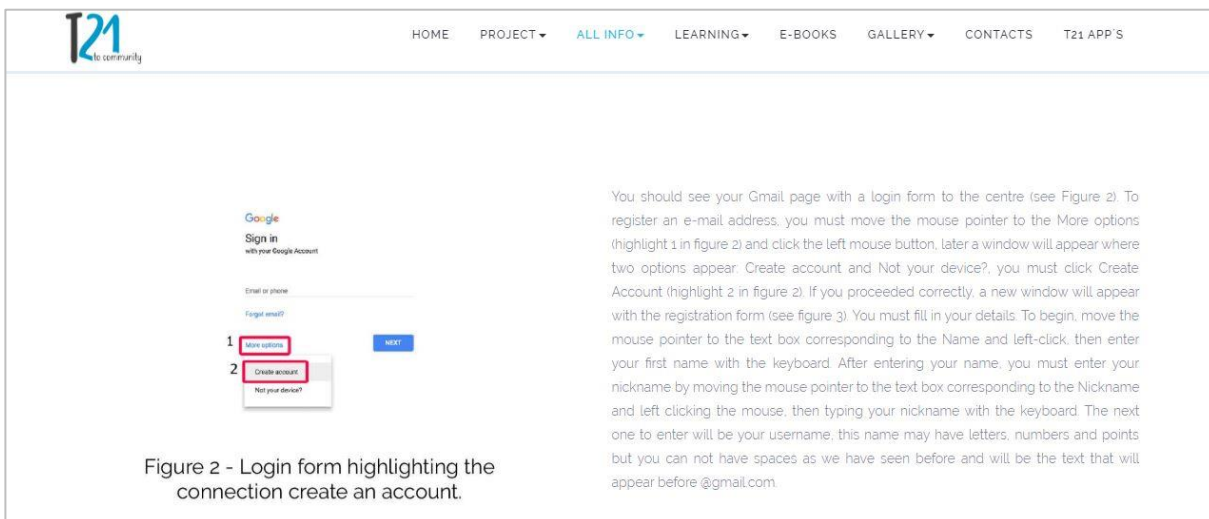
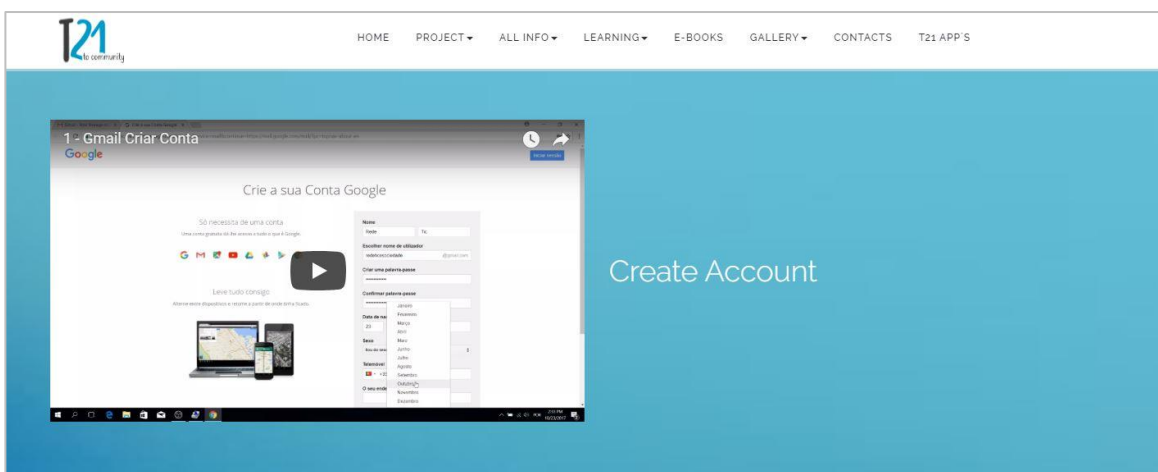


Figure 1. E-content module about Electronic Mail

This was the page related to the e-content about learning about an electronic mail and using Gmail service as a practical example. Nevertheless, it is important to mention that for each e-module available at the online platform there was a complementary module in video format.



Lastly, about this topic that introduced the online platform and e-modules created in the course of the project study it is possible to check all the developed e-skills training materials at the official platform, available through this hyper link <http://t21.ese.ipsantarem.pt/gmail.html>.

Given these indications of innovative open learning models and resources for learning in e-skills for young people with disabilities, other technological resources were still developed and used in the project study. First, we understand that the use of interactive electronic devices, such as tablets, would be a strategy to adopt. In addition to these systems being more intuitive and interactive with

the target audience in question have allowed the integration of other digital applications such as games, quizzes and digital puzzles, as it will be possible to see through the Figures 3, 4 and 5. In fact, the use of devices like tablets is a practice to encourage to learners with special needs. The fact these devices foster a set of interactive and intuitive activities allows a greater degree of attention and focus on the part of students with disabilities. It is also important to mention that devices with tactile graphics receive much more direct attention since they present their content through a visual format, that is, using monitors. Thus, they introduce a great benefit because they are tactile henceforth supporting the question of multipoint interaction as verified in the real world. In this way, allowing objects to be "touched" or "sensed" using fingers or hands (Hollier, n.d.), rather than through peripherals, which is a more widespread system among information systems. With this, given the use of tablets in an educational context, this study also allowed the discovery of other digital tools, fostering the learning of e-skills using adapted mobile applications and online games enabling the creative capacity of each student with a disability.

In this way, mobile applications have been created with the integration of systems to match the image to the text, allowing practical-based learning of a real-world scenario.

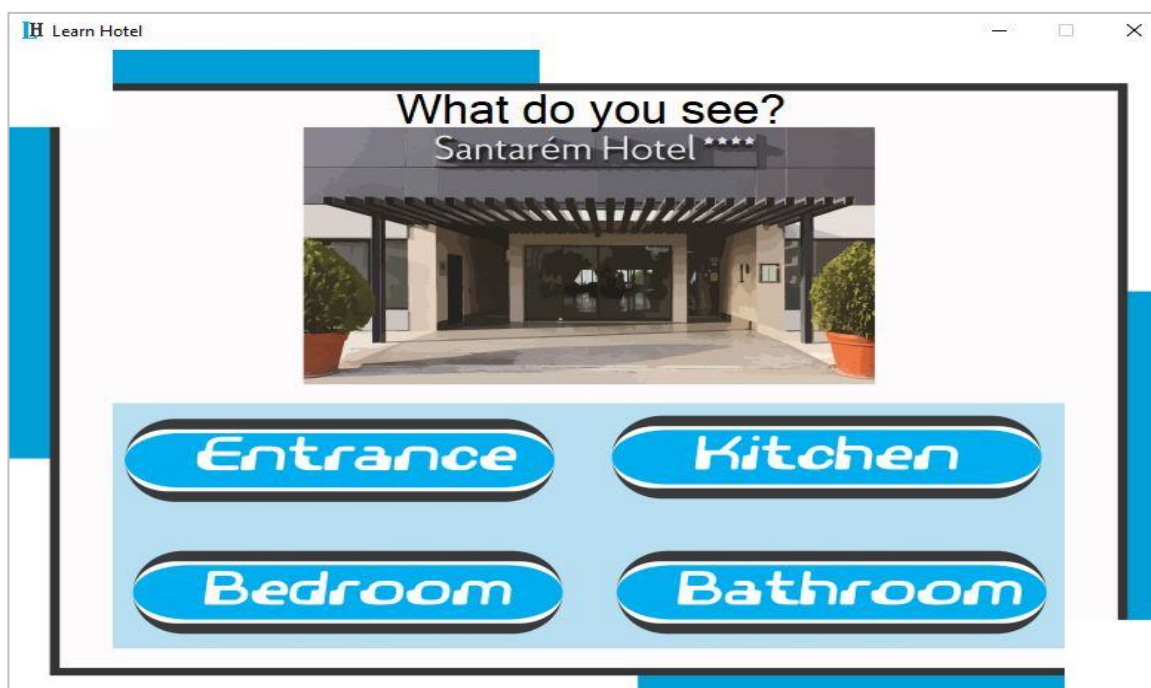


Figure 3. Mobile Application about matching images

Alongside this type of mobile application, another one was also developed, with a more creative scope. It was focused on a more comprehensive and cultural theme, in this case music, in order to foster the creative sense of the practitioners. The application in question allowed students with Down

syndrome to select their favorite songs and categorize them by countries of origin and order them by popularity.

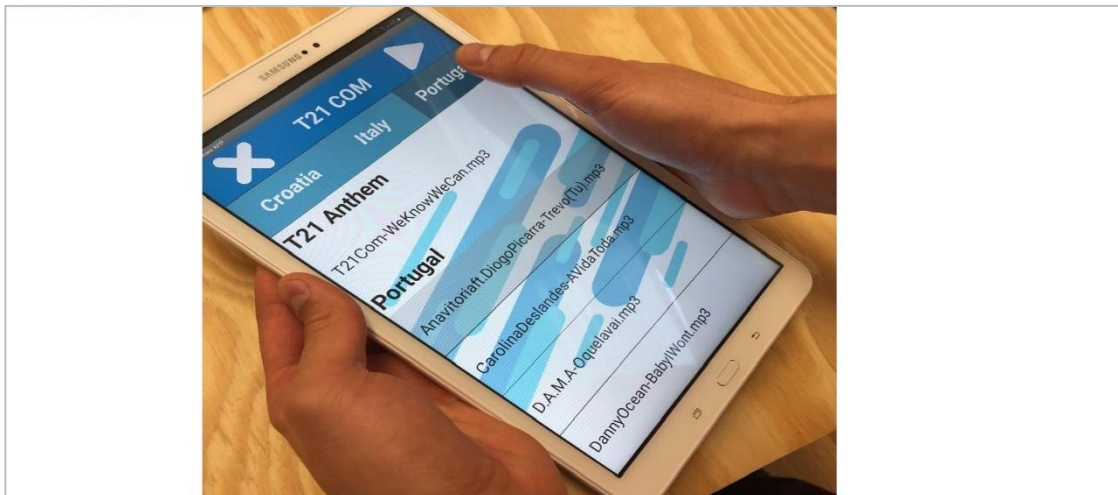


Figure 4. Mobile Application about music

Finally, digital games were created that served as innovative models of support for learning in e-skills. These games were intended to foster the most competitive aspect of students with disabilities in order to create a healthy environment of competition between them. Thus, the developed games used the platform jigsaw planet for the construction of digital puzzles giving the possibility of the students to solve these same puzzles through the usage of the tablets.

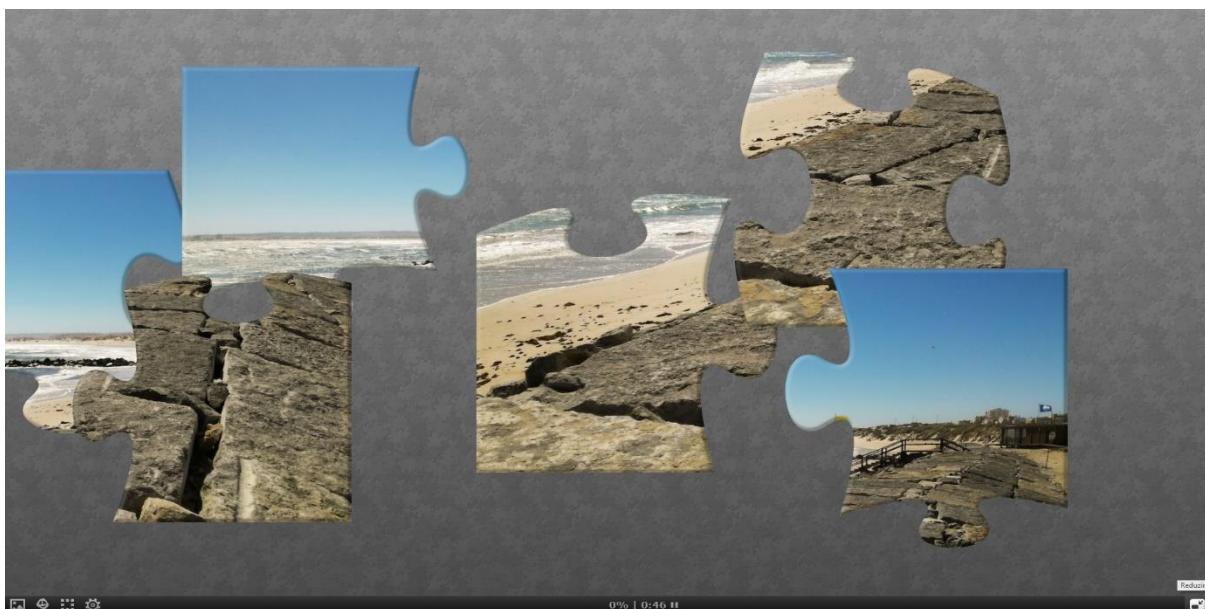


Figure 5. Digital puzzle game

This last digital application included time, score and percentage elements in order to measure the progress of each student upon its completion. Therefore, these were some of the models, resources and innovative materials produced in order to address the complimentary aspects of the training sessions of the participants with disabilities. Since digital competencies are one of the eight key competencies referred in the European Council Conclusions on New Skills for New Jobs (Watkins, Tokareva & Turner, 2011) this study focused the development of Information Technology Communication (ICT) tools as one of the priorities for the adapted training sessions for students with special needs. Since, these competencies are skills needed for future jobs towards the digital labour market (Watkins, Tokareva & Turner, 2011

3. METHODOLOGY

The methodology and the process inherent to it are considered fundamental aspects when it is intended to develop a study on a certain question, hypothesis or object. Thus, a methodology follows a set of processes, procedures and instruments. It allows us to clearly understand the various tools to choose so that the necessary methods can be applied to plan, conduct and complete their study. All research usually follows one or more methodological processes, depending on the purpose for which it is intended and what is intended by the researcher. For this, it is important to understand what methodological definition to adopt and what it represents in the various investigative processes, especially in projects of this nature.

When starting a more in-depth analysis it is possible to verify that in methodological terms it would benefit from a both quantitative and qualitative approach. To do so, the use of a mixed methodology would be beneficial for the conclusion of the study. In fact, since this project is part of a multidisciplinary field that crosses a set of subjects, such as the social, digital and professional inclusion component, the importance of relating these elements to mixed sequences methods is high. In this sense, and in the case of a dynamic and permeable study of last-minute changes, the approach to a mixed methodology as a methodological tool allows the creation of at least two pathways (Tashakkori & Creswell, 2008), resulting in a mixed and correlated development between subjects. Thus, since it is the relationship between the emergence of information systems and their connection with individuals with disabilities, it was important to use all possible methods to answer our questions within the scope of the study, as well as providing a basis for future investigations that inclined towards these phenomena.

In fact, this mixed methodology fits perfectly with the type of research performed, since the combination of two types of methodological processes (quantitative and qualitative) allowed the integration of several specific methods. These are divided into questionnaires, that is, elements that,

after being analysed, translate into numerical and statistical results, as well as techniques such as interviews and observation, which fit into a more qualitative narrative.

It is with this sense to reinforce the reason that led to the choice of this type of methodology, which is possible to see the taught process behind it through the scheme presented at Figure 6. That said, the mixed component is undoubtedly one of the key factors that allowed the design and development of this research, applying the correct and necessary procedures for each stage, manifestation or element to be studied / analysed. This allowed us to move from a methodological perspective to a more strategic perspective, where the combination of multiple research techniques was crucial to determine certain aspects of the research. It is also important to mention that when dealing with non-interfering methods that include documents or products analysed, specifically methods such as notes, interviews and questionnaires are found, the mixed methodology is also the correct option to take. Listed the essential characteristics that identify the main reason and choice of this methodological process, namely the mixed methodology, is still important to understand the design and structure in which this research was based.



Figure 6. Methodological Process

After analysing the methodological process used in the study and project, it is important to note that the fact that it is governed by the mixed approach has allowed this level of openness and innovation. Thus, we begin to interpret the methodological design presented, its first layer being based on participation, whether direct or indirect. This step enables stakeholders (enterprises, national governance, training institutions, etc.) to participate as technological trainers in the learning process of young people with disabilities, or to participate indirectly as researchers or collaborators. Then, the second step is responsible for the observation. Once again, this can be direct or indirect resulting from annotations, photographic and audio-visual records and even mental maps, useful for the development of new tools and informational resources. The third step is the development that involves the creation and production of the various materials, models and digital resources used in e-skills training for students with Down syndrome. After this step, there is an important factor, that

is, volunteering. In this respect, a more detailed explanation is necessary. Knowing that one of the focuses of this study and project is the development of electronic and digital competences, through the information systems, the inclusion of volunteering leads to greater social, digital and professional inclusion to individuals with disabilities resulting in a possible entry of this type of public-target in the digital industry and job market.

Volunteering allowed an innovative feature, that is, people from different areas including students, entrepreneurs and trainers were able to participate as active elements in this study and project. In addition, the implementation of volunteering is seen as having an impact on three major outcomes: improving the learning and employability of students and volunteers, improving relationships between local organizations, businesses, communities and educational institutions, and social justice for local communities (Holdsworth & Quinn, 2012).

Finally, the last steps of the methodological process are communication, part responsible for the internal and external communication of the study. For this purpose, several channels of communication between trainers, partners, participants and volunteers have been developed. As for the step related to implementation and adjustments, this served as the final moment of the methodological process because it allowed the implementation of the various models, resources and products developed in the scope of e-skills training and the possible adjustments or refinements necessary for a more effective learning.

4. RESULTS

In this section we will present the results obtained in the study and project "#TV T21 COMmunity # e-Skills, social inclusion and employability (intercultural dialogue in tourism)". As it is possible to understand after the reading and analysis of the previous sections of this work, some of the results are already framed and even analysed succinctly. However, here will be presented a discussion, reflection and in-depth analysis of all the results achieved in support of the study and applied project. To do this, the various derivatives are listed below through a table in order to obtain an overview of what was expected to achieve (Key Performance Indicator) and what was achieved, after the implementation of the study, project and research strategies (Achieved Value).

Then we will present each result and its analysis, making critical and constructive comments to pass on what has been explored, developed, implemented, tested and finalized.

Key Performance Indicator	Expected Value	Achieved Value
No. of Collaborative online platform	1	1
No. of E-contents and e-modules in e-skills	10	15
No. of Pedagogical and Methodological Guidelines	1	4

No. of Trainees in workshops	25	25
No. of Trainers in workshops	10	20
No. of Workshops	5	11
No. of Digital Applications	N/A	2
No. of Digital Games	N/A	1
No. of New Models, Open Resources or Innovative Materials	N/A	>10
No. of Audiovisual Materials or Multimedia Productions	N/A	>10

Table 1. Study and Project Results

After a careful analysis of the results listed in the table, it is verified that a total of 10 deliverables were reached both tangible (quantitative) and intangible (qualitative). In this way we will begin an in-depth description and analysis of each result since each subsection has a subsection to be categorized and explained.

Thus, beginning with the first result "No. of Collaborative online platform" we expected the total of one platform and that is what has been achieved. Although the purpose of this platform is described throughout this work, it is important to mention that it has established a link between trainers and trainees. Knowing that some of these trainees with disabilities suffered from geographical disadvantages, it was important to create a technological environment that would allow the learning of contents related to e-skills through a methodology of distance learning. In this way, the platform was created including all e-content and e-modules. This platform is available online and its use is totally free. In addition to these features, this platform also includes other important elements such as guides, tutorials and other innovative features.

Regarding the second result "No. of E-contents and E-modules in e-skills " a total of ten e-contents and e-modules were foreseen nevertheless reached fifteen. As mentioned earlier, these modules and educational content respond to a previous study and carried out by strategies led by the European Commission and, knowing that this project is a strategic action under the Erasmus + program, there was a need to build training content in the scope of digital and electronic skills. To this end, these e-modules and e-content were constructed in three different levels of difficulty: basic, intermediate and advanced levels. Each of these levels incorporated different contents on information systems, digital and technological components, such as:

- Basic level: Fundamental concepts of computer science and Web search with Google for a basic apprenticeship.
- Intermediate level: E-mail and Skype for an intermediate learning about the various systems of information and communication via web.

- Advanced level: Facebook, Instagram and WhatsApp for advanced learning about social networks and how to search, publish and communicate in online communities and spaces.

Thus, it is important to mention that the last contents, of the advanced level, were developed after what was expected, guaranteeing added value and greater involvement with the new digital trends.

Concerning the third result "No. of Pedagogical and Methodological Guidelines" it was hoped to develop only one, however, four pedagogical and methodological guides were developed. These guides served as tools to support the e-modules and e-content created by presenting tips, tutorials and learning modes step-by-step guiding more closely and adapted the different students with Down syndrome.

In relation to the fourth result, "No. of Trainees in workshops", twenty-five trainees with special needs were expected, and the number of students involved in the workshops was fulfilled. These trainees were previously selected, being six from Croatia and Italy and thirteen from Portugal.

As for the fifth result, "No. of Trainers in workshops", it was expected an estimated number of ten trainers per session. However, at the final implementation it was achieved a total of twenty trainers. This is due to the fact that we work with young people with disabilities, such as Down syndrome or trisomy 21, and therefore we need to strengthen the team of trainers in order to integrate a multidisciplinary environment covering several areas related to digital inclusion and information systems.

Regarding the sixth result "No. of Workshops" a total of five workshops were expected. However, a total of eleven workshops resulted:

- Group dynamics in digital contexts;
- Coaching for emotional intelligence;
- Europass CV video;
- Painting;
- Starting up 4 Labour Market;
- Writing and Reading;
- Quality of life;
- Diversity of labour market integration;
- Storytelling networking;
- Music workshop;

Finally, the latest results "No. of Digital Applications ", " No. of Digital Games ", " No. of New Models, Open Resources or Innovative Materials, "" No. of Audio-visual Materials or Multimedia Productions "were those that were not expected to be completed. However, the task force that conducted this study and project decided that they were relevant deliverables for learning in e-skills of trainees with disabilities. It should also be noted that other quantitative results were also recorded, however these will be analysed in the next section, to understand the data more linearly.

5. DATA ANALYSIS AND INTERPRETATION

In this last section we intend to analyse and interpret the data resulting from the application of the quantitative methods implemented, in this case, the questionnaires. Thus, the questionnaires in this study played a fundamental role:

- Analyse a specific and minimally representative sample (trainees with disabilities) in order to calculate data that, to a certain extent, showed answers to our research. Thus, include, through this research technique, the participation of one of the target groups of this study, that is, the students with Down syndrome or trisomy 21.

Thus, elements of adaptability and accessibility were taken into account when constructing the forms.

Another important note is that the working team that developed these questionnaires had full consent for the collection and processing of data by parents, guardians and tutors of participants with special needs.

That said, we will start with the demographic analysis of the first questionnaire. In terms of age it was possible to obtain a broad spectrum of ages having participants from 17 years of age up to 31 years.

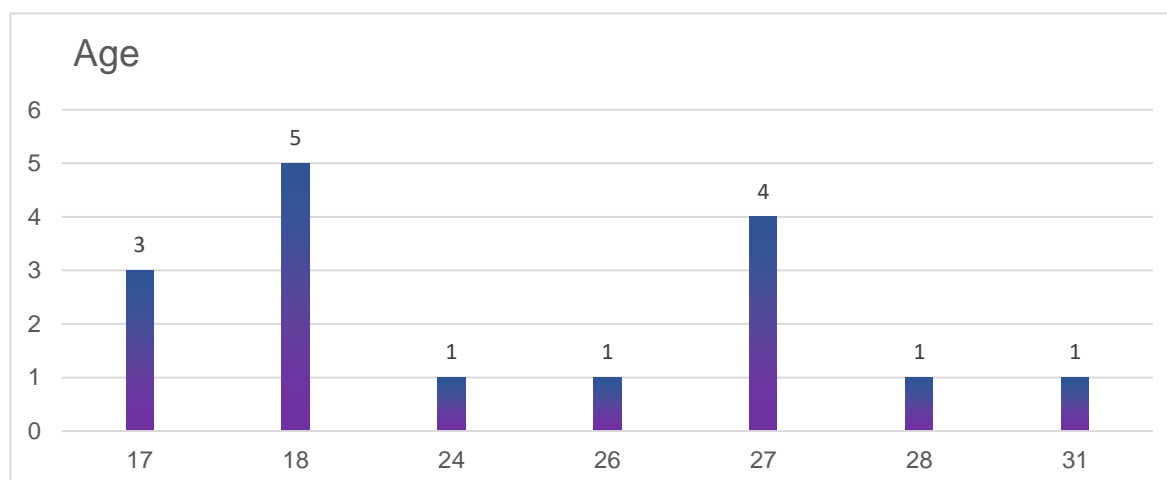


Figure 7. Chart about the demographic analysis I. Age of the participants

Then we will examine the gender of the participants have been possible to achieve a perfect gender balance between boys and girls. Thus, achieving a heterogeneous working group of trainees, which was good for the implementation of different techniques in the training sessions of e-skills.

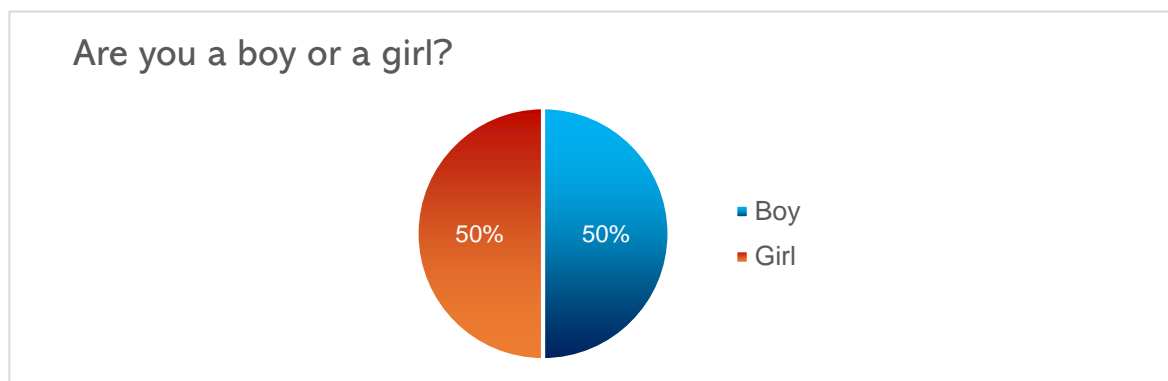


Figure 8. Chart about the demographic analysis II. Gender of the participants

Lastly, the last issue addressed to the focus group was about their expectations for the week related to the learning activities (workshops). It is important to note that, although the focus of the study is to understand the impact of learning on e-skills, it is important to include in the response options elements such as fun or social interaction. This makes it easier for the respondents with special needs to properly address the questions. And, as expected, the trend of responses (81.3%) were the "Knowing new people" and "Having fun" options. However, the students' concern was not only with the social or recreational question, but also, with the learning and professional aspect, following "Knowing more professions" (56.3%), "Learning and Practicing your skills" (43, 8%) and "Creating networks" (43.8%).

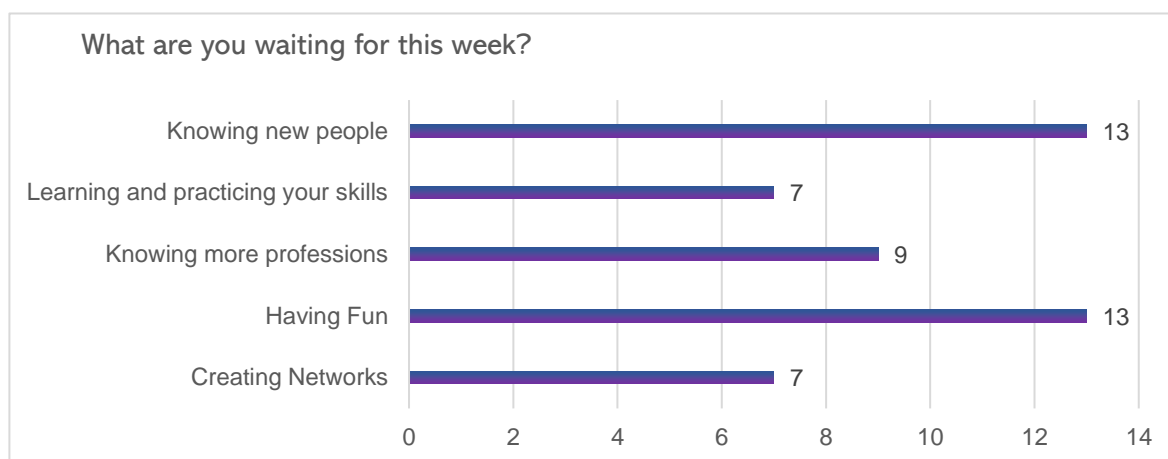


Figure 9. Chart about the trainee's expectations

Next, we will start the analysis of the second form, which was only applied at the end of the training sessions. In this way we will leave aside the demographic analysis since it was previously presented,

and the values are practically the same. Thus, we will proceed to the presentation of the results starting with the question "Did you like the week of learning activities that took place in Santarém?" The answers were all yes. The importance of this question is indeed high since it allows the team responsible for this study and project to understand the relevance of the applied workshops and e-skills learning environments for this type of target audience.



Figure 10. Chart about the trainee's expectations II

Continuing the analysis of the collected results we pass to one of the most important points of the questionnaires. The question was "What activities did you like most?" Thus, allowing an understanding of which activities related to the learning in electronic and digital skills were most relevant to the participants. Hence, the results with the most impact were as follows: Group dynamics in digital contexts with 10 responses being the majority tendency, then Music with 9 responses and Painting with 7 responses. Therefore, it is noticeable that the activities with higher technological content were those that did not present so much affluence. It remains now, understand why. In fact and taking into account other techniques and methods of study, such as observation, it was apparent that all workshops had a considerable impact. However, interaction with technological devices was not always the best or the most intuitive. Although they facilitated learning, they were still recognized as "distant resources" to the trainees. Because of their inability, they preferred more artistic or practical workshops, where the use of technological devices was just the essential.

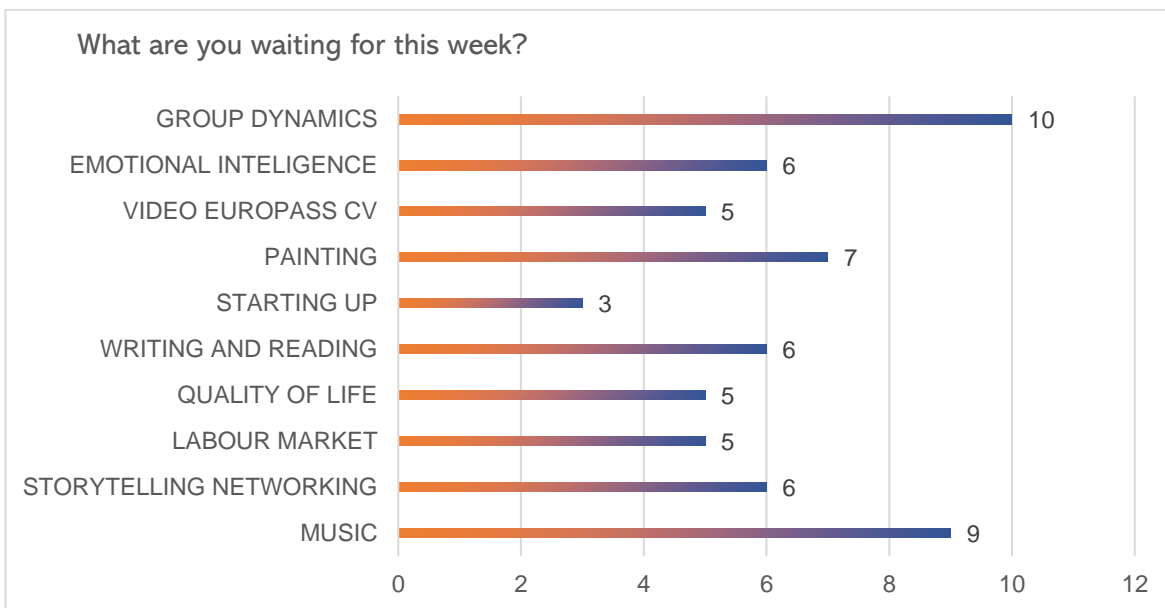


Figure 11. Chart about the most enjoyable activities

Finally, two results remain. One related to what the participants wish, in the future, to be in professional terms, "In what kind of job do you see yourself working?". The most likely response was "Administrative Assistant" (6 replies) and in fact, when introducing the observation and interviews it became clear to trainers that many of these young people "worked" on special circumstances. In fact, many of the trainees operated as cash operators or assistants. Hence, most of these want to work as administrative assistant. Other results point in the same direction being, school assistants and shopping assistants (4 replies each).

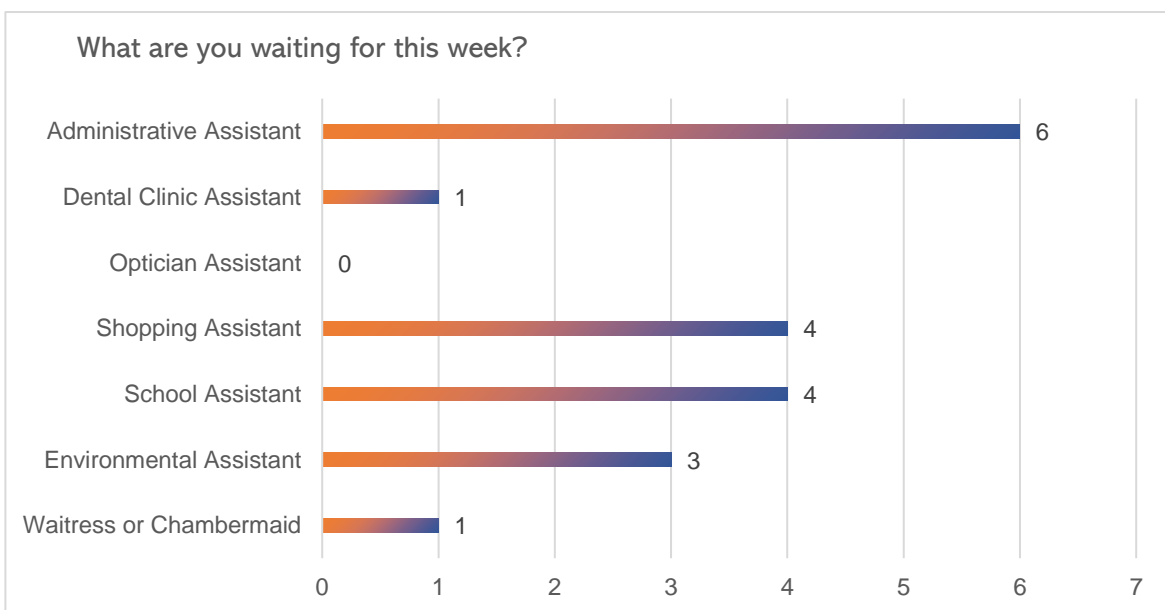


Figure 12. Chart about what kind of job the trainees see themselves working

As for the last result, this was only a way of clarifying future training sessions, in order to understand to what extent, they had been useful, important and relevant to participants with disabilities. All the answers were positive.

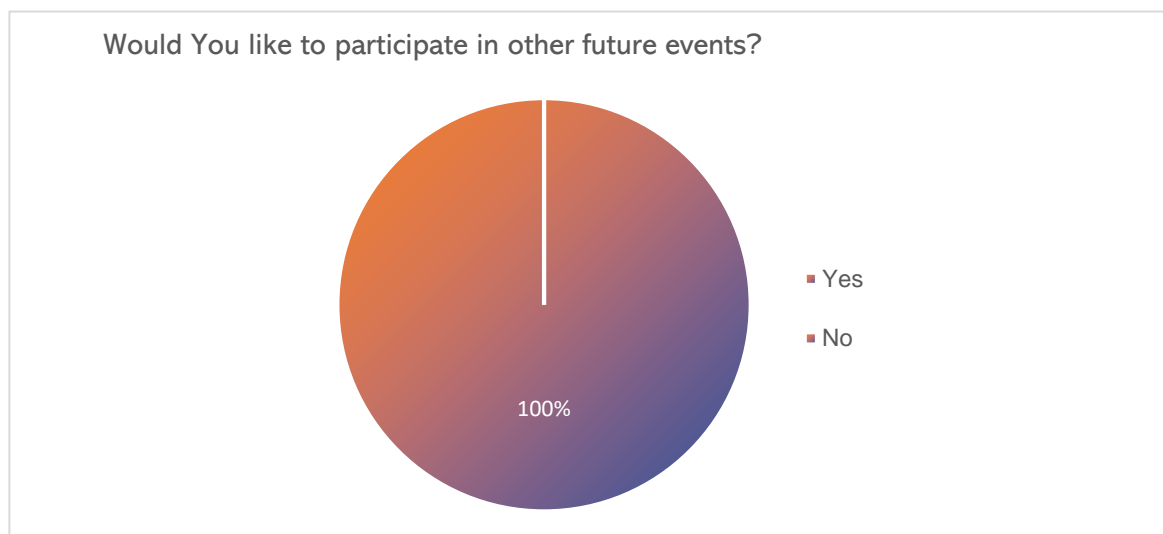


Figure 13. Chart about future events

Thus, thanks to the use of questionnaires, it was possible to understand the most important aspects of the implementation of e-skills learning sessions. Thus, it was clear that participants with disabilities prefer more recreational activities, but, nevertheless, that include some technological components or even digital devices, being only the essential use of them. Another of the more vivid results was the labour issue, since many of these young people want administrative work or are involved in assisting administrative activities.

6. CONCLUSION

This study was conducted as part of the "#TV T21 Community # e-Skills, social inclusion and employability" project, focusing on the importance of providing participants with disabilities with a set of training sessions on digital skills and electronic devices.

The importance of taking this study forward is that it allows a greater understanding of the challenges inherent in the social, digital and professional inclusion of citizens with special needs, namely Down syndrome or Trisomy 21. Knowing that, today, digital skills necessary for the job market and digital industry change rapidly and require rapid change and adaptability on the part of the worker. This also adapts to the issue of organizations that still need greater learning and flexibility vis-à-vis this more sensitive target audience. Sometimes the question of inclusion, in its more general term, goes unnoticed among the most technologically advanced means. In this way, leaving behind individuals of more disadvantaged means and even equipped with intellectual incapacities.

Thus, this project allowed the promotion and acquisition of new skills and knowledge for a social and labour inclusion favourable to the job market of today and the citizens with disabilities that they try to integrate into it.

Innovation in this project is visible through the link between the various actors (educational institutions, companies, associations and other entities) in order to promote cooperation, dialogue and teamwork. This project is also innovative in that it integrates alternative teaching methods and connectivity environments into priority areas (digital inclusion, mastery of basic and transversal skills, and ICT training).

The technology in this project presents a highly relevant factor since it encompasses materials, resources and content related to the areas considered emerging (Information Systems and Creative Industries). The technology also promotes the development of specific and complementary competences in order to train a heterogenous tool profile for participants with disabilities.

Employability synthesizes somehow all the other differentiating factors of this project and study. From this point of view, employability presents itself as a result of training based on the principles of social inclusion, innovation and technology.

Thus, as a prospective view, we highlight the fact that this study contributes to future projects and research in the area of inclusive digital projects and in a more general way of emerging information systems.

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