R2.2: Supporting students with disability in HE and VET: a needs analysis

WP2: Needs assessment, ECVET strategy and VLE specifications

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Table of Contents

1. List of charts and graphs .................................................................................................... 7
2. List of abbreviations ........................................................................................................ 11
3. Executive Summary ......................................................................................................... 12
4. Project Description .......................................................................................................... 14
5. Introduction and general overview of results ................................................................. 15
   5.1 Design meetings ...................................................................................................... 15
   5.2 Needs Analysis survey ............................................................................................. 16
6. Needs analysis of students with disabilities and education professionals in Spain....... 24
   6.1 Overview and Analysis of results of ALdia Survey for Students with Disabilities in Spain  24
      6.1.1 General profile of the respondents ................................................................. 24
      6.1.2 General accessibility of students with disabilities ........................................... 26
      6.1.3 Accessibility of students with disabilities to the learning process ............... 26
      6.1.4 Appropriateness and flexibility of teaching methods ..................................... 26
      6.1.5 Ability of education professionals to address the needs of students with disabilities ........................................................................................................................ 27
      6.1.6 Ability of the University/VET providers to address the needs of students with disabilities ........................................................................................................................ 27
      6.1.7 Main obstacles to the education of students with disabilities .................... 27
      6.1.8 Use of Assistive Technologies ........................................................................ 29
      6.1.9 General conclusions and lessons learned ....................................................... 31
   6.2 Overview and Analysis of results of ALdia Survey for Education Professionals in Spain  33
      6.2.1 General profile of the respondents ................................................................. 33
      6.2.2 Education professionals with teaching experience on students with disabilities 35
      6.2.3 General accessibility of students with disabilities ........................................... 37
      6.2.4 Accessibility of students with disabilities to the learning process ............... 37
      6.2.5 Ability of education professionals to address the needs of students with disabilities ........................................................................................................................ 38
      6.2.6 Ability of the University/VET providers to address the needs of students with disabilities ........................................................................................................................ 39
6.2.7 Methods used by education professionals to enhance the learning process. 39
6.2.8 Use of assistive technologies................................................................. 40
6.2.9 General conclusions and lessons learned............................................... 42

6.3 Overview and Analysis of results of design meetings in Spain..................... 43

6.3.1 Training needs ...................................................................................... 44
6.3.2 Accessible Learning .............................................................................. 45
6.3.3 Challenges identified ............................................................................ 45

7. Needs analysis of students with disabilities and education professionals in Greece .... 47

7.1 Overview and Analysis of results of ALdia Survey for Students with Disabilities in Greece 47

7.1.1 General profile of the respondents...................................................... 47
7.1.2 General accessibility of students with disabilities.............................. 48
7.1.3 Accessibility of students with disabilities to the learning process .......... 49
7.1.4 Appropriateness and flexibility of teaching methods ......................... 49
7.1.5 Ability of education professionals to address the needs of students with disabilities .......................................................................................................................... 50
7.1.6 Ability of the University/VET providers to address the needs of students with disabilities .......................................................................................................................... 50
7.1.7 Main obstacles to the education of students with disabilities.............. 51
7.1.8 Use of Assistive Technologies.............................................................. 52
7.1.9 General conclusions and lessons learned.............................................. 54

7.2 Overview and Analysis of results of ALdia Survey for Education Professionals in Greece 56

7.2.1 General profile of the respondents...................................................... 56
7.2.2 Education professionals with teaching experience on students with disabilities 58
7.2.3 General accessibility of students with disabilities.............................. 60
7.2.4 Accessibility of students with disabilities to the learning process .......... 60
7.2.5 Ability of education professionals to address the needs of students with disabilities.......................................................................................................................... 61
7.2.6 Ability of the University/VET providers to address the needs of students with disabilities .......................................................................................................................... 61
7.2.7 Methods used by education professionals to enhance the learning process. 62
7.2.8 Use of assistive technologies................................................................. 62
7.2.9 General conclusions and lessons learned............................................ 64
7.3 Overview and Analysis of results of design meetings in Greece.............. 66
7.3.1 First design meeting and individual interviews................................. 66
7.3.2 Second design meeting....................................................................... 69
8. Needs analysis of students with disabilities and education professionals in Italy 73
8.1 Overview and Analysis of results of ALdia Survey for Students with Disabilities in Italy 73
8.1.1 General profile of the respondents....................................................... 74
8.1.2 General accessibility of students with disabilities............................... 76
8.1.3 Accessibility of students with disabilities to the learning process......... 76
8.1.4 Appropriateness and flexibility of teaching methods............................ 76
8.1.5 Ability of education professionals to address the needs of students with disabilities............................................................... 76
8.1.6 Ability of the University/VET providers to address the needs of students with disabilities.................................................................. 77
8.1.7 Main obstacles to the education of students with disabilities.............. 77
8.1.8 Use of Assistive Technologies............................................................... 78
8.1.9 General conclusions and lessons learned............................................. 80
8.2 Overview and Analysis of results of ALdia Survey for Education Professionals in Italy 81
8.2.1 General profile of the respondents....................................................... 82
8.2.2 Education professionals with teaching experience on students with disabilities 84
8.2.3 General accessibility of students with disabilities............................... 87
8.2.4 Accessibility of students with disabilities to the learning process......... 87
8.2.5 Ability of education professionals to address the needs of students with disabilities.................................................................. 87
8.2.6 Ability of the University/VET providers to address the needs of students with disabilities.................................................................. 87
8.2.7 Methods used by education professionals to enhance the learning process. 88
8.2.8 Use of assistive technologies............................................................... 88
8.2.9 General conclusions and lessons learned............................................. 89
8.3 Overview and Analysis of results of design meetings in Italy ................................. 91
  8.3.1 Training needs ...................................................................................................... 91
  8.3.2 Accessible learning ............................................................................................ 91
  8.3.3 Challenges identified ......................................................................................... 92
  8.3.4 Key findings ....................................................................................................... 92
9. Respondents’ feedback .............................................................................................. 94
10. Conclusions and Recommendations ......................................................................... 99
11. Annexes .................................................................................................................. 103
    11.1 Breakdown of completed questionnaires .......................................................... 103
    11.2 ALdia Needs Analysis Questionnaire for students with disabilities ................. 104
    11.3 ALdia Needs Analysis Questionnaire for academic and VET staff ................. 111
    11.4 ALdia Reporting Template – Design meetings on the training needs of the target
groups 119
1. List of charts and graphs

1. Completed questionnaires per country ................................................................. 17
2. Completed questionnaires per target group ......................................................... 17
3. Gender distribution .............................................................................................. 18
4. Gender per country and per target group ............................................................ 18
5. Students with disabilities per educational sector ............................................... 19
6. Students with disabilities per educational sector/ per country ............................ 19
7. Types of disabilities total .................................................................................... 20
8. Types of disability per country ........................................................................... 20
9. Total EP respondents per educational sector ....................................................... 21
10. Education sector per country ............................................................................ 21
11. Education professionals per knowledge area .................................................... 22
12. Educational level .............................................................................................. 22
13. Percentage of respondents who have taught students with disabilities in their career .. 23
14. Training on teaching students with disabilities .................................................. 23

Spain: Students with disabilities

15. Q1. Please choose your gender ........................................................................... 24
16. Q2. Are you a university or a VET student? ......................................................... 24
17. Q3. Area of knowledge in which you study: ....................................................... 25
18. Q4. For how many years have you been studying / training at your university / VET institution? ................................................................. 25
19. Q5. What is your disability? (Please select the most suitable description): ............ 26
20. Q6. Which one of the following would you identify as the biggest obstacle in your education and/or training? ................................................................. 28
21. Q7. Does your university/VET provider make use of student support and/or adaptation services? ................................................................. 28
22. Q8. If the answer to the above question is yes, how effective are these services in facilitating the students’ transition in their education/training? ......................... 29
23. Q9. Does your university or VET provider make use of AT? ................................. 29
24. Q10. Do teachers/trainers consider assistive technology when planning and anticipating for students’ individual learning needs? ........................................... 29
25. Q11. How do you perceive the availability of assistive technology in your university or VET provider? ................................................................. 30
26. Q12. Which of the following types of assistive technology and tools are available in your university or VET provider? ................................................................. 30

Spain: Education Professionals

27. Q1. Please choose your gender ........................................................................... 33
28. Q2. Are you a university or a VET professional? ............................................................... 33
29. Q3. Area of knowledge in which you work: ................................................................. 34
30. Q4. Your educational level: ....................................................................................... 34
31. Q5. How many years of professional experience do you have as a university teacher /VET
          trainer? .................................................................................................................. 34
32. Q6. Have you ever had any students with disabilities in your classes? ................. 34
33. Q6.1. What kind of disabilities / special educational needs did these students have:..... 35
34. Q6.3 Have you received any training on teaching students with disabilities? .......... 35
35. Q6.3.a. Who provided this training? ....................................................................... 36
36. Q6.3.b What type of training? ................................................................................ 36
37. Q7. Are you aware of any service and support structure for students with disabilities at
          the university/VET provider you are working? .................................................. 36
38. Q1. What is your level of knowledge and skills in using AT? ...................................... 40
39. Q2. Have you ever taken a course on AT? ................................................................. 41
40. Q3. Interested in receiving training about AT? ........................................................... 41
41. Q4. What would be your preferred method for learning about AT? ...................... 41

Greece: Students with disabilities

42. Q1. Please choose your gender. ................................................................. 47
43. Q4. For how many years have you been studying / training at your university / VET
          institution? .......................................................................................................... 47
44. Q5. What is your disability? (Please select the most suitable description): ............ 48
45. Q16. Which one of the following would you identify as the biggest obstacle in your
          education and/or training? .................................................................................. 51
46. Q17. Does your university/VET provider make use of student support and/or adaptation
          services? .................................................................................................................. 52
47. Q18. If the answer to the above question is yes, how effective are these services in
          facilitating the students’ transition in their education/training ? .......................... 52
48. Q1. Does your university or VET provider make use of AT? ................................. 52
49. Q2. Do teachers/trainers consider assistive technology when planning and anticipating
          for students’ individual learning needs? .............................................................. 53
50. Q3. How do you perceive the availability of assistive technology in your university or VET
          provider? ............................................................................................................. 53
51. Q4. Which of the following types of assistive technology and tools are available in your
          university or VET provider? .............................................................................. 54

Greece: Education Professionals

52. Q1. Please choose your gender. ................................................................. 56
53. Q2. Are you a university or a VET professional? .................................................. 56
54. Q3. Area of knowledge in which you work: ......................................................... 57
55. Q4. Your educational level: ................................................................. 57
56. Q5. How many years of professional experience do you have as a university teacher /VET trainer? ............................................................... 57
57. Q6. Have you ever had any students with disabilities in your classes? ................................................................. 57
58. Q6.1. What kind of disabilities / special educational needs did these students have? ............................... 58
59. Q6.3. Have you received any training on teaching students with disabilities? .................................................. 59
60 Q6.3.a. Who provided this training? ................................................................................................................ 59
61. Q6.3.b What type of training? .................................................................................................................. 59
62. Q7. Are you aware of any service and support structure for students with disabilities at the university/VET provider you are working? ................................................................. 60
63. Q1. What is your level of knowledge and skills in using AT? .............................................................................. 63
64. Q2. Have you ever taken a course on AT? ........................................................................................................ 63
65. Q3. Interested in receiving training about AT? .................................................................................................. 64
66. Q4. What would be your preferred method for learning about AT? ................................................................. 64

Italy: Students with disabilities

67. Q1. Please choose your gender ........................................................................................ 74
68. Q2. Are you a university or a VET student? ...................................................................... 75
69. Q3. Area of knowledge in which you study: ................................................................. 75
70. Q4. For how many years have you been studying / training at your university / VET institution? ............................................................................................................... 75
71. Q5. What is your disability? (Please select the most suitable description): ...................... 75
72. Q16. Which one of the following would you identify as the biggest obstacle in your education and/or training? ........................................................................................................ 77
73. Q17. Does your university/VET provider make use of student support and/or adaptation services? ............................................................................................................... 78
74. Q18. If the answer to the above question is yes, how effective are these services in facilitating the students’ transition in their education/training? ........................................................................................................ 78
75. Q1. Does your university or VET provider make use of AT? .................................................. 79
76. Q2. Do teachers/trainers consider assistive technology when planning and anticipating for students’ individual learning needs? ........................................................................................................ 79
77. Q3. How do you perceive the availability of assistive technology in your university or VET provider? .................................................................................................................. 79
78. Q4. Which of the following types of assistive technology and tools are available in your university or VET provider? ........................................................................................................ 80

Italy: Education Professionals

79. Q1. Please choose your gender ........................................................................................ 83
80. Q2. Are you a university or a VET professional? ............................................................ 83
81. Q3. Area of knowledge in which you work: ..................................................................... 83
82. Q4. Your educational level: ................................................................. 83
83. Q5. How many years of professional experience do you have as a university teacher / VET trainer? ................................................................. 84
84. Q6. Have you ever had any students with disabilities in your classes? ........................................... 84
85. Q6.1. What kind of disabilities / special educational needs did these students have? ......... 85
86. Q6.3 Have you received any training on teaching students with disabilities? ............... 85
87. Q6.3.a. Who provided this training? ........................................................................ 86
88. Q6.3.b What type of training? ................................................................................. 86
89. Q7. Are you aware of any service and support structure for students with disabilities at the university/VET provider you are working? ................................................................. 86
90. Q1. What is your level of knowledge and skills in using AT? ............................................. 88
91. Q2. Have you ever taken a course on AT? ........................................................................ 88
92. Q3. Interested in receiving training about AT? ................................................................. 89
93. Q4. What would be your preferred method for learning about AT? ............................... 89
## 2. List of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALdia</td>
<td>Accessible Learning Design, implementation and accreditation</td>
</tr>
<tr>
<td>ASD</td>
<td>Autism Spectrum Disorder</td>
</tr>
<tr>
<td>AT</td>
<td>Assistive Technologies</td>
</tr>
<tr>
<td>DM</td>
<td>Design meeting</td>
</tr>
<tr>
<td>SD</td>
<td>Students with disabilities</td>
</tr>
<tr>
<td>EP</td>
<td>Education professionals</td>
</tr>
<tr>
<td>EVS</td>
<td>European Voluntary Service</td>
</tr>
<tr>
<td>FG</td>
<td>Focus group</td>
</tr>
<tr>
<td>HE</td>
<td>Higher education</td>
</tr>
<tr>
<td>HEI</td>
<td>Higher education institute</td>
</tr>
<tr>
<td>MOOC</td>
<td>Massive Open Online Course</td>
</tr>
<tr>
<td>ICF</td>
<td>International Classification of Functioning, Disability and Health</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communication technology</td>
</tr>
<tr>
<td>SW</td>
<td>Software</td>
</tr>
<tr>
<td>TTS</td>
<td>Text-to-Speech</td>
</tr>
<tr>
<td>VET</td>
<td>Vocational education and training</td>
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3. Executive Summary

This report presents and analyses the findings of the needs assessment activities that were carried out in the three countries participating in the project, in order to determine the current situation and the needs of the project’s target groups. The two methods that were used for this process were surveys administered to students with disabilities, VET trainers, HE professors and conduction of design meetings with the project’s Focus Groups. In total, 583 questionnaires were completed in Spain, Italy and Greece from June to July 2016 that provided the main source of raw data for this report. From the other side, the design meetings provided the chance to have an open dialogue and interaction between ALdia’s target groups, thus drawing valuable open-ended responses and recommendations for a range of issues pertaining to the project. More specifically, the main issues covered by the surveys and the design meetings include among others:

- Accessible learning for students with disabilities
- Training needs of education professionals in relation to their teaching students with disabilities
- Use of assistive technologies to enhance the learning process and make it more accessible to students with disabilities.
- Improving the support structures for students with disabilities and education professionals in Universities and VET providers
- Identification of challenges and obstacles faced by students with disabilities and education professionals.

In the first part of the report there is a brief description of the needs assessment methods that have been used and an overview of the data collected through the surveys. This is followed by three needs analyses one for each consortium country. They include an overview and analysis of the results of the surveys for students with disabilities, another one for the education professionals and they are concluded by the presenting the finding of the design meetings organized in every country. The next part of the report has a selection of the input of the survey participants. The final part of the report presents the conclusions and recommendations of the preceding analyses and the relevant annexes. The conclusions and recommendations can be summarized as follows:

- There is an existing organizational and institutional framework to support the learning needs of students with disabilities but it has to be improved.
- Most educational professionals have experience from teaching disabled but few have received training on how to do it.
- Online training for this purpose is not very common but is needed.
- Education professionals want to be trained and become more aware of the learning needs of students with disabilities. From their side, students identify the lack of training as one of the main obstacles.
Professors and VET trainers have to be trained in being able to adapt learning to the individual needs of each disabled student. Accessible learning should ensure the compatibility between the learning content and the disabled student.

A key component of training is the use of assistive technologies.

Training should be regular and continuously evolving so that it does not become obsolete.

All relevant resources should be collected and made available in platform. A forum in the form of a platform could be created so that exchange of good practices takes place.

There should be continuous communication and coordination between education professionals and students with disabilities / education professionals and educational institutions and between students with disabilities and educational institutions. Universities and VET providers should play a key role in this by enhancing the effectiveness of the relevant support structures.
4. Project Description

Developing an inclusive education system is not only a matter of equal rights. Access to education can put persons with disabilities on equal footing with non-disabled persons, promotes diversity within the educational environment and creates social bonds between persons with and without disabilities. It is also a means for promoting education systems with an emphasis on achieving a common learning environment guaranteeing the presence, participation and achievement of equal outcomes for all learners. Moreover, equal access to inclusive education in the mainstream improves the employment and work prospects of persons with disabilities.

The ALdia project aims to create an innovative, comprehensive and sustainable framework that will promote the equal access of students with disabilities and trainees to University education and vocational training. This framework will:

a) Define student needs in both higher education and VET sectors,

b) Develop and implement a flexible, massive open online course (MOOC) for higher education and VET education professionals and

c) Validate the acquired expertise through certification that will be based on the ECVET principles, thus facilitating its use across Europe.

ALdia aims to provide open, practical and sharable material for institutions to develop and deliver quality equal learning opportunities. We are also working to create synergies and encourage cooperation between education providers at all levels, in order to have a multiplier effect in Europe and beyond. Finally, it will provide evidence for policy-making that supports the development of learning environments that foster equity and inclusion. It will thus promote the aims of the European Disability Strategy 2010-2020 and the Education and Training 2020 programme (ET2020).

ALdia is expected to a) generate genuine and sustainable improvements in the education and training system and policies and b) improve the situation of young people with disabilities, regarding attainment, social inclusion and well-being.
5. Introduction and general overview of results

The purpose of this report is to organize and coherently present the findings of the needs assessment activities that took place in the framework of the project from May to July 2016. ALdia needs assessment investigated the current situation of the challenges faced by both the Higher Education and VET sectors, in preparing and delivering accessible lectures and educational material. In addition, there was an investigation of the needs of the students with disabilities in HE and VET as well as the potential of using assistive technology in the learning process. The current situation investigation of the needs of the project’s target groups was conducted using two main methods: administration of questionnaires and organization of design meetings with each participant country’s focus groups.

5.1 Design meetings

A total of four design meetings were held in all consortium countries, one in Spain, one in Italy and two in Greece. We conducted two meetings in Greece because they were complementary to each other, as the first design meeting did not include VET trainers and the second one did not include students with disabilities. In addition, although not required by the project plan, some partners carried out a number of individual interviews to reinforce the evidence base of the project. The design meetings and individual interviews, were a platform for the end-users (HE and VET educators) and students with disabilities to discuss with each other and define the training needs from their perspective.

The meetings had an approximate run time of ninety minutes and were coordinated by one or more facilitators who were responsible for conducting the dialogue among the participants through various project related questions. The findings of the meeting were kept using notes and/or audio and video recording, after receiving the participants’ consent. All participants were physically present with the exception of one professor who participated through Skype as he worked in a different city from the one where the design meeting took place. The whole process was closely supervised and organized by CESIE, who provided detailed guidelines on how to conduct the design meetings as well as a reporting template that can be found at the end of this report (Annex 11.4).

The participants of the needs assessment Design Meetings (DM), are members of each country’s focus group that will be actively involved in other parts of the projects as well. The three Focus Groups (FGs) (one for Spain, one for Italy and one for Greece) are composed of persons designated by the partners and carefully selected so as to be representative of the project’s end users namely:

1) Students with disabilities and their family
2) VET / HE professionals working with students with disabilities
3) Civil society organisations working with students with disabilities

In total the design meetings were attended by twenty-three members of the target groups, eight in Spain, eight in Italy and seven in Greece. In addition, five more members of the target groups provided their feedback through individual interviews. The findings of these meetings are presented in detail below in order to be evaluated and categorised, so that they can be used for the training programmes and platform specifications.

5.2 Needs Analysis survey

Four Elements prepared two questionnaire templates; one for students with disabilities and one for academic/VET staff. The questionnaires were prepared in English, with input from all partners and then translated in all three consortium languages. The aim of the questionnaires was to reveal the setbacks that hinder equal access to HE and VET learning and the assistive technology tools that are most popular in the two education settings. In this way the Questionnaires results are meant to act as a basis for the development of the training curriculum and the ALdia platform specifications. The project target was to administer at least a hundred questionnaires in all countries and target groups but there was no maximum threshold set. The templates of the questionnaires are annexed at the end of the report (Annexes 11.2 & 11.3).

In total 583 questionnaires were administered to students with disabilities and education professionals from 7/6/2016 to 4/7/2016 in all participating countries. The grant total greatly surpassed the minimum objective of a 100 questionnaires almost six-fold, which adds significant credibility and validity to the sample and therefore to the conclusions that can be drawn from it. All responses to the questionnaires are freely accessible in the following links and a breakdown of the numbers of completed questionnaires per country / per target group and per subgroups is provided on Annex 11.1:

<table>
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<th>SD</th>
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<td>GR</td>
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<tr>
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<td><a href="https://goo.gl/uySk5x">https://goo.gl/uySk5x</a></td>
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At the same time, although all participating countries achieved their respective minimum objectives, the response in Spain was much greater as 511 or 88% of all questionnaires were completed there, as shown in Chart 1 below. This could be considered a relative limitation of the needs assessment process as the sample is imbalanced towards the needs of the target groups in Spain rather than being equally representative of all countries. One way to
overcome this limitation was to conduct country by country specific analysis of the questionnaire results.

1. Completed questionnaires per country

![Chart showing completed questionnaires per country](chart1.png)

Chart 2 below, shows how the project’s two main target groups are being represented in the sample. 78 were filled in by students with disabilities and 505 by education professionals. In some cases, questionnaires had to be administered in person in groups of students with disabilities like in the case of 12 VET students with mental and physical disabilities in Greece and then filled-in online by the partners’ personnel.

2. Completed questionnaires per target group

![Chart showing completed questionnaires per target group](chart2.png)
Pie chart 3 below, reflects the relative balance between male and female respondents. More specifically there were 348 or 60% male participants and 235 or 40% female ones.

3. Gender distribution

There are small variations in gender balance between the different target groups in each country. Graph 4 below, shows that the gender balance is around 50/50 for SD in Spain and EP in Greece and Italy. EP respondents in Spain are around 40% female and 60% male as is the overall sample average. The biggest differences in gender balance can be noticed in SD in Greece and Italy where there is approximately 1 female respondent for every 2 male ones.

4. Gender per country and per target group
As demonstrated by Chart 5 below, from a total of 78 students with disabilities that participated in the questionnaire process, 13 (17%) originated from the VET sector, 57 (73%) from universities and 8 (10%) from other categories, like being former VET or university students who recently completed their studies or training.

5. Students with disabilities per educational sector

Graph 6 demonstrates that when it comes to individual countries, university students are the largest sub-group in all countries with the exception of Greece where VET students are more.

6. Students with disabilities per educational sector/ per country
Chart 7 shows that students exhibited a large variety of disability profiles with the most prevalent being by far physical ones with 43 cases and 52%. The remaining types of disabilities, namely visual, hearing, dyslexia, ASD and others were relatively equally dispersed and represented around 48% of the sample. There were several respondents who stated more than one disability with the most common combination being physical disabilities with ASD. It would have been interesting to compare these figures with corresponding data at European level and determine how close (or not) they are. However it was not possible to find this type of data.

7. Types of disabilities total

The numbers of respondents in every country per type of disability is demonstrated in Graph 8 below. The other category in both Chart 7 and Graph 8, includes disabilities like down syndrome, borderline personality disorder, panic disorder and intellectual disability.

8. Types of disability per country
As shown in chart 9 below, the next target group that participated in the completion of questionnaires are education professionals from HE, VET and other sectors. Of the 505 EP that responded 450 or 89%, are from HE, 34 from VET and 21 from other education levels (secondary and primary education etc.).

9. Total EP respondents per educational sector

Graph 10 shows that in Greece and Italy (where the sample was admittedly much smaller) HE professionals were not represented at the same extent as in Spain where almost 97% were academics. In Greece there were more VET trainers (11) than university professors (6) and in Italy respondents from other educational – primary, secondary - sectors (7) were marginally less than HE professionals (9). These differences in the percentages between education professionals from VET and HE could be taken into account when designing the training programme in WP3 of the project, so as to make it more tailor made to the needs of the end users, in each project country.

10. Education sector per country
Graph 11 shows that the knowledge area in which most EP are active are the Social and Legal Sciences with 162 respondents and 32% of the total EP sample with a relatively balanced allocation in the remaining knowledge areas. The balanced participation of numerous EP from many different knowledge and scientific areas should be highlighted as it further strengthens the validity of the surveys’ results and the conclusions that could be drawn from them.

11. Education professionals per knowledge area

The educational level of EP as it appears in Graph 12, is also worthy of notice, as 360 out of 505 respondents (71%) are PhD holders a trend that is more pronounced in Spain. In Italy and Greece educational levels are more balanced with BA holders being the slightly more dominant sample group.

12. Educational level
Another important result of the analysis of the questionnaires, shown in Chart 13, is that almost 75% or 369 out of 505 of EP respondents have some experience in teaching SD during their career. This shows that 3 out of 4 EP are likely to teach SD at some point of their career.

13. Percentage of respondents who have taught students with disabilities in their career

Nevertheless, as evidenced in Graph 14 below, only 109 of those 369 (29%) have received some kind of specific training in teaching SD. The remaining 259 had to find their own way to accommodate the needs of SD in the learning process. The proportion of EP who have received training varies greatly between the three countries as it 57% in Italy, 62.5% in Greece and 27% in Spain.

14. Training on teaching students with disabilities
6. Needs analysis of students with disabilities and education professionals in Spain

6.1 Overview and Analysis of results of ALdia Survey for Students with Disabilities in Spain

6.1.1 General profile of the respondents

(Questionnaire reference: Part 1 General Questions 1-5)

There were a total of 42 students with disabilities who responded in the Spanish version of the ALdia needs analysis questionnaires. The gender of the respondents is 50% female and 50% male. Most of these responses came from University students (95%), and only 2 responses (5%) from “Other”.

15. Q1. Please choose your gender.

16. Q2. Are you a university or a VET student?
The majority of respondents come from the field of Social and Legal Sciences (31%); secondly from Health Sciences (21.4%); thirdly from “Other” (19%) and the rest from Humanistic and Arts and Engineering (14%) and Architecture (9.5%).

17. Q3. Area of knowledge in which you study:

- Humanities: 6 (14.3%)
- Health Sciences: 9 (21.4%)
- Social and Legal Sciences: 13 (31%)
- Applied Sciences: 2 (4.8%)
- Architecture and Engineering: 4 (9.5%)
- Other: 8 (19%)

Most of the respondents (64%) stated that they study in Universities or train in VET centres for more than 2 years. In terms of the types of disability 62% of the respondents have physical disabilities and 24% have “other” disabilities.

18. Q4. For how many years have you been studying / training at your university / VET institution?

- 0-1 years: 7 (16.7%)
- 1-2 years: 8 (19%)
- More than 2 years: 16 (64.3%)

In terms of the types of disability 62% of the respondents have physical disabilities and 24% have “other” disabilities.
19. Q5. What is your disability? (Please select the most suitable description):

- Physical disabilities: 26 (61.9%)
- Visual disabilities: 3 (7.1%)
- Hearing disabilities: 2 (4.8%)
- Dyslexia: 0 (0%)
- ASD: 1 (2.4%)
- Other: 10 (23.8%)

6.1.2 General accessibility of students with disabilities

(Questionnaire reference: Part 2, Questions 6-8)

Regarding the state of general accessibility for SD in Spain: In Q6, 31% of the respondents are unhappy (strongly disagree) with how their classrooms’ space was organized and accounted for their specific needs independently of their size, posture and disability. 24% of them are doubting and another 24% think that the accessibility to their classrooms, provided in their Universities or VET centers was fine.

The 38% of respondents think that they have guaranteed access to the services provided by their University / VET provider, same as with every other student, and the 24% “Strongly agree” with this statement.

Regarding the general state of accessibility to classrooms for disabled people in Spain, 31% of students with disabilities think they are OK and the 28% neither agree nor disagree.

6.1.3 Accessibility of students with disabilities to the learning process

(Questionnaire reference: Part 2, Questions 3-5)

45% of students with disabilities agree that the teaching instructions are easy to understand and follow, regardless of student’s level of experience, knowledge, or skills and 38% agree with the statement that “Essential information is communicated effectively and is available and accessible to all students, independently of the student’s sensory skills”.

Regarding the possible variations in the assertion that student learning rates and skills are anticipated and considered the answers are divided as follows: almost 29% of respondents seem to “Strongly disagree” and another 26% and 21% respectively, neither agree nor disagree and agree with this item.
6.1.4 Appropriateness and flexibility of teaching methods

(Questionnaire reference: Part 2, Questions 1-2)

One third of the SD that filled in the ALdia questionnaire in Spain, were doubting if teachers and/or VET trainers do make use of several written and oral teaching methods and tools, so that pedagogical material is accessible to all students. As far as the variety of options that are available to SD in order to complete course workload (like workload, exams with multiple-choice or developmental questions) is concerned, the respondents are divided as follows: 24% agree that there are enough options whereas 21% strongly disagree with this.

6.1.5 Ability of education professionals to address the needs of students with disabilities

(Questionnaire reference: Part 2, Questions 9-10)

SD in Spain (62%) agree and strongly agree that the level of the teachers/trainers’ training in AT and disabilities could be the most important factor to the most effective inclusion of DS in Universities and VET centers. The 45% of DS believed that a helpful and positive learning environment can be conducive to more communication and interaction between students as well as between students and teachers or trainers. And almost 20% strongly agree.

6.1.6 Ability of the University/VET providers to address the needs of students with disabilities

(Questionnaire reference: Part 2, Questions 11-15)

The 54% of SD think that the environment is supportive and facilitates the inclusion and participation of all students. However, almost the 70% of respondents believe that students with disabilities in university/VET providers have to cope with more barriers regarding their participation in learning. Therefore, the majority (81%) agree or strongly agree think that the university/VET provider must provide services and support structures for students with disabilities to pursue their studies/training normally like other students.

28% agree that the university/VET provider is prepared for the educational inclusion of students with disabilities but another 26% don’t have it clear. What is more, 36% think that students with disabilities have guaranteed access to the institution’s facilities, same as with other students and 21% strongly agree with this statement.

6.1.7 Main obstacles to the education of students with disabilities

(Questionnaire reference: Part 2, Questions 16-18)

There seems to be three main obstacles for SD in their education/training:
- Difficulties caused by the handicap/disability (26%)
- Teachers and trainers who are not adequately trained and prepared in working with students with disabilities (24%)
- Time management/organization (24%)

Concerning if the university or VET provider make use of student support and/or adaptation services, 88% of SD stated that there are such services available in their educational institutions and almost the 50% of respondents claimed that they are at least adequately satisfied by the level of their effectiveness. However, 46% think that they could be more effective.

20. Q 16. Which one of the following would you identify as the biggest obstacle in your education and/or training?

- Teachers and trainers who are not adequately trained and prepared in working with students with disabilities 10 23.8%
- Courses: Heavy workload 2 4.8%
- Difficulties caused by the handicap/disability 11 26.2%
- Courses: Level of difficulty 3 7.1%
- Time management/organization 10 23.8%
- Student material (notes, books, exams) not being adapted to my needs 1 2.4%
- Other: 5 11.9%

21. Q17. Does your university/VET provider make use of student support and/or adaptation services?

- Yes: 37 95.2%
- No: 5 11.9%
22. Q18. If the answer to the above question is yes, how effective are these services in facilitating the students’ transition in their education/training?

- a. Not effective at all: 2 (5.4%)
- b. Could be more effective: 17 (45.9%)
- c. Adequately effective: 15 (40.5%)
- d. Very effective: 3 (8.1%)

6.1.8 Use of Assistive Technologies

(Questionnaire reference: Part 3, Questions 1-5 on AT)

60% of SD confirmed that their university or VET provider make use of AT.

23. Q1. Does your university or VET provider make use of AT?

- Yes: 18 (40.5%)
- No: 3 (59.5%)

57% of respondents said that teachers and trainers DO NOT consider assistive technology when planning and anticipating for students’ individual learning needs. Almost half of the respondents (48%) also stated that the availability and use of AT in their educational institutions is little.

24. Q2. Do teachers/trainers consider assistive technology when planning and anticipating for students’ individual learning needs?
Yes: 18 42.9%
No: 24 57.1%

25. Q3. How do you perceive the availability of assistive technology in your university or VET provider?

a. Non-existent 2 9.5%
b. Little 7 33.3%
c. Adequate 9 42.9%
d. Widespread 3 14.3%

However when the assistive technology is available in the university or VET provider, the most common ones are the mid-tech devices (26%). 40% of respondents affirm that neither AT applications nor software nor Low/High-tech devices are used.

26. Q4. Which of the following types of assistive technology and tools are available in your university or VET provider?

a. AT applications and software 5 11.4%
b. Low-tech devices 6 13.6%
c. Mid-tech devices 11 25%
d. High-tech devices 5 11.4%
e. None of the above 17 38.4%

Depending on the disability, the students with disabilities confirmed that the assistive technology devices and tools that are most helpful when studying / training are NOT the following (with none responses): Wands and sticks, Keyboard filters, Light signaller alerts,
On-screen keyboards, Refreshable Braille displays, Screen readers and Talking and large-print word processors.

The following types of devices had three responses each: Alternative keyboards, Touch screens, Reading tools and learning disabilities programs and Text-to-Speech (TTS) or speech synthesizers; Speech recognition or voice recognition programs obtained 5 responses. The rest of answers selected “other” (almost 70% of the respondents) without specifying any others assistive technology devices and tools.

6.1.9 General conclusions and lessons learned

- In terms of the general profile of the respondents it should be taken into account that only 3 respondents have visual disabilities and 2 hearing disabilities in Spain. The most represented groups of SD are physical disability (62%).
- The state of general accessibility of SD in Spain was rated unsatisfactory. 31% are not happy (strongly disagree) with how their classrooms’ space was organized and accounted for their specific needs independently of their size, posture and disability.
- The 38% of responses think that they have guaranteed access to the services provided by their University / VET provider, same as with every other student, and the 24% “Strongly agree” with this statement.
- Almost half of the respondents (45%) agree with the teaching instructions are easy to understand and follow, regardless of student’s level of experience, knowledge, or skills.
- SD in Spain (62%) agree and strongly agree that the level of the teachers/trainers’ training in AT and disabilities could be the single most important factor to the most effective inclusion of SD in Universities and VET centers.
- The majority (81%) agree or strongly agree think that the university/VET provider must provide services and support structures for students with disabilities to pursue their studies/training normally like other students.
- Regarding the obstacles to SD education and institutional support services from University/VET provider, the 88% of SD stated that there are such services available in their educational institutions and almost the 50% of respondents claimed that they are at least adequately satisfied by the level of their effectiveness. The 46% think that they could be more effective.
- In terms of the use of AT in Universities and VET providers, 60% of SD who took part in the survey replied affirmatively.
- 57% of respondents stated that professors and VET trainers DO NOT take into account AT for designing and anticipating for the students’ needs. Almost the half of the respondents (48%) also stated that the availability and use of AT in their educational institutions is little.
• The 40% of SD affirm that neither AT applications nor software Low/High-tech devices is used.
6.2 Overview and Analysis of results of ALdia Survey for Education Professionals in Spain

6.2.1 General profile of the respondents

(Questionnaire reference: Part 1 General Questions 1-6)

A total of 469 education professionals filled in the ALdia questionnaire in Spain with a proportion of male and female respondents: 284 males (60%) / 185 females (40%). Respondents are University professors except for 2 VET teachers.

27. Q1. Please choose your gender.

![Gender Distribution](image)

- Male: 284 (60.6%)
- Female: 185 (39.4%)

28. Q2. Are you a university or a VET professional?

![Profession Distribution](image)

- University teacher: 435 (92.8%)
- VET trainer: 20 (4.2%)
- Other: 14 (3%)

Regarding the areas of knowledge: 78 are active in Applied Sciences, 67 in Engineering and Architecture, 81 in Humanities, 69 in Health Sciences and 157 in Social and Legal Sciences.

When the educational background of the respondents is concerned, 13% are holders of Master and 74% of PhD degrees.
29. Q3. Area of knowledge in which you work:

- Arts & Humanities: 81 (17.3%)
- Health Sciences: 69 (14.7%)
- Social and Legal Sciences: 157 (33.5%)
- Applied Sciences: 78 (16.6%)
- Architecture and Engineering: 67 (14.3%)
- Other: 17 (3.6%)

30. Q4. Your educational level:

- Graduate level (BA etc): 54 (11.5%)
- Master: 61 (13%)
- PhD: 350 (74.6%)
- Other: 4 (0.9%)

What is more, around 68% have more than 11 years of working experience. About 3/4 of professors (339 teachers) have some professional experience with students with disabilities, which makes their input to the questionnaire even more pertinent. Thus, the major part of the respondents is aware of the main difficulties that can appear during the education process due to their experience. What is more, their background on working with students with disabilities means a better understanding of the topic the ALdia project deals with.

31. Q5. How many years of professional experience do you have as a university teacher/VET trainer?

- 0-5: 85 (18.1%)
- 6-10: 64 (13.6%)
- 11-16: 99 (21.1%)
- 17-25: 120 (25.6%)
- more than 26 years: 101 (21.5%)

32. Q6. Have you ever had any students with disabilities in your classes?
6.2.2 Education professionals with teaching experience on students with disabilities

(Questionnaire reference: Part 2 Conditional questions 6.1-7)

As already stated above, 70% teachers have taught SD in the past with several types of disabilities. The two most prominent types of disabilities that they have encountered are physical (63.8%) and visual (57.1%) ones. A positive aspect of the sample is that the EP who completed the questionnaires had teaching experience with students of all types of disabilities including dyslexia (14.1%), hearing disabilities (35.3%) and ASD (19.1%). Moreover, the average number of students with disabilities that each professional had during their career is about 5.

33. Q6.1. What kind of disabilities / special educational needs did these students have:

Physical disabilities: 216 63.8%
Visual disabilities: 194 57.1%
Hearing disabilities: 120 35.3%
Dyslexia: 48 14.2%
ASD: 65 19.1%
Other: 33 9.7%

Roughly 26% have received some training helping to treat SD in classes. The sources teachers got the training from goes as follows: 32% have received this training from the Universities or VET providers from their work and 38% are self-trained. In terms of the type of training received, 20.1% passed training online, 42.3% had presence-based training and 14.8% through personal mentoring.

34. Q6.3 Have you received any training on teaching students with disabilities?
36. Q6.3.b What type of training?

- Online: 30 (20.1%)
- Classroom: 63 (42.3%)
- One on one mentoring: 22 (14.8%)
- Other: 34 (22.8%)

Finally, major part of the respondents (71.9%) stated that they are informed about the existence of some types of support service in their educational institutions that caters for the needs of SD.

37. Q7. Are you aware of any service and support structure for students with disabilities at the university/VET provider you are working?
Overall, the analysis of this part of the questionnaire shows that there is still work to do to improve the use of the online training, as it was shown that this type of training has not been sufficiently used (20.1%) compared to the present-based one (42.3%). Taking everything into account, teachers got some types of training and are informed about the way they can get the information in their universities if this need appears.

6.2.3 General accessibility of students with disabilities
(Questionnaire reference: Part 3, Questions 7, 8, 12)

The level of general accessibility of SD in classrooms and university/VET services EP is rather satisfactory. Thus 34% agreed or strongly agreed (24.3%) that the classrooms where they teach are easily accessible to students with disabilities. What is more, respondents agree on 32.8% agreed and strongly agreed on 27% that the students with disabilities have guaranteed access to the services provided by the University/VET provider as every other student. But still more than a half of the respondents found that a student with disability in universities face more physical barriers.

This way, major part of universities are prepared for this kind of students to enter it and can provide a proper access to the classrooms and the general services, though it is still important to provide students with disabilities who want to enter universities with some additional help to overcome existing barriers.

6.2.4 Accessibility of students with disabilities to the learning process
(Questionnaire reference: Part 3, Questions 6, 10, 11, 17, 20)

When checking the difficulties that SD are facing during the learning process (Q10 & 11), EP agreed that 1) they face more barriers in their learning participation and 2) the types of barriers they have to deal with are not only of a physical but also of a social nature. More than 1/3 of the respondents also stated that the principles of accessibility and universal design are kept in their course so as to make the learning experience equally accessible for all students. Despite the fact that majority of the respondents agreed on the fact that the
access to university is possible for SD, more than 78% agreed on the fact that they experience some difficulties in following the same rhythm of studying, and thus need tutoring to be provided.

Moreover, more than 88% stated that although flexible work schemes could be applied to facilitate the learning process for SD, the evaluation system should be kept the same for all the students. The last figure is revealing as it could indicate the limits to which education professionals are prepared to go so that they can accommodate the SD learning needs but at the same time be fair to all students.

All in all, students with disabilities seem to face more barriers when entering and studying in university, both physical and social ones. Thus, some additional tutoring should be provided to the students that experience more difficulties in the class. This kind of tutoring could be provided through introducing some new schemes of teaching in class and different methods to ease the process of learning. However, students with disabilities should not have their proper evaluation system, as this will create even more social barriers.

6.2.5 Ability of education professionals to address the needs of students with disabilities

(Questionnaire reference: Part 3, Questions 1-5, 9, 18, 19, 21)

Despite the fact that many of the respondents stated that they had received some type of specialized training to teach SD, 63% responded that the training that they have received on students with disabilities was limited; they do not know the meaning of inclusive education and its educational implications (more than 50%).

One should notice that only a small part of professors (about 16%) find it difficult to teach in a classroom with students with disabilities. On the other hand, more attention should be paid to the matter of willingness to work with students like this, as a lot of teachers stated that they need to become more aware of the educational needs of these students the results are: 29.4% agreed and strongly agreed: 30.2%.

With respect to the necessity of the regular advice and support to teachers/trainers on students with disabilities, more than 76% found it necessary to get this type of help. That means that a lot of teachers are willing to learn this type of information to improve their way of teaching and thus help the students in their class to integrate better and better their participation.

This data is very important for our Project as teachers demand a formation which is considered important and necessary for them.

Overall the figures in this topic demonstrate recognition by EP, of the need for further training and awareness rising of the learning difficulties of SD. At the same time they also
reveal their willingness to persevere and be supportive of SD even when their training is sometimes limited and they do not receive the necessary support.

6.2.6 Ability of the University/VET providers to address the needs of students with disabilities

(Questionnaire reference: Part 3, Questions 13-16)

In general professors agreed that Universities should take all necessary measures in order to accommodate and facilitate the study/training experience for SD without any obstacles. So, 80.7% stated that there should be appropriate structures and services as well as tailor-made plans prepared by planning reception centres. Furthermore, almost 75% think that the implementation of the reception plan of this kind of students will improve their educational integration.

Regarding specific plans of qualification for students with disabilities, 60% of respondents stated that Universities and VET providers should plan specific qualification groups for SD. Another noticeable statistic is that 23.4% of EP stated that Universities and VET providers are not prepared for the educational inclusion of SD.

Considering this, it is necessary to make a better preparation for all universities for the entrance of this type of students and to organize better structures and university services that will be in charge of providing help to the students with disabilities.

6.2.7 Methods used by education professionals to enhance the learning process

(Questionnaire reference: Part 4, Questions 1-8)

Questions provide much insight as to which teaching methods and tools EP use most to enhance the learning process. Thus the analysis shows, that the majority of professors used the same techniques when talking about the proportioning of materials and notes before the class or starting the class with the revision and reminding of the material seen in the previous class, which is rather logic as this type of techniques is rather popular and efficient, so it is widely used.

What is more, other popular techniques are also used among the respondents, such as: using the visual materials when giving classes, as graphs, power point presentations and others to make it easier for students to accept and analyze the information. Furthermore, professors try to encourage students to investigate on their own the topic that has been discussed in the class.

Moreover, 73% of teachers agreed that they use cooperative groups in class when dealing with practical tasks in class and 83, 2% are suing the same materials for all the student both
in practical and theoretical classes. Also, almost 78% stated that ICT are necessary for the presentation of the proper materials of professors themselves and students work.

However, only 48% agreed with the fact that they use different formats of the teaching to adapt themselves to the different learning formats of different students.

Summing everything up, all professors use same general techniques in their classes, but only some of them are using some new or adaptive technologies to improve the efficiency of their students. Some aspects were thought to be valued with a higher score, but they were not. In this way, there appears a necessity of including some of these methodological aspects in the training plan that will be designed.

### 6.2.8 Use of assistive technologies

(Questionnaire reference: Part 5, Questions 1-4 on AT)

When it comes to AT, we should notice that only 17% answered that they have a good knowledge of this type of technologies. We should also emphasize the fact that only 13.2% have actually participated in some type of training on AT. The reason for such a low knowledge could be the lack of information given in this kind of courses taken or it could be one short course, the information of which has never been used afterwards.

As 52.1% of respondents stated that they possess no knowledge of AT, the initial formation should be given to cover this question.

38. Q1. What is your level of knowledge and skills in using AT?

- a. No knowledge 120 25.6%
- b. Little knowledge 125 26.7%
- c. Some knowledge 143 30.5%
- d. Good knowledge 67 14.3%
- e. Extensive knowledge 14 3%
39. Q2. Have you ever taken a course on AT?

- Yes: 7 41.2%
- No: 10 58.8%

One of the positive points is that 80.2% of respondents stated their interest in further participating in these types of trainings. Among the methods of learning about the AT, practical instructions in groups appear to be the most popular. Workshops, formal courses and presence-based formation appear to be also important as about 15-17% would like to get information in this way.

40. Q3. Interested in receiving training about AT?

- Yes: 376 80.2%
- No: 93 19.8%

41. Q4. What would be your preferred method for learning about AT?

- a. One-on-one individualized instruction 74 15.8%
- b. Hands-on instruction in group setting 235 50.1%
- c. Attending workshops or conference sessions 81 17.3%
- d. Formalized courses 79 16.8%
6.2.9 General conclusions and lessons learned

- The major part of the respondents understands the difficulties that can appear during the education process with SD.
- Teachers got some types of training and are informed about the way they can get the information in their universities.
- Major part of universities are prepared for students with disabilities to enter their class and can provide a proper access to the classrooms and the general services.
- It is important to provide students with disabilities with some additional help to overcome existing barriers.
- Students with disabilities seem to face more barriers when entering and studying in university, both physical and social ones.
- Tutoring could be provided through introducing some new schemes and methods of teaching in class.
- Students with disabilities should not have their proper evaluation system, as this will create even more social barriers.
- A better preparation for universities is needed to allow better access for SD.
- The respondents use same general techniques in their classes, but only some of them are using some new or adaptive technologies to improve the efficiency of their students.
6.3 Overview and Analysis of results of design meetings in Spain

The design meeting in Spain took place on 19/5/2016 at the University of Alicante with the aim of defining the needs of students with disabilities in the field of higher education and technical and professional training. These were the participants:

- u1, u4: They are university students and have received (and often suffered) attention by university professors during their studies.
- u7: He has been also a student, but for several years he is working in the Student Services Center, where he is dedicated to design, disseminate and implement adaptations of the curriculum materials. He also trains university professors on these issues.
- u2, u3, u5: They are professionals related to the psychopedagogical intervention of students with special education needs. The U5 also belongs to an association to serve the hearing impaired. As an interesting mark, she tells us that they have never received any call from any university to address the issue of teacher training.
- u8: She is a university professor who has an adequate training to attend disabled students.
- u6: He is a member of an association linked to hearing impairment and he is father of a child with this disability, particularly with cochlear implant and that does not require a different alternative system to spoken language. He has received training from the mentioned association and is closely linked to a specific association, in order to continue with the training so he can help his daughter with her evolution.

The focus group was coordinated by two professors of the University of Alicante.

Regarding what training means, all participants agree that it is the level of knowledge and skills a person has on a particular subject. They point out, also, regarding the overall project (once it has been explained) that "the training at university and vocational training educational levels is important, but it is essential that it is related to the previous educational levels: primary, secondary and high schools, so that there is a bridge between these levels so, to face the needs as a continuation in the attention to this group"(u2)

Regarding the own experience about training, these are the key points briefly:

- u1, u4: They are university students and have received (and often suffered) attention by university professors during their studies.
- u7: He has been also a student, but for several years he is working in the Student Services Center, where he is dedicated to design, disseminate and implement adaptations of the curriculum materials. He also trains university professors on these issues.
- u2, u3, u5: They are professionals related to the psychopedagogical intervention of students with special education needs. The U5 also belongs to an association to serve the hearing impaired. As an interesting mark, she tells us that they have never received any call from any university to address the issue of teacher training.
- u8: She is a university professor who has an adequate training to attend students with disabilities.
- u6: He is a member of an association linked to hearing impairment and he is father of a child with this disability, particularly with cochlear implant and that does not require a different alternative system to spoken language. He has received training from the mentioned association and is closely linked to a specific association, in order to continue with the training so he can help his daughter with her evolution.

### 6.3.1 Training needs

This is what the SD that participated in the meeting stated about training needs:

- Trainers must have a continuous training regarding what it is done in the pre-university educational levels. The coordination between the two groups is essential. (u4)
- It is necessary a positive attitude towards disability in order to have training on basic issues:
  - “The case of a trainer organizing an activity to see a picture, without offering me alternative resources, was very frustrating.” (u4)
  - "The case of a teacher who received a report from the University Student Service where it was indicated that printed materials should have a large size of letter, but the exam day came and a sheet with a very small letter was presented to me". (u1)
- It is considered that the specific needs regarding teacher training would be (u4):
  - A greater understanding of the different disabilities and their needs.
  - Knowledge of possible actions within the educational center.
  - Knowledge of student support services in the different educational contexts and disabled people parents associations.
  - Consider such action as an obligation of trainers duties and disabled people rights.
  - Awareness about the functional diversity.

This is what the EP that participated in the meeting stated about training needs:

- The university teachers have nor pedagogic habits nor culture of diversifying their methodology, which is characterized by the homogeneity in their performances.
- EP very often do not possess technology training either. However, in this aspect, it is important the existence of professionals (archivists, graphic designers, etc.) who assist the teacher/ trainer to design the curriculum materials. (u7)
- There must be a link between the educative institution and the specific associations to train teachers conveniently. (u5)
- The main question is the attitude. Many times, having a report and curricula adaptation, the guidelines are not met. (u3)
There are a number of steps regarding teacher training:

1st step: to publicize the existing resources in the university and in other institutions or associations. It is not possible to train about everything, but it is reassuring to know the existing resources and where to go in case you need them. (u2) The trainers are lost. (u5)

Step 2: determine the adjustments to be made as legal obligations that teachers have to meet. They must be enforced. They have to understand that the other's rights are their obligations. (u2) In this sense, no one keeps an eye on the compliance of the guidelines indicated by the corresponding Student Service. "The trainers say "I do not want "and that's it. If you have no sense of duty ..."(u7)

3rd step: Attitude as human training. Both in the university and the vocational training, the incoming professional (whose possible job is teaching) receives training on content, but not training on human sensitivity, respect, etc. towards "the other".

6.3.2 Accessible Learning

SD attending the meeting stated that:

Regarding what “accessible learning” means for each one:
- The accessible learning is which generates equal opportunities. Each one starts from a different step. (u2)
- The accessible learning is which makes us all equal at the same level. (u1)

To achieve an accessible learning is necessary the anticipation. The needs should be anticipated and focused on them from the beginning. A student cannot begin the university studies and takes some time until he/she is attended. Therefore it is essential a link with the previous educational levels: Primary, secondary and high schools, and so to start the course from the first day with the necessary attention. (u2)

It is important a change of awareness by teachers: "You do not give more advantage if you give me more time on an exam, but I'm at a disadvantage if you do not give it to me". (u4)

It is possible that an institution like the university or a VET center, give the necessary attention. Just see, as an example, the case of the Cambridge exams, where they offer you an exam tailored to your conditions. (u1)

From the other side EPs state that:

- It is necessary to provide many resources to give the opportunity to all. To diversify. (u5)
- Training in technological means is necessary. (u7)

6.3.3 Challenges identified

SD focused on these issues as the most important in order for students with special education needs to be well catered for:
- Communication between students and the institution is missing. For example, the student is asked in the course fee if he/she has special education needs, but this data later is not used. It is the student who must address to the university Student Services Center to receive assistance. (u1, u4)
- It is essential to ask the student what he/she needs. We must start from the student and not to implement generic default activities for each type of disability, because each individual is unique. (u4, u1)
- Communication between the teacher and the institution is missing. (u1, u4)

EPs highlighted the following issues as important if we want students with special education needs to be well attended:
- Before training is the awareness, the attitude. (u3)
- There must be positive discrimination for students and, regarding teachers, encourage them if they meet attention to these students. (u2)
- It is important to personalize the attention. A suitable example (u6) is the case of a Law student, who was deaf, but with cochlear implants, and the report carried out with guidelines to follow, indicated that a sign language interpreter was needed.
- It is very important that the action procedure is well established by the educational institution. (u8)
- If the university has needs, resources are needed.
- Everything is not solved with technical issues. It is necessary to create something that meets the needs. For example, create an Observatory. In this line, it would be interesting to establish a forum for experiences exchange:
  o teachers with experience in this field could train peers.
  o the good experiences are reflected in a website and serve as examples, as good teaching practices.
7. Needs analysis of students with disabilities and education professionals in Greece

7.1 Overview and Analysis of results of ALdia Survey for Students with Disabilities in Greece

7.1.1 General profile of the respondents

There were a total of 21 students with disabilities who responded in the Greek version of the ALdia needs analysis questionnaires. This represents approximately one fourth of the total responses (78) received in this category across the three participating countries. However, it should be noted that 12 of these responses came from VET students, which is almost the absolute total of responses received in this category (13) for the whole consortium. The gender of the respondents is 1/3 female and 2/3 male.

42. Q1. Please choose your gender.

In the question, whose purpose was to determine the area of knowledge in which the respondents study (Q3), 95% chose “Other” and only one chose a specific field (Social and Legal Sciences). The explanation for this could be twofold. The first one is that a large number of respondents probably felt that their knowledge background did not correspond to any of the predefined options. This is most probably true for VET students that very often receive training in everyday practical professions that don’t translate directly to the predefined areas of knowledge hence their answers in the “other” option as simply VET. The second explanation has to do with how clear the question was so as to make the respondents understand which subjects each knowledge area included, for example applied sciences include physics, mathematics etc. More than three out four respondents (16/21) stated that they study in Universities or train in VET centers for more than 2 years.

43. Q4. For how many years have you been studying / training at your university / VET institution?
In terms of the types of disability 43% of the respondents have physical disabilities and 28.6% have hearing impairment. The “other” responses could be roughly allocated to mental disabilities (one response for Down syndrome, one with intellectual disability and one with panic disorder) and be connected with the 3 response for “Autism” to account for another 28.6% of the total Greek responses. There were also 4 responses (19%) for dyslexia. The responses to this question could be taken to account when defining the ALdia training programme in WP3.

44. Q5. What is your disability? (Please select the most suitable description):

- Physical disabilities: 9 42.9%
- Visual disabilities: 0
- Hearing disabilities: 6 28.6%
- Dyslexia: 4 19%
- Autism: 3 14.3%
- Asperger syndrome: 0
- Other: 3 14.3%

7.1.2 General accessibility of students with disabilities

(Questionnaire reference: Part 2, Questions 6-8)

The state of general accessibility for SD in Greece seems to be mixed. In Q6, 66.7% of the respondents seemed to be content or satisfied (agreed or strongly agreed) with how their classrooms’ space was organized and accounted for their specific needs independently of their size, posture and disability. The exact same percentage of SD (66.7%) answered that they are satisfied with the level of accessibility to their classrooms, provided in their Universities or VET centers. This is a relatively positive percentage considering the general state of accessibility for disabled people in Greece, but in any case the 1/3 of responses that
were not satisfied shows that there is still room for improvement. However 62% of respondents are either dissatisfied or have not made their mind about how equally accessible for SD and non-SD, are the general services provided by their Universities or VET centers. This is a figure that ALdia partners and relevant stakeholders should keep in mind and try to improve the situation.

7.1.3 Accessibility of students with disabilities to the learning process

(Questionnaire reference: Part 2, Questions 3-5)

The level of accessibility of SD to the learning process seems to be relatively satisfactory for a bit more than half of the respondents in all relevant questions. More specifically, around 52% of SD who filled in the ALdia questionnaire either agreed or strongly agreed that:

- Instructions provided by teachers are comprehensible by all students
- Knowledge is taught effectively and learning material is accessible and available to all students independently of whether they are disabled or not
- Proper measures are taken and respect is shown towards SD with different learning rates

Nevertheless there was a large percentage of Greek SD, between 24 and 33%, who were not in a position to state whether the level of the above issues is at least satisfactory or not. It would be fair to assume that respondents who cannot clearly decide whether they are at least adequately satisfied, probably have doubts about how accessible is the overall learning process and should therefore be added together with SD who were clearly dissatisfied with that (between 15-19%). If we do this, we would conclude that respondents are almost equally divided on how accessible the learning process is for SD.

7.1.4 Appropriateness and flexibility of teaching methods

(Questionnaire reference: Part 2, Questions 1-2)

Two thirds of the SD that filled in the ALdia questionnaire in Greece, believe that teachers and/or VET trainers do make use of several written and oral teaching methods and tools so that pedagogical material is accessible to all students. 28.6% were unsure of whether this was the case or not. As far as the variety of options that is made available to SD in order to complete course workload (like workload like exams with multiple-choice or developmental questions) is concerned, the respondents were more evenly divided. 52% agreed that there are enough options whereas 48% were doubtful in their judgement. The issue of available options for course workload completion, should be further explored in WP3 so as to provide additional solutions.
7.1.5 Ability of education professionals to address the needs of students with disabilities

(Questionnaire reference: Part 2, Questions 9-10)

SD in Greece were almost unanimous (85%) in agreeing that the level of the teachers/trainers’ training in AT and disabilities could be the single most important factor to the most effective inclusion of SD in Universities and VET centers. More than three out of four SD (76.1%) also believed that a helpful and positive learning environment can be conducive to more communication and interaction between students as well as between students and teachers or trainers. These figures are in line with some of the project’s main objectives, namely to create and test a training programme for teachers and trainers based on AT and specialized teaching methods, so as to make learning more inclusive and accessible to SD.

7.1.6 Ability of the University/VET providers to address the needs of students with disabilities

(Questionnaire reference: Part 2, Questions 11-15)

When it comes to the educational inclusion and general accessibility of SD in universities and VET centers the responses were predominantly positive. Around 62% of respondents believe that the measures taken in the institutions they study in, are enough to promote their educational inclusion as well as to provide guaranteed access to their facilities (Q14-15). Between 28 and 33% of respondents were undecided of whether this was the case or not and only 5-10% disagreed with that assessment. Almost 1 in 2 (47.6%) could not provide a definite answer of whether SD face more barriers regarding their participation in learning. This can be considered a puzzling figure given the relatively universal acceptance of this statement as a matter of fact. Two possible explanations for this are:

1. Some SD might be hesitant in admitting that they cannot participate properly in the learning process because of their disability.
2. It could have to do with their general assessment of the state of education in Greece and that the barriers that SD are facing are to a large extent similar to the ones faced by all students.

Nevertheless the vast majority of respondents (80%) agreed or strongly agreed that universities and VET providers must provide appropriate services and support structures for SD to pursue their studies/training normally like other students (Q13). From the other side, they were almost equally divided in their assessment of whether the environment in their University or VET center was conducive to their inclusion and participation: 48% were either undecided or negative in their assessment and 52% were positive (Q12).
7.1.7 Main obstacles to the education of students with disabilities

(Questionnaire reference: Part 2, Questions 16-18)

There seems to be little agreement and a large dispersal of answers as to what is the main obstacle of SD in their education/training. From the six specific options, five of them received at least three responses - Options c. and f. accessibility of learning material and difficulty level of courses: 14.3% each and 28.6% in total– options a. (not adequately trained teachers/trainers) and e. each received 4 responses and 19%, while option c. defining their disability as the main obstacle received a total of five responses (24%). ALdia partners should take heed, that a clear majority of respondents chose to cite difficulties related directly to the learning process (options a.,b.,d., and f. account for around 53%) rather than their disability as the biggest obstacles to their education.

45. Q16. Which one of the following would you identify as the biggest obstacle in your education and/or training?

- a. Teachers and trainers who are not adequately trained and prepared in working with students with disabilities  4  19%
- b. Courses: Heavy workload  1  4.8%
- c. Difficulties caused by the handicap/disability  5  23.8%
- d. Courses: Level of difficulty  3  14.3%
- e. Time management/organization  4  19%
- f. Student material (notes, books, exams) not being adapted to my needs.  3  14.3%
- Other:  1  4.8%

In the questions covering the level of institutional support services provided by the Universities and VET providers, feedback was overwhelmingly positive. 95% of SD stated that there are such services available in their educational institutions and three out of four respondents claimed that they are at least adequately satisfied by the level of their effectiveness.
46. Q17. Does your university/VET provider make use of student support and/or adaptation services?

- Yes: 20 (95.2%)
- No: 1 (4.8%)

47. Q18. If the answer to the above question is yes, how effective are these services in facilitating the students’ transition in their education/training?

- a. Not effective at all: 0 (0%)
- b. Could be more effective: 5 (25%)
- c. Adequately effective: 7 (35%)
- d. Very effective: 8 (40%)

7.1.8 Use of Assistive Technologies

(Questionnaire reference: Part 3, Questions 1-5 on AT)

In terms of the use of AT in Universities and VET providers (Q1), 86% of SD who took part in the survey replied affirmatively. This alone, is an important statistic as it confirms that there are at least some types of AT being used in Universities and VET providers to begin with, a basis without which it would have been difficult to expand some of the project aspects.

48. Q1. Does your university or VET provider make use of AT?

- Yes: 18 (85.7%)
- No: 3 (14.3%)
Continuing from the 1st question a clear 71% of respondents stated that professors and VET trainers take into account AT for designing and anticipating for the students’ needs. A clear majority (57%) also stated that the availability and use of AT in their educational institutions is at least adequate.

49. Q2. Do teachers/trainers consider assistive technology when planning and anticipating for students’ individual learning needs?

- Yes: 15  71.4%
- No:  6   28.6%

50. Q3. How do you perceive the availability of assistive technology in your university or VET provider?

- a. Non-existent  2  9.5%
- b. Little        7  33.3%
- c. Adequate      9  42.9%
- d. Widespread    3  14.3%

However, when categorizing the available types of AT from low-tech to high tech devices plus AT applications and SW, less than one out of three respondents (28.6%) indicated that there are either mid or high-tech AT devices available in their institutions.
51. Q4. Which of the following types of assistive technology and tools are available in your university or VET provider?

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>AT applications and SW</td>
<td>3</td>
<td>14.3%</td>
</tr>
<tr>
<td>Low-tech devices</td>
<td>10</td>
<td>47.6%</td>
</tr>
<tr>
<td>Mid-tech devices</td>
<td>5</td>
<td>23.8%</td>
</tr>
<tr>
<td>High-tech devices</td>
<td>1</td>
<td>4.8%</td>
</tr>
<tr>
<td>None of the above</td>
<td>4</td>
<td>19%</td>
</tr>
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As far as more specific types of AT are concerned (Q5) the figures are inconclusive and it would not be safe to draw any resolutions out of them. One reason for this is because many of the proposed devices and tools (seven out of seventeen) from the list are addressed to SD with visual impairment, a target group that unfortunately was not represented at all in the sample. Only three out of the seventeen listed types of devices had three responses each (1. alternative keyboards, 2. Reading tools and learning disabilities programs, 3. Speech recognition or voice recognition programs) which were primarily selected by respondents with hearing impairment or dyslexia. Fifteen of the respondents chose “other” as an option eleven of which did not specify any device or SW which probably shows a lack of knowledge about AT.

7.1.9 General conclusions and lessons learned

- In terms of the general profile of the respondents it should be taken into account that that no SD with visual impairment filled in the questionnaire in Greece. The most represented groups of SD are physical disability (43%) followed by hearing and mental disabilities (28.6% each) and 19% with dyslexia. It should also be noted that four respondents chose multiple disabilities (e.g. physical disabilities and autism). Also the results on the question about the area of knowledge were inconclusive as 95% chose the “Other” option.
- The state of general accessibility of SD in Greece was rated at least as satisfactory by 2/3 of the respondents with the exception how equally accessible were the general services provided by their educational institutions in which 62% of SD were either undecided or not satisfied.
- Only a slight majority of respondents (52%) rated the accessibility of SD to the learning process as satisfactory, which is an area that ALdia should concentrate on.
- As far as the appropriateness and flexibility of teaching methods is concerned, the results showed that there is room for improvement especially when it comes to the
variety of options available to SD for assessment and exams. This is further echoed by some of the general comments at the end of the report.

- The role of the educational personnel in addressing the learning needs of SD was generally accepted as being crucial including the creation of a positive learning environment to enhance interaction between students and professors.

- Educational inclusion and general accessibility of SD in universities and VET centers seem to be at generally good levels according to the majority of respondents (62%) but when it came to assessing the extent to which the learning environment in their educational institutions was supportive to the inclusion and participation of all students the results were divided (52% positive / 48% negative or undecided). Therefore more solutions could be explored for creating a positive learning environment for all students.

- ALdia partners should take heed, that a clear majority of respondents chose to cite difficulties related directly to the learning process (options a.,b.,d., and f. account for around 53%) rather than their disability as the biggest obstacles to their education.

- AT are available in most Universities and VET providers of the respondents and a clear majority of education professionals seem to embed them in the learning process. If any conclusion could be made from the Greek sample of the questionnaire results, about the specific types of AT is that there is probably little in-depth knowledge. Training both students and education professionals on how to identify, use and embed the most appropriate type AT devices and SW in the learning process could go a long way in improving the level of accessible and the overall results. Availability of AT alone is not enough.

- For students with hearing impairment, sign language interpreters can be deployed and more visual learning material can be used.

- Large universities should harmonize their processes for evaluating and diagnosing learning difficulties. Establishing diagnosing committees could be a solution.
7.2 Overview and Analysis of results of ALdia Survey for Education Professionals in Greece

7.2.1 General profile of the respondents

(Questionnaire reference: Part 1 General Questions 1-6)

A total of seventeen education professionals filled in the ALdia questionnaires in Greece with an almost equal proportion of male and female respondents (9 male / 8 female). Almost two out of three EP are VET trainers and the rest are University professors.

52. Q1. Please choose your gender.

- Male: 9  52.9%
- Female: 8  47.1%

53. Q2. Are you a university or a VET professional?

- University teacher: 6  35.3%
- VET trainer: 11  64.7%
- Other: 0

In terms of area of knowledge, almost half of the respondents are active in Applied Sciences, and the rest are spread around the other areas of knowledge with the exception Engineering and Architecture that did not receive any responses. The educational background and professional experience of the EP is impressive as 53% are holder of Master and/or PhD degrees and around 64% have at least 17 years of working experience. Moreover almost all of them (94.1%) have some professional experience with students with disabilities, which makes their input even more pertinent.
54. Q3. Area of knowledge in which you work:

- Humanities: 2 (11.8%)
- Health Sciences: 1 (5.9%)
- Social and Legal Sciences: 3 (17.6%)
- Applied Sciences: 8 (47.1%)
- Architecture and Engineering: 0 (0%)
- Other: 3 (17.6%)

55. Q4. Your educational level:

- Graduate level (BA etc): 8 (47.1%)
- Master: 4 (23.5%)
- PhD: 5 (29.4%)
- Other: 0 (0%)

56. Q5. How many years of professional experience do you have as a university teacher/VET trainer?

- 0-5: 0 (0%)
- 6-10: 1 (5.9%)
- 11-16: 5 (29.4%)
- 17-25: 8 (47.1%)
- More than 26 years: 3 (17.6%)

57. Q6. Have you ever had any students with disabilities in your classes?

- Yes: 16 (94.1%)
- No: 1 (5.9%)
7.2.2 Education professionals with teaching experience on students with disabilities

(Questionnaire reference: Part 2 Conditional questions 6.1-7)

As already stated above 16 out of 17 respondents have taught SD in the past with several types of disabilities. The two most prominent types of disabilities that they have encountered are physical (75%) and hearing disabilities (56.3%). A positive aspect of the sample is that the EP who completed the questionnaires had teaching experience with student of all types of disabilities including dyslexia (37.5%), visual impairment (18.8%) and ASD (18.8%).

58. Q6.1. What kind of disabilities / special educational needs did these students have:

- Physical disabilities: 12 (75%)
- Visual disabilities: 3 (18.8%)
- Hearing disabilities: 9 (56.3%)
- Dyslexia: 6 (37.5%)
- ASD: 3 (18.8%)
- Other: 1 (6.3%)

Moreover, the average number of students with disabilities that each education professional has taught in their career to date is more than 24 a figure that provides additional validity to their feedback. It should be noted that this average is somewhat distorted from one respondent who has taught 150 SD. Even if we deduct this from the remaining sample we still get an average of more than 15 SD per EP.

Almost two thirds of respondents (62.5%) have received some type of training for teaching to SD with 73% of them having received this training from the Universities or VET providers they work in. In terms of the type of training received, 77% of them replied classroom training and 23% through personal mentoring.
59. Q6.3 Have you received any training on teaching students with disabilities?

Yes: 10  62.5%
No:   6  37.5%

60. Q6.3.a Who provided this training?

- The university/VET provider: 8  72.7%
- The students themselves: 0  0%
- The university/VET provider advocate: 0  0%
- Self-trained: 2  18.2%
- Other: 1  9.1%

The interesting figure here is that zero respondents have received this type of training online. Therefore, it could be argued that by providing online means of specialized training through its developed MOOC, ALdia will add a brand new flexible option for education professionals that want to complete the ALdia course through alternative means, at least in the case of Greece.

61. Q6.3.b What type of training?

- Online: 0  0%
- Classroom: 10  76.9%
- One on one mentoring: 3  23.1%
- Other: 0  0%

Finally, there is almost universal agreement between the respondents (82.4%) about the existence of some type of support service in their educational institutions that caters for the needs of SD. Overall, the figures in this part of the questionnaires show that there is an
existing framework and a pool of already experienced ed. professionals on which the ALdia project can build upon.

62. Q7. Are you aware of any service and support structure for students with disabilities at the university/VET provider you are working?

Yes: 14 82.4%
No: 3 17.6%

7.2.3 General accessibility of students with disabilities

(Questionnaire reference: Part 3, Questions 7, 8, 12)

The level of general accessibility of SD in classrooms and university/ VET services EP deemed it to be satisfactory. More specifically almost 65% agreed or strongly agreed (41.2%) that SD have guaranteed access to the University and VET provider services same as all students. This comes in contrast with the responses provided by SD in the exact same question where 62% of respondents stated that they are either dissatisfied or have not made their mind about how equally accessible were services for SD and non-SD. This different perception between the project’s two main target groups on this and possibly other issues, should be an element of further reflection so that all relevant stakeholders can accommodate more effectively the SD needs. However classroom accessibility was found at least adequate by a minimum 66.7% of both target groups, although EP were much more positive in their assessment (82.4%). Almost 2/3 (64.7%) of EP respondents also agreed that SD face more physical accessibility barriers than their non-SD peers.

7.2.4 Accessibility of students with disabilities to the learning process

(Questionnaire reference: Part 3, Questions 6, 10, 11, 17, 20)

When assessing the difficulties with which SD must cope in the learning process (Q10 & 11), EP agreed that 1) they face more barriers in their learning participation by 70.6% and 2) the types of barriers they have to deal with are not only of a physical and/or social nature by 88.2%. Similar levels of agreement were noticed (82.3%) among EP, when evaluating the need to provide SD with complementary mentoring so that they can alleviate the difficulties they sometimes have in following the learning rhythms of the rest of the classroom. A large majority of the respondents also stated that the principles of accessibility and universal
design are upkept in their course so as to make the learning experience equally accessible for all students. Despite their general agreement in all above issues and the recognition that SD learning need must be catered for, a clear majority of respondents (58.8%), stated that although flexible work schemes could be applied to facilitate the learning process for SD, modifying the assessment just for SD should not be an option to this end. The last figure is revealing as it could indicate the limits to which education professionals are prepared to go so that they can accommodate the SD learning needs but at the same time be fair to all students.

7.2.5 Ability of education professionals to address the needs of students with disabilities

(Questionnaire reference: Part 3, Questions 1-5, 9, 18, 19, 21)

Although 2/3 of EP stated in earlier questions that they had received some type of specialized training to teach SD, 58.8% also agreed that their training was limited and in need of improvement (Q1). In a similar line, 76.5% of respondents agreed that they have to be more aware of the educational needs of SD and there was universal agreement (100%) that this can be achieved through regular advice and support provided by the relevant educational authorities as well as through appropriate training (Q18:100%). In addition 41.2% responded that they possess little knowledge when it comes to sign language or other means to teach students with hearing impairment or other communication difficulties. Another 35.3% was undecided on the same issue.

Despite the above admissions, the vast majority of EP (82.3%) stated that they are not daunted by the task of teaching in classrooms that include SD, a figure that is quite encouraging. However, 30% was uncertain when assessing the difficulty of adapting learning material to the SD needs and another 30% stated that it was indeed difficult to do so (Q21). More than 2/3 (70.6%) also stated that they are aware of inclusive education and its educational implications. As the responses in Q9 show they are keenly aware of their key role in facilitating the educational inclusion of SD (58.9%).

Overall the figures in this topic demonstrate recognition by EP, of the need for further training and awareness raising of the learning difficulties of SD. At the same time they also reveal their willingness to persevere and be supportive of SD even when their training is sometimes limited and they do not receive the necessary support.

7.2.6 Ability of the University/VET providers to address the needs of students with disabilities

(Questionnaire reference: Part 3, Questions 13-16)

There was general agreement between the respondents, regarding the need for Universities and VET providers to take the necessary measures in order to accommodate and facilitate
their study/training experience without obstacles. This especially true in Q13 and 15 where 94.1 and 100% agreed that there should be appropriate structures and services as well as tailor-made plans prepared by planning reception centers. A somewhat smaller degree of agreement was noticed in Q14 where 70.6% of respondents stated that specific qualification groups for SD should be planned by Universities and VET providers. Another noticeable statistic is that 53% of EP did not want to provide a definite assessment of whether Universities and VET providers are prepared for the educational inclusion of SD. A clearer statistic, either way, would have been helpful for the project but the resulting figure could have several explanations. It could be that some respondents believed that they didn’t have all the evidence to pass such a judgment or that they were a bit afraid to portray their employers in a negative light (even though the questionnaires were anonymous the sample is small and the possible sources of responses are limited).

7.2.7 Methods used by education professionals to enhance the learning process

(Questionnaire reference: Part 4, Questions 1-8)

Part 4 questions did not provide much insight as to which teaching methods and tools EP use most to enhance the learning process. This is because, with the exception of whether notes and course material are supplied before classes (Q1) where 70.6% answered affirmatively, in all other questions there was nearly complete unanimity with percentages ranging from 82.4 to 100%. More specifically the EP stated that they make use of the following methods and tools:

- Lectures start with a reminder summary of the previous class (88.2% of respondents)
- Use of visual aids (100% of respondents)
- Students are encouraged to expand and do more research on the subject (100% of respondents)
- Cooperative groups are used for practical assignments (88.3% of respondents)
- The same learning material is used in both theoretical and practical classes (82.4% of respondents)
- Different methodological formats are used to adapt to the learning styles of students (94.1% of respondents)
- Use of ICT is important to the delivery of the course (100% of respondents)

The fact that almost all EP already make use of the above teaching methods and tools is encouraging as they will adapt easier and be more receptive to further upgrading their teaching skills to accommodate better the learning needs of SD.

7.2.8 Use of assistive technologies

(Questionnaire reference: Part 5, Questions 1-4 on AT)
Only 5.9% of respondents stated that they possess no knowledge of AT and an encouraging 58.8% claimed to have a good or extensive knowledge on AT. This is despite the fact that only 41.2% have actually participated in some type of training on AT. This could mean that more than have of them (52%) actually took the time to learn about using AT by themselves or they had to through every day use (94.1% have knowledge on AT minus 41.2% who have received training). This statistic is key as it indicates the possible room for improvement in terms of further training EP in AT. Plus it is further confirmed by the fact that 100% of respondents stated their interest in participating in such training (Q3). The training method, preferable by 64.7% of respondents is hands-on instruction in group setting.

63. Q1. What is your level of knowledge and skills in using AT?

- a. No knowledge 1 5.9%
- b. Little knowledge 1 5.9%
- c. Some knowledge 5 29.4%
- d. Good knowledge 4 23.5%
- e. Extensive knowledge 6 35.3%

64. Q2. Have you ever taken a course on AT?

- Yes: 7 41.2%
- No: 10 58.8%
65. Q3. Interested in receiving training about AT?

Yes: 17 100%
No: 0 0%

66. Q4. What would be your preferred method for learning about AT?

- a. One-on-one individualized instruction: 1 (5.9%)
- b. Hands-on instruction in group setting: 11 (64.7%)
- c. Attending workshops or conference sessions: 4 (23.5%)
- d. Formalized courses: 1 (5.9%)

7.2.9 General conclusions and lessons learned

- 94.1% of respondents have some professional experience with students with disabilities, which makes their input even more pertinent.
- Responses show that there is an existing framework and a pool of already experienced ed. professionals on which the ALdia project can build upon.
- Some specific issues (e.g. like how equally accessible were University and VET services for SD and non-SD ) seem to be perceived and assessed differently by the project’s two main target groups (EP and SD ). This should be an element of further reflection so that all relevant stakeholders can accommodate more effectively the SD needs and see them from their prism as well.
- The fact that most education professionals stated that although flexible work schemes could be applied to facilitate the learning process for SD , but at the same time modifying the assessment just for SD should not be an option, shows that there are limits to which they are prepared to go so that they can accommodate the SD learning needs but at the same time be fair to all students.
• Education professionals recognize the need for further training and awareness raising of the learning difficulties of SD. At the same time they have a willingness to persevere and be supportive of SD even when their training is sometimes limited and they do not receive adequate support.

• Universities and VET providers should take the necessary measures and provide the required infrastructure to accommodate and facilitate the study/training experience of SD without obstacles. However, EPs were unwilling to provide a clear assessment of the current level of preparedness of Universities and VET providers on these issues.

• The fact that almost all EP already make use of teaching methods and tools (like visual aids, cooperative groups etc.) is encouraging as they will be more likely to adapt easier and be more receptive to further upgrading their teaching skills to accommodate better the learning needs of SD.

• The vast majority of EP already possesses some knowledge in using AT but few of them have participated in organized training that would further enhance their ability to embed AT in the learning process.
7.3 Overview and Analysis of results of design meetings in Greece

7.3.1 First design meeting and individual interviews

The first design meeting was conducted by UPRC on 2/6 and was attended by the following target groups’ representatives:

- HE staff/teacher with good knowledge of Greek sign language, Mrs Ourania Anastasiadou director of the Accessibility Unit of the Athens School of Fine Arts
- Two students with hearing impairment from the Athens School of fine arts, Mr George Pantelis and Mrs Konstantina Theochari.

In addition UPRC conducted five individual interviews from 30/5 to 1/7/2016. This was done because some interviewees could not attend the design meeting and in this way it was possible to conduct in-depth discussion and analysis of the needs of each person from the different target group. Individual interviews were conducted with the following persons:

- HE teacher, Mr Georgios Kouroupetroglou, director of the Accessibility Unit of the University of Athens
- HE teacher, Mrs Magda Nikolaraizi, director of the Accessibility Unit of the University of Thessaly
- Special education teacher, Fotios Papanastasiou, scientific responsible for the special education portal
- Mr Nikolaos Lagoudakis, hard of hearing student from the University of Piraeus,
- Mr Panagiotis Alexiadis, student with visual disability of the University of Athens.

Moderator: Theofili Sbrini

This first part of the meeting, was focused on the objectives of the projects and the key terms of “educational needs” and “accessible learning”. Teacher and students shared the same thoughts about these two terms:

- The educational needs are strongly related to special characteristics that contribute in learning at different rates and different ways. Educational needs are addressed to all students, however students with special needs require extra help and support, targeted in their special characteristics.
- The educational needs of HE teachers are mainly perceived as the effort to adapt their teaching practices in the learning needs of the students, in order to make learning content as comprehensible as possible.
- None of the interviewees have ever attended such a meeting and they stated very enthusiastic, because the meeting was rather a good opportunity to identify the educational needs in regards with the special education.
- All the interviewees agreed that accessible learning is defined as a collection of methods used to make learning accessible and comprehensible by all students,
including those with special needs, such as deafness, blindness, motion problems, dyslexia, etc. Mrs. Anastasiadou emphasized the need to train teachers on how to make their lessons accessible by all students.

7.3.1.1 Training needs

The needs of the students with disabilities were categorised in terms of a) learning, b) communication with secretary and teachers and c) access in the campus.

Students with hearing disability and hard of hearing stated the following:

a) Learning: need for an interpreter in theoretical courses. The use of presentations and written notes do not facilitate learning, for the reason that deaf people cannot fully comprehend written language, because of the difference in structure between the written language and the sign language. Both deaf students stated that disability to understand the written language is not related to levels of intelligence. The student with the hard hearing stated that it would be very helpful to watch the face of the teacher while he/she is giving a lecture and speak slowly to facilitate lip-reading.

b) Communication with secretary and teachers: all the students agreed that the communication with secretary and teachers should be enabled by the accessibility unit of the institution. All the announcements should be updated on time for the students with disabilities and there should be collaboration between the teachers and the accessibility unit. For example a teacher may announce during the lecture an outdoor activity for the next day, which the deaf students cannot perceive and as a result they cannot participate because they do not have time to find an interpreter. So, it would be very helpful if all the activities are programmed ahead and not at the last minute.

c) Access in the campus: on time announcements of the classes.

Student with visual impairment stated the following:

a) Learning: need for compatible type of learning material. Translation of books in Braille or taping of books. Websites should be accessible for blind students.

b) Communication with secretary and teachers: should be facilitated in collaboration with the Unit of accessibility. Script assistance in writing emails.

c) Access in the campus: need for tactile paving. Also the elevators should have loud announcement.

All the students pointed out the need for a well-trained Special Advisor Professor, who will be an expert on special needs and special education.

The training needs in which the HE professionals mainly referred to, are the following:
- Get informed about the number and type of disability participating in the course and how to respond to the learning needs.
- Get informed about the recommended methods of examination according to the disability.
- Seek for an accessible examination room.
- Learn about the use of any special accessibility equipment which might be needed by the Student with Disability, like speech-to-text converter, laptop with accessibility features, etc.
- Get informed about the responsibilities of the Special Advisor professor.

7.3.1.2 Accessible learning

As mentioned in the section Training Needs, accessible learning could be achieved:

**For Students with hearing disability:**

- Use of interpreter in theoretical courses and exams. According to Deaf Association of Greece, all members-students are eligible for a free interpreting service during the exam period, for 25 hours.
- Teachers, when aware of the presence of deaf students during their lectures, should speak slowly to enable the lip-reading.

**For visual impairment:** Translation of the basic books in Braille or taping of books/notes. Students with vision disabilities can be examined using Braille system. In Science courses where special symbols are required, oral examination is suggested. Notes for the courses should be delivered in Braille or a digital accessible format. For example, digital text for screen readers or audio message. Conversion of notes to accessible formats can be done by volunteer students who are registered in the Accessibility Unit and have undertaken this specific task.

According to HE teachers’ perception, the accessible lectures design should be based on the following:

- Learning material should be translated in sign language or Braille. Especially, key books for each university school, should be accessible in sign language via video or Braille system, in the library.
- E-class platforms should be appropriately prepared in order to be accessible. The platforms should fulfil the requirements of accessibility for deaf and blind students.

In case of participation of the students with disabilities in an ERASMUS programme, the teachers should be able to support students via teleconference.

7.3.1.3 Challenges identified
The challenges in designing / delivering accessible lectures is focused on specific situations where students with disabilities:
- Are having difficulties in seeing, hear or understand a type of information written or oral.
- Are not able to operate the keyboard or the mouse of a computer.
- Their computer cannot support accessibility equipment / or they have poor network connectivity.
They do not speak the language or comprehend the language in which the information is offered.
The challenges in designing / delivering accessible lectures is focused on the following statements:
- the accessibility should ensure the compatibility between the learning content and the disable student/user.
- application of the Universal Design for Learning (UDL). Learning should be supported via multiple ways of representation, implementation and expression of the information.
- all of HE teachers referred to the cost of making a lecture accessible.
The accessibility of the learning should be examined by different aspects: legal, financial, social/moral and technological. It is a common belief that all states should promote accessibility for disable students, in order to ensure their access in the learning, without any discrimination.
According to the Greek legislation all HEI are obliged to have a special Unit of Accessibility for students with disabilities, as well as a Special Advisor professor. Mrs Anastasiadou, proposed that there should be organised by the state a special training service to train teachers for this purpose.
Disability in HEI should not be faced as a problematic situation, but rather as an opportunity to create and promote an accessible environment for all students, without discrimination.
The Accessibility Units should give information for future disable students on the process of getting accepted in the institution.

7.3.2 Second design meeting

The second design meeting was organized by Four Elements on Thursday 23/6 at the partner’s offices and was attended by the following participants:

- Dr. Stathes Hadjiefthymiades (SH), Associate Professor at the National and Kapodistrian University of Athens and deputy counselling Professor at the Department of Informatics & Telecoms for students with disabilities.
- Dr. Chariton Polatoglou (CP), Professor of Physics at the Aristotle University of Thessaloniki and member of the university Committee for Social Policy and Health that is responsible for supporting students with disabilities (participated for the whole duration of the focus group through skype as he’s based in Thessaloniki).
• Maria Apostolou (MA), clinical psychologist, former Director of the HERMES Center for Vocational Training for people with disabilities and trainers’ instructor for adult learners.
• Giannis Kampourelis (GK), VET trainer in Informatics, with experience in teaching students with disabilities.

Moderator: Konstantinos Papavramidis

Members of the FG were contacted directly by phone or email. Voice recording was used to record the DM, after receiving the participants’ prior permission. Three of the participants were physically present in the room of the DM and one attended through teleconference as he is a professor in Thessaloniki. This mixed method did not affect the quality of the dialogue of the FG with only some minor audio issues when CP couldn’t hear clearly some of the other participants. The original planning of the DM included the participation of a disabled student via teleconference but he could not attend in the end so one of the TGs was not represented in the current DM. This DM complemented the one organised by UPRC earlier in June where students with disabilities also participated.

7.3.2.1 Training needs

In terms of training needs and how it can be defined the meeting’s participants provided the following feedback:

GK: What somebody needs to work in his professional space.
MA:
- It depends on many aspects: psychological and non-psychological means: from the way a student seats, the type of teaching class you use, type of light, type of educational material, what types of educational techniques are used
- Educational techniques of material type but even more psychological and socio-psychological type that should have as their objective the encouragement of the students and providing them with motivation to learn.
- All students have different individual training needs: there should be a portfolio for each student with their individual needs- encourage them to participate, to get accessibility to education material
SH: Filtering the learning material used by students, it should be adaptable to the individual needs of the students, students receive and become aware of learning information in different ways and that is even truer for students with disabilities. Teaching methods are adapted depending on the circumstances: Different techniques should be applied in big lecture amphitheaters where there are very few students with disabilities and different in other VET classes that could be addressed only to students with disabilities. I’m not trained to adapt my teaching techniques
CP: Student needs for SD depend largely on the type of disability that each student has. Therefore more use could be made of “translatability” techniques that use different channels to guide the SD learning experience.

7.3.2.2 Accessible lectures design

Accessible lectures design is one of the key objectives of ALdia and there was some useful insight from the attending academics and VET trainers on the issue:

AM: Trainers’ training for students with disabilities at least 60 hours, seminar type for the basic principles that characterize this type of communication because if the environment is not inducive to learning there can’t be effective education for students with disabilities, addressed to all education professionals (VET and university alike)

Develop a common training framework based on communication and acceptance, mutual respect, (multidimensional training for students with disabilities).

CP: Accessible diagrams and tables, training on AT will complement teaching methods. Principles of Translatability of information from different channels, visual, audio etc.

SH: Students can be very supportive to other students with disabilities even without the teacher’s guidance. Students with disabilities are usually more committed to the learning process

MA: All students should strive to help and support their co-students with disabilities and in order for this to happen successfully the teacher must actively encourage it. The teacher should try to assist in the smooth transition of students with disabilities in the classroom and the learning process and at the same time try to take away the “stigma” away from the students with disabilities in the eyes and attitudes of their fellow students

Evaluation of university students and adult learners, evaluate progress and necessary steps that need to be taken. Don’t judge failure and see success and the possibility of continuous improvement which can be very important for students with disabilities.

CP: Translatability of visual information to other channels (e.g. hearing, sensing etc). Use of multiple re-enactments depending on the students’ needs and profile could enhance the SD learning. Assistive technology should be more widely used: e.g. use of subtitling in the classroom for a better learning experience for students with hearing disabilities. Use of Daisy protocol, electronic reader, it increases text accessibility. There should be seminars to students with disabilities for using AT in Math classes and seminar to education professional on how to escort and support students with disabilities.

7.3.2.3 Challenges identified

In terms of challenges in designing / delivering accessible lectures the following input was offered by the project participants:
MA: There is knowledge and work done but no information dissemination to students with disabilities. Certified knowledge is not widely used and disseminated. All relevant knowledge has to be gathered and used appropriately. Students with ASD face increased challenges in all aspects of their educational life. Appropriate training for both SD and education professional should be a continuous process: Training needs must be recorded, covered and addressed, try them, test them certify them and repeat.

SH: There is a lack of training of educational personnel in assistive technology (AT) training although use of AT is made and most of the required equipment is there at least in bigger universities. However there is no in depth scheduled and regular training.

CM: From experience in the university Social and Health Committee, in the beginning there is a negative attitude that teachers for example won’t be able to handle the participation of blind students in the classroom but after the initial hesitation there is a natural process that’s followed and everything goes according to the plan. Seminars to students with disabilities for using AT in Math classes, how to escort SD.

In the question of how can Universities and VET centers can assure the use of good practices in SD learning, adopt them and institutionalize them:

MA: Basic principles of learning for SD, inclusive for all should be taught, that will take place regularly every 6 months for example, continuously evolving, and will be evaluated by students themselves. Continuous exchange of information between ed. Professionals and SD, and pressure to all the relevant stakeholders, especially the state authorities. E.g. Create and sustainable programmes and projects beyond their completion.

CP: University web sites should have information about accessibility, so that SD can get an idea from before they choose the university they will go to. From practical information on how to go and use the University, to secretariat, to what experience each university department has in accommodating SD needs.
8. Needs analysis of students with disabilities and education professionals in Italy

8.1 Overview and Analysis of results of ALdia Survey for Students with Disabilities in Italy

Through the administration of the questionnaire addressed to students with disabilities, which was launched at the end of May 2016, a total of 15 students with disabilities were reached. Out of this sample, the majority (62.5%) are male, half are suffering from physical disabilities and a large majority (81.3%) have been studying at university for more than two years.

What has emerged from this survey is that the majority of the respondents (31.3%) think that classrooms are not organised in a way that allows students to have adequate space, even if, as we can assume from the answers to question 8 of the questionnaire, a significant majority (56.3%) believe that classrooms are easily accessible to students with disabilities thanks to available dedicated services.

It is important to notice that, according to the 31.3% of the respondents, fundamental information is given in an effective way, and besides, instructions on academic activities are easy to understand, regardless of previous experience or competences of the student. Despite this, the same number of respondents think that individual paces and learning speeds as well as variations in the skills acquisition are not duly considered in advance.

What emerges from the answers collected is that the learning methods are not considered as appropriate and the choice of assessment procedures is not as effective as the students with disabilities would wish.

Despite these perspectives, the majority of respondents settle on the positive portion of the grid when they are asked about interaction between students and teachers. This means that they believe that being involved in academic environments always helps, even if in order to ensure effective inclusion this has to be anticipated by proper preparation of teachers on assistive technologies.

Of course, as we know, students with disabilities meet several barriers that hinder their participation in the learning processes. According to this evidence, the majority of respondents (56.3%) affirm that university has to provide accessible services for students with disabilities and guarantee support structures in order to facilitate inclusion and encourage students with disabilities to keep up their studies.

By the way, physical barriers are not the only ones to be considered, and if we set apart the difficulties linked to the specific disability of each student, 43.8% of the respondents agree in
asserting that the main obstacle students with disabilities meet during their education is the lack of appropriate training for the teachers they are supposed to learn from. Universities and schools offer support services like tutoring, but according to the majority of the sample who has taken the questionnaire (46.7%), those services could (and should) be more effective.

In fact, even if 56.3% of the respondents study in educational institutions that make use of assistive technologies, 68.8% of them affirm that their teachers don’t take into due consideration these technologies when they plan learning paths or either consider the individual learning needs of their disabled attendants.

As a matter of fact, the majority of the respondents (43.8% + 12.5%) assert that the availability of assistive technologies in their universities is limited or inexistent, and if they could choose they would like to use instruments such as touch screens, text-to-speech systems and screen readers.

Ultimately, although the overall perceptions are positive about the improvements that have been made over the years, still much remains to be done to step forward in the right direction.

8.1.1 General profile of the respondents

(Questionnaire reference: Part 1 General Questions

As shown in the charts below, the overall profile of the students who participated in the need analysis is the following: the majority of the respondents are male, who have been involved for more than two years in a course at university, and half of them are suffering from a physical disability, while others have been studying with or tutoring disabled people.

67. Q1. Please choose your gender.

- Male: 10 62.5%
- Female: 6 37.5%
68. Q2. Are you a university or a VET student?

- University: 13 (81.3%)
- VET: 1 (0%)
- Other: 2 (12.5%)

69. Q3. Area of knowledge in which you study:

- Humanities: 2 (12.5%)
- Health Sciences: 2 (12.5%)
- Social and Legal Sciences: 3 (18.8%)
- Applied Sciences: 4 (25%)
- Other: 5 (31.3%)

70. Q4. For how many years have you been studying / training at your university / VET institution?

- 0-1 years: 2 (12.5%)
- 1-2 years: 1 (6.3%)
- More than 2 years: 13 (81.3%)

71. Q5. What is your disability? (Please select the most suitable description):
8.1.2 General accessibility of students with disabilities

(Questionnaire reference: Part 2, Questions 6-8)

Responses in these questions show that the majority of the respondents (31.3%) think that the classrooms are not organised in a way that allows students to have adequate space, even if, there is a significant majority that believes that classrooms are easily accessible (56.3%) to students with disabilities whose dedicated services are guaranteed.

8.1.3 Accessibility of students with disabilities to the learning process

(Questionnaire reference: Part 2, Questions 3-5)

According to 31.3% of the respondents fundamental information is provided in an effective way and instructions on academic activities are easy to understand regardless of the previous experience or competences of the student. In spite of this, the same number of respondents believe that variations in the skill acquisition are not considered in advance.

8.1.4 Appropriateness and flexibility of teaching methods

(Questionnaire reference: Part 2, Questions 1-2)

According to the data collected, the majority of the respondents judge the learning methods as not appropriate, and the choice of the assessment procedures is not perceived as effective.

8.1.5 Ability of education professionals to address the needs of students with disabilities

(Questionnaire reference: Part 2, Questions 9-10)

The majority of the respondents settles on the positive portion of the grid. This shows their belief that being involved in the academic environment helps the interaction between students and teachers, even if the effectiveness of the inclusion of SD depends on the preparation of teachers on assistive technologies.
8.1.6 Ability of the University/VET providers to address the needs of students with disabilities

(Questionnaire reference: Part 2, Questions 11-15)

SD meet several barriers that hinder their participation in the learning process. In fact, the majority of the respondents (56.3%) believes that university has to provide accessible services and support structures in order to facilitate inclusion and help students keep up their studies.

8.1.7 Main obstacles to the education of students with disabilities

(Questionnaire reference: Part 2, Questions 16-18)

According to the majority of the respondents (43.8%), apart from the difficulties linked to the disability, the main obstacle students with disabilities meet during their education is the lack of appropriate training of the teachers they learn from. Universities and schools use support services, but according to the majority of the students who have taken the questionnaire (46.7%) those services could (and should) be more effective.

72. Q16. Which one of the following would you identify as the biggest obstacle in your education and/or training?

- a. Teachers and trainers who are not adequately trained and prepared in working with students with disabilities 7 43.8%
- b. Courses: Heavy workload 1 6.3%
- c. Difficulties caused by the handicap/disability 5 31.3%
- d. Courses: Level of difficulty 0 0%
- e. Time management/organization 0 0%
- f. Student material (notes, books, exams) not being adapted to my needs 2 12.5%
- Other: 0 6.3%
73. Q17. Does your university/VET provider make use of student support and/or adaptation services?

- Yes: 16 100%
- No: 0 0%

74. Q18. If the answer to the above question is yes, how effective are these services in facilitating the students’ transition in their education/training?

- a. Not effective at all: 2 13.3%
- b. Could be more effective: 7 46.7%
- c. Adequately effective: 6 40%
- d. Very effective: 0 0%

8.1.8 Use of Assistive Technologies

(Questionnaire reference: Part 3, Questions 1-5 on AT)

The majority of the respondents (56.3%) study in institutes that use assistive technologies, but 68.8% of SD participating in the survey said that their teachers do not consider assistive technologies when they plan learning paths, neither do they consider the individual learning needs of their disabled attendants. As a matter of fact, the majority of the respondents (43.8% + 12.5%) affirm that the availability of assistive technologies in their universities is limited or inexistent, and if they could choose they would like to use instruments such as touch screens, text-to-speech systems and screen readers.
75. Q1. Does your university or VET provider make use of AT?

- Yes: 9 (56.3%)
- No: 7 (43.8%)

76. Q2. Do teachers/trainers consider assistive technology when planning and anticipating for students’ individual learning needs?

- Yes: 5 (31.3%)
- No: 11 (68.8%)

77. Q3. How do you perceive the availability of assistive technology in your university or VET provider?

- a. Non-existent: 2 (12.5%)
- b. Little: 7 (43.8%)
- c. Adequate: 5 (31.3%)
- d. Widespread: 2 (12.5%)
78. Q4. Which of the following types of assistive technology and tools are available in your university or VET provider?

![Bar chart showing the availability of different types of assistive technology tools.]

- AT applications and SW: 5 (31.3%)
- Low-tech devices: 2 (12.5%)
- Mid-tech devices: 1 (6.3%)
- High-tech devices: 3 (18.8%)
- None of the above: 9 (56.3%)

8.1.9 General conclusions and lessons learned

A total of 15 students with disabilities were reached through the needs analysis survey, the majority being male, half suffering from physical disabilities and a large majority having studied at university for more than two years.

According to the questionnaires collected, classrooms’ space is not perceived as adequate, even if a significant majority believe that classrooms are easily accessible to students with disabilities thanks to available dedicated services.

Additionally, fundamental information and instructions at University are given in an effective way, but individual paces and learning speeds are not duly considered. Learning and assessment methods are not perceived as appropriate, while interaction between students and teachers is considered as positive, even if it should be anticipated by a proper preparation of teachers on assistive technologies.

University should provide accessible services for students with disabilities and guarantee support structures in order to facilitate inclusion and encourage students with disabilities to keep up their studies.

Physical barriers are not the only ones to be considered, and the main obstacle a disabled student meets during his/her education is the lack of appropriate training of the teachers s/he is supposed to learn from. Universities and schools support services like tutoring need to be enhanced, and specific training on the use of assistive technologies in the design and delivery phases of lectures are needed.
Perceptions are positive about the improvements that have been made over the years, but still much remains to be done to step forward in the right direction.

8.2 Overview and Analysis of results of ALdia Survey for Education Professionals in Italy

Through the administration of the questionnaire addressed to HE and VET professionals working with students with disabilities, which was launched at the end of May 2016, a total of 19 education professionals were reached. Out of this sample, the majority (52.6%) of the respondents were male and did not belong to the academic environment. Most of them (36.8%) have a degree and experience in vocational training that stands between 11 and 16 years. Moreover, 73.7% of the respondents stated to have worked with students with disabilities in their classrooms, with different kinds of disability, the most common being physical ones, especially visual and hearing impairments, dyslexia and ASD disorders.

Only 57.1% out of the professionals’ sample have received specific training on how to teach students with disabilities, and it is important to point out that only in 46.2% of the cases such a training was provided by the institute where the professional works, whereas 38.5% of the respondents are self-taught specialists.

Surprisingly, in spite of the increasing attention that is being paid to disabilities and support services, there is still a significant percentage (26.3%) of education professionals who do not know about support structures in their work place.

According to the data collected, the majority of the respondents agree on the statement that students with disabilities have a guaranteed access to specific support services provided by the educational institutes, and there is agreement in saying that the premises where lectures are delivered are easily accessible. Notwithstanding, they also agree on the statement that students with disabilities face architectural barriers on a daily basis.

The respondents mostly agree on the statement according to which the principle of accessibility and universal design should guide the delivery of the courses they teach. Moreover, they mostly share the idea that students with disabilities meet both social and physical barriers that hinder their participation in the learning process, and a significant number of them also believe that mentoring as well as flexible schemes of work would really help students with disabilities.

According to the analytics, a noteworthy percentage (57.9% + 21.1%) of respondents is familiar with the concept of inclusive education and do not have particular difficulties at teaching in classrooms where students with disabilities are present, even if most of them think to be supposed to gain much more consciousness on the educational needs of this kind
of students. A majority of 31.6% is fine with adapting the content of the lessons to students with disabilities, but they believe that the organisation of specific training courses for teachers is needed to help them to learn more about disabilities and assistive technologies.

More than half of the respondents (57.9%) agree on the statement that education institutions must provide services and support structures to help students with disabilities to keep up their studies, organising support groups or planning specific programmes to foster inclusion.

As identified by the responses, more than half of the respondents (52.6% + 21.1%) start the lessons with a brief summary of the previous one, and use visual supports such as power point presentations, 57.9% of the respondents normally encourage students to do personal research on the topics addressed, and during the assessments, in a significant number of cases (47.4% + 26.3%) when a practical task is to be carried out, students are divided into groups. Besides, for a significant combined percentage of professionals (47.4% + 31.6%) the use of ICT tools is critical not only for the implementation of activities but also for the explanation process.

Finally, as shown in the picture on the left, none of the respondent has in-depth knowledge of assistive technologies. Only 26.3% of them followed a course focusing on these support instruments, and 73.7% are interested in receiving specific training based on methods such as workshops and practical education as well as on group-work.

8.2.1 General profile of the respondents

(Questionnaire reference: Part 1 General Questions 1-6)

The overall profile of the respondents is the following: the majority (52.6%) are male and do not belong to the academic environment; most of them (36.8%) have a degree and experience as a vocational trainer (26.3%) that stands between 11 and 16 years. Moreover, 73.7 % of the respondents stated to have worked with students with disabilities in their classrooms.
79. Q1. Please choose your gender.

- Male: 10 (52.6%)
- Female: 9 (47.4%)

80. Q2. Are you a university or a VET professional?

- University teacher: 7 (36.8%)
- VET trainer: 2 (10.5%)
- Other: 10 (52.6%)

81. Q3. Area of knowledge in which you work:

- Humanities: 6 (31.6%)
- Health Sciences: 2 (10.5%)
- Social and Legal Sciences: 2 (10.5%)
- Applied Sciences: 1 (5.3%)
- Architecture and Engineering: 3 (15.8%)
- Other: 5 (26.3%)

82. Q4. Your educational level:
83. Q5. How many years of professional experience do you have as a university teacher /VET trainer?

- 0-5: 4 (21.1%)
- 6-10: 4 (21.1%)
- 11-16: 2 (10.5%)
- 17-25: 5 (26.3%)
- More than 26 years: 4 (21.1%)

84. Q6. Have you ever had any students with disabilities in your classes?

- Yes: 14 (73.7%)
- No: 5 (26.3%)

8.2.2 Education professionals with teaching experience on students with disabilities

(Questionnaire reference: Part 2 Conditional questions 6.1-7)
The 19 professionals who participated in our need analysis met students with different disabilities. The most common are the physical ones, in particular visual and hearing impairments, dyslexia and ASD.

Out of the professionals interviewed, only 57.1% received specific training on teaching students with disabilities. It is important to notice that the training has been provided by the employer only in 46.2% of the cases, and that a significant number of professionals (38.5%) are self-taught.

Moreover, it can be underlined that despite the increasing attention being paid to disabilities and support services, there is still a significant percentage (26.3%) of educational professionals who don’t know about support structures in their work-place.

85. Q6.1. What kind of disabilities / special educational needs did these students have:

<table>
<thead>
<tr>
<th>Disability Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical disabilities</td>
<td>13</td>
<td>92.9%</td>
</tr>
<tr>
<td>Visual disabilities</td>
<td>9</td>
<td>64.3%</td>
</tr>
<tr>
<td>Hearing disabilities</td>
<td>6</td>
<td>42.9%</td>
</tr>
<tr>
<td>Dyslexia</td>
<td>10</td>
<td>71.4%</td>
</tr>
<tr>
<td>ASD</td>
<td>6</td>
<td>42.9%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>7.1%</td>
</tr>
</tbody>
</table>

86. Q6.3 Have you received any training on teaching students with disabilities?

- Yes: 8 (57.1%)
- No: 6 (42.9%)
87. Q6.3.a. Who provided this training?

- The university/VET provider: 6 (46.2%)
- The students themselves: 1 (7.7%)
- The university/VET provider advocate: 0 (0%)
- Self-trained: 5 (38.5%)
- Other: 1 (7.7%)

88. Q6.3.b What type of training?

- Classroom: 5 (41.7%)
- One on one mentoring: 7 (58.3%)
- Online: 0 (0%)
- Other: 0 (0%)

89. Q7. Are you aware of any service and support structure for students with disabilities at the university/VET provider you are working?

- Yes: 14 (73.7%)
- No: 5 (26.3%)
8.2.3 General accessibility of students with disabilities

(Questionnaire reference: Part 3, Questions 7, 8, 12)

The majority of the respondents agree on the statement that students with disabilities have guaranteed access to the support services provided by the educational institutes, and that premises where lectures are held are easily accessible, even if in spite of this they also acknowledge that every day students with disabilities face architectural barriers.

8.2.4 Accessibility of students with disabilities to the learning process

(Questionnaire reference: Part 3, Questions 6, 10, 11, 17, 20)

The evidence shows that the respondents settle in the positive side of the grid (Agree or Strongly Agree). This means that they mostly agree on the statement according to which the principles of accessibility and universal design should be considered as a guide in the courses where they teach. Moreover, they mostly agree on the statement according to which students with disabilities meet not only social and physical barriers, and that these barriers hinder their participation to the learning process. Finally, a significant number of respondents believe that mentoring as well as flexible schemes of work would really help students with disabilities.

8.2.5 Ability of education professionals to address the needs of students with disabilities

(Questionnaire reference: Part 3, Questions 1-5, 9, 18, 19, 21)

According to the analytics, a significant percentage of respondents know the concept of inclusive education and does not have particular difficulties at teaching in classrooms where students with disabilities are present, even if most of them think to be supposed to gain much more consciousness on the educational needs of this kind of students. The majority of them have no difficulties in adapting the content of the lessons to students with disabilities, but they believe that the organisation of specific training courses for teachers is needed to help them to learn more about disabilities and assistive technologies

8.2.6 Ability of the University/VET providers to address the needs of students with disabilities

(Questionnaire reference: Part 3, Questions 13-16)

More than half of the respondents agree on the statement that educational institutions must provide services and support structures to help students with disabilities to keep up their studies, forecasting support groups or planning specific programmes to foster their inclusion.
8.2.7 Methods used by education professionals to enhance the learning process

(Questionnaire reference: Part 4, Questions 1-8)

According to the responses, more than a half of the respondents starts the lessons with a brief summary of the previous lecture and uses visual supports such as power point presentations. Moreover, in assessments envisaging practical tasks, students are often divided in groups. Finally, for a significant number of respondents the use of ICT tools is very important not only for the implementation of activities but also in the explanation phase.

8.2.8 Use of assistive technologies

(Questionnaire reference: Part 5, Questions 1-4 on AT)

None of the respondents stated to have a deep knowledge of the aid technologies, and since only 26.3% of them followed a course on the matter, a high percentage is interested in receiving a specific training. The favorite methods are workshops and practical education by group work.

90. Q1. What is your level of knowledge and skills in using AT?

91. Q2. Have you ever taken a course on AT?
92. Q3. Interested in receiving training about AT?

Yes: 14  73.7%
No:  5  26.3%

93. Q4. What would be your preferred method for learning about AT?

a. One-on-one individualized instruction  5  26.3%
b. Hands-on instruction in group setting  8  42.1%
c. Attending workshops or conference sessions  5  26.3%
d. Formalized courses  1  5.3%

8.2.9  General conclusions and lessons learned

A total of 19 education professionals were reached through the needs analysis survey, the majority being male and having a long-standing experience in vocational training, working with students with different kinds of disabilities, such as visual and hearing impairments, dyslexia and ASD disorders.

A significant portion of the professionals’ sample has received specific training on how to teach students with disabilities and to use assistive technologies, either provided by the institute where the professional works or self-taught. However, there is still a percentage of education professionals who do not know about support structures in their work place.
Additionally, none of the respondents showed to have in-depth knowledge of assistive technologies: some of them have followed a course focusing on these support instruments, and most of them are interested in receiving a specific training. In spite of this, for a significant number of professionals the use of ICT is critical.

From professionals’ point of view, the students have a guaranteed access to specific support services provided by the educational institutes, and the premises where lectures are delivered are easily accessible. Notwithstanding, students with disabilities face architectural, social and physical barriers on a daily basis, hindering the learning process.

According to the data collected, accessibility and universal design are the principles which should guide the delivery of the courses, and mentoring as well as flexible schemes of work would help students with disabilities in the learning process. Most of the professionals interviewed are familiar with the concept of inclusive education, even if most of them think to be supposed to gain much more consciousness of the educational needs of these students. An adaptation of the contents to the needs of students with disabilities is perceived as necessary.

Education institutions must provide services and support structures to help students with disabilities to keep up their studies, organising support groups or planning specific programmes fostering their inclusion.

The data collected through the questionnaire show that both students and teachers taking part in the survey generally perceive a specific training for teachers and staff working with disabled people as recommendable.

In such a perspective, the data collected show that the delivery of a Massive Open Online Course for Higher Education and Vocational Education & Training staff will meet one of the most significant needs identified in the needs analysis. Thus the ALdia project activities and objectives are consistent with the expectations emerged.
8.3 Overview and Analysis of results of design meetings in Italy

The design meeting in Italy was conducted by CESIE on 27/6 and was attended by the following target groups’ representatives:

- Marco Farina, Director of Human Rights Youth Organisation and Deputy-director of FEDERSID
- Peppe Potestio, Teacher working with students with disabilities
- Damiano Sabatino, Teacher working with students with disabilities
- Antonina Musso, Visually-impaired graduate at the University of Palermo, now working at the University on a research project on disability management
- Mario Motta, Tutor for students with disabilities
- Filippo Santamaria, Disabled person, former student at the University of Palermo and now representative of Who is handy? Onlus
- Giorgia Campisi, Student of Psychology, tutor for students with disabilities
- Stefania Giambelluca, Project manager working with the EQUIL project about mental disabilities.

All participants agreed on the fact that learning accessibility could be enhanced quite easily. For instance, according to the professionals attending, a first step in this direction would be to set up a digital platform on the university website where to store audio or video recordings of the lessons. On the other hand, students and former students highlight that accessibility is strongly linked to the preparation and training of professionals.

8.3.1 Training needs

SD stated that specific training of mentors and enhancement of teachers’ skills is needed in order to effectively meet students with disabilities’ needs during the training and the exams. From the other side EP identified peer learning as one of the most important features to meet the training needs of the learners. Indeed, the involvement of students with disabilities in peer-learning activities helps teachers in handling the class and eases students’ learning.

8.3.2 Accessible learning

SD argued that in Palermo no adequate technological tools are available, for example stenotype services are not provided for those who are unable to write, and audio recordings of lectures are not provided to help students who have visual impairments.

Systems such as Braille display, speech synthesizers, screen readers and voice recognition should be used.

An increase in the funds invested in accessible learning is advisable. EP said that steps to take towards a greater accessibility of teaching tools are:

- Provision of specific training for tutors and teachers;
- Adaptation of technological support tools through a digitalisation of lessons.
- Provision of specific training for tutors and teachers;
- Adaptation of technological support tools through a digitalisation of lessons.

8.3.3 Challenges identified

SD who attended the meeting believed that assistive technology-based media are not even available during the exams, and, when available, professors are often unfamiliar with such tools, thereby increasing the difficulties that students with disabilities have to face every day.

Sometimes the attitude of the disabled student is an obstacle itself, as in some cases too much expectation on support provision prevents the student from finding effective training solutions.

EP attending the meeting emphasized that the tools available at university are often inadequate, and this results in educational issues: teachers are often unable to recognise the disabled person as someone who needs special help, especially when the disability is not a physical disability and therefore is not "immediately visible".

8.3.4 Key findings

What emerged from the discussion is that the main barriers that a disabled person faces in everyday life are both physical and mental. This is reflected in the academic life of a disabled student who constantly undergoes stigmatization.

Although, schools and universities often provide rules and regulations concerning the tools to help them, these tools are often inadequate and this results in educational issues:
- Teachers are often unable to acknowledge the disabled person as someone who needs special help, especially when the disability is not a physical disability and therefore is not "immediately" visible. This entails a lack of trust towards students with disabilities, and consequently emotional insecurity.

- Tutors, whose task is to support students with disabilities in the learning process, do not have specific skills, and therefore often do not know how to cope with specific issues linked to disability; moreover, every disabled student is entitled to only have two tutors during the academic year (100h overall), and this means that there are often gaps in the support service they need.

- As for the reality of Palermo, no adequate technological tools are available, for example stenotype services are not provided to help people who are unable to write, and audio recordings of lectures are not provided to help students who have visual impairments;
Furthermore, assistive technology-based media are not even available during the exams, and, when available, professors are often unfamiliar with such tools, thereby increasing the difficulties that students with disabilities have to face every day.

What emerges is that, at these conditions, it is difficult to ensure that learning is perceived as fair.

In spite of this, there are a lot of good practices in Italy, from North to South, across the whole country. And despite all the hardships that students with disabilities face in the South of Italy (e.g. architectural barriers), the local support service at the University of Palermo has a pioneering history, as it was the first to be founded in Italy, and it still is the only one completely free for the students. In addition, in the last ten years supplementary support services that go in the direction of equal access to learning integrated academic programmes such as Erasmus, EVS or internships in Italy and abroad. Understandably, these services evolve at a slower pace as they are often perceived with distrust by students with disabilities, who may be worried of making a mobility experience. However, in spite of this scepticism, new steps in the direction of a complete integration are being made, thanks to the fact that services available abroad are very effective, and the disabled persons participating in this type of mobility experiences become themselves an engagement instrument for the others.

The steps required to move, therefore, towards a more active involvement of students with disabilities, and towards a greater accessibility of teaching tools are:
- Training of mentors and enhancement of teachers’ skills;
- Adaptation of technological support tools through a digitalisation of lessons and through the use of systems such as Braille display, speech synthesizers or reading of the screen and voice recognition systems;
- Increase of the funds allocated to allow the involvement of a greater number of people in order to cover all the needs.
9. Respondents’ feedback

At the end of the questionnaires, the respondents were given the chance to provide their feedback and insight on the issues covered by the project. These are their responses accompanied by each respondent’s profile:

<table>
<thead>
<tr>
<th>Respondent profile</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male university student from Greece with hearing disability studying photography.</td>
<td>&quot;Use of sign language interpreters for SD with hearing impairment. More visual learning material.&quot;</td>
</tr>
<tr>
<td>Female university student from Greece with physical disability studying Social and Legal Sciences.</td>
<td>&quot;Unfortunately not all universities are accessible for SD.&quot;</td>
</tr>
<tr>
<td>Female VET student from Greece with mental disability.</td>
<td>&quot;Training in the VET provider I’m attending is well organized and supervised by EOPPEP so that all requirements are being observed.&quot;</td>
</tr>
<tr>
<td>Male university student from Greece with mental disability business administration.</td>
<td>&quot;Difficulties in accessing universities and lectures, acts as an obstacle to SD that due to personal and professional issues are not in a position to follow their courses.&quot;</td>
</tr>
<tr>
<td>Male university student from Greece with dyslexia studying finance.</td>
<td>&quot;There are no means for diagnosing the learning difficulties of adult learners. There are no diagnosing committees. Professors at the University of Piraeus do not recognize the same test for learning difficulties as the National and Kapodistrian University of Athens Professors have no objections in using oral exams to facilitate the examination process for some SD.&quot;</td>
</tr>
</tbody>
</table>
Male PhD student from Italy with physical disability studying Applied Sciences.

"For me the only assistance needed is the breaking of architectural barriers. At the university I attend, the situation is hardly acceptable."

Male university student from Italy with physical disability studying Engineering

"It would be very useful to be able to follow the lessons from home, if they were directly streamed on Internet. Several universities use this teaching method, which requires a very simple technology (a webcam for the teacher and a web connection)."

Male secondary school teacher from Italy, with a BA in Arts and 11-16 years of work experience, including teaching to SD

"I would be glad to learn more about available innovative methods and tools."

Male university professor from Italy, in Applied Sciences with a BA and 17-25 years of work experience, including teaching to SD

"When I describe myself as a self-taught I refer to two things: 1) I am a person with mobility impairment on a wheelchair, 2) I’ve been dealing with themes related to inclusive design according to the principles of University Design and ICF."

Male university student from Spain, with mental disability studying in Humanities.

"Professional psychological services should be available for students with disabilities."

Female university student from Spain, with physical disability studying Health Sciences.

"There are many classrooms with stairs and the access is not easy; if finally I can solve this problem, I have to be on top and is very difficult to listen to the teacher, see the slides projected and follow the class normally. The accessibility of the campus in general, that is, to go from one building to another is HORRIBLE, there are many stones, curbs and even concrete benches, leaving not much easily pass and hinder the pass. In the library, areas with plugs for the computer are inaccessible to people in wheelchairs, making impossible go to the library with my own laptop."
Female university student from Spain, with hearing disability studying Languages.

“It needed support teacher out of the training time to catch up with all the material that students with hearing disabilities were unable to follow as other hearing students. Stream videos, movies, etc. in class with subtitles. Providing information and training teachers on needs involving hearing impaired are missing: place the classroom in U format so that the faces and lips of the teacher and students are visible, to be near the teacher, and that he/she vocalizes and speaks more slowly to follow his/her explanations.”

Female university Health Sciences student from Spain, with physical disability.

“In my case I find more difficulty in the laboratory, because there is nothing adapted. Both the worktable and the instruments are quite high.”

Female Arts and Humanities university student from Spain, with mental disability.

“Teachers, deans, rectors are not interested in the problems of students with disabilities. We encountered endless problems and apart from that, we live up to the pressure of our peers who think teachers give us the career, when I have to push myself twice because of my disability.”

Female Social and Legal Sciences university student from Spain, with physical disability.

“To facilitate the study from home can greatly help people with disabilities.”

Male university professor in Social and Legal Sciences from Spain with a PhD and 11-16 years of work experience, including teaching to SD.

“Nowadays it is possible to receive any kind of training online in any place needed, which is preferable.”

Female university professor in Social and Legal Sciences from Spain with a PhD and 17-25 years of work experience, including teaching to SD.

“One should define what is meant by “Assistive Technologies”, since the same thing can be called in different ways by different people.”
Male university professor in Social and Legal Sciences from Spain with a BA and more than 26 years of work experience, including teaching to SD.

"It is essential to reduce ratios and create specific working conditions (paid) for teachers who decide to work with disabled or handicapped."

Male university professor in Social and Legal Sciences from Spain with a PhD and 11-16 years of work experience, including teaching to SD.

"As for training, ideally it should be received by a teacher who is going to work with disabled student and training should be directly related to the type of disability of the student."

Female university professor in Applied Sciences from Spain with a PhD and 11-16 years of work experience.

"Regarding the method for learning about assistive technologies, ideally it should be a formal course where it is explained basically what these types of technologies are and what they consist from, and if there appears a student in need of one of these technologies, professor should be able to contact the relevant service so he could have a kind of individual formation or one in small groups if some people ask for the same type of formation."

Female university professor in Social and Legal Sciences from Spain with a PhD and 11-16 years of work experience, including teaching to SD.

"It does not seem correct to consider all types of disabilities in a single category. Disabilities like visual, auditory, mental disabilities or disabilities of intellectual nature. As they are not the same, the problem in the classroom may not be the same, and thus the way to treat it will be different."

Male university professor in Social and Legal Sciences from Spain with a PhD and more than 26 years of work experience, including teaching to SD.

"It is important to plan a proper strategy of explanation and, in this situation, it is important that people with different disabilities do not coincide in the same class with the same teacher."
Female university professor in Social and Legal Sciences from Spain with a PhD and more than 26 years of work experience, including teaching to SD.

“It is very important to have a service to advise on these issues.”

Female university professor in Arts and Humanities from Spain with a PhD and 11-16 years of work experience, including teaching to SD.

“It is difficult to attend students with disabilities (especially cognitive) in classrooms of more than 100 students. Usually mentoring and monitoring of students depends largely on the number of students we have in the classroom.”

Female university professor in Applied Sciences from Spain with a PhD and 17-25 years of work experience, including teaching to SD.

“Spanish public universities are not sensitive to the functional diversity of our students. There appear more and more students who clearly have features of autism spectrum. These students need help and they are not advised, nor are teachers informed. I think many of them (usually boys) feel really bad about it and what the university needs to do is to organize a support group for them.”

Male university professor in Health Sciences from Spain with a PhD and 6-10 years of work experience.

“At the level of a university-level teaching, teachers’ formation for students with special needs is very limited.”

Male university professor in Social and Legal Sciences from Spain with a PhD and 11-16 years of work experience, including teaching to SD.

“Evaluation should not differ greatly for students with disabilities, as it could create even higher barrier. Neither should we fall into the hyper-protection, but it seems a great idea to use the possible strategies to facilitate their inclusion in the classroom, especially, if none was used before.”
10. Conclusions and Recommendations

Research showed that there is an existing organizational and institutional framework that has been set up explicitly to support the learning process of SD. This means that there are rules and regulations to cover this process and teachers are aware of the principles of accessibility and universal design as well as of inclusive education. In most cases there exist students support infrastructures in HEI and VET providers like special Units of Accessibility, student support services etc. However, the responses of the target groups in the surveys and the DM demonstrate that this framework and processes very often seem to be functioning only on the surface and do not go in depth to cater for the everyday learning needs of SD and the EPs who are there to teach them.

One of the most important findings reflected in Graph 14 below, is that although around ¾ of EP in all countries have taught SD and many of them do so on a regular basis, the vast majority (around 70%) have not received any specialized training. Therefore, a key conclusion that can be drawn is the need to increase the percentage of education professionals who receive specialized training for teaching to SD. This is because trained EP are better equipped to teach to SD and address their diverse leaning needs in an effective way. The ALdia project aims to address this issue directly.

![Graph 14: Training on teaching students with disabilities](image)

Of those EP that have received training, only 20% have done it online though the use of e-learning, MOOC or VLE. This includes only EP in Spain as those who participated in the Greek or Italian surveys, had not received any online training. This is another need that will be addressed by ALdia through the creation of a MOOC. The ALdia VLE will create an accessible Massive Open Online Course (MOOC) that will contain the teaching and
assessment material for accessible learning. It will also contain a Virtual Community space and access to assistive technology freeware tools, categorized per disability. This is also echoed by the open feedback provided by some professors and trainers who stated that online training could provide additional flexibility. Moreover, more than a few participants emphasized the need for a common repository of knowledge and tools that would also act as a forum where education professionals teaching to SD could exchange work experience, good practices and advise one another.

The need for education professionals to receive specialized training and become more aware of the specific difficulties that SD face, was shared by most participants and across all countries. This after all, was also identified as one of the main obstacles that SD have to cope with in their studies and/or training i.e. teachers and trainers who are not adequately trained and prepared in working with students with disabilities. When it comes to specifics of what this training should entail and how it will enhance accessible learning, the needs analysis activities resulted in many useful insights and recommendations.

A recurring theme was that teachers should be trained in being able to adapt learning to the individual needs of each disabled student and not only use a generic framework that will simply change according to the type of disability. In other words, attention to students with disabilities has to be personalized and tailor made. This is a process that ideally has to start from the moment the student begins his/her studies and/or training and be continuously monitored. One disabled student from Spain made the interesting suggestion that this could be a continuous process that will be interlinked at all educational levels (primary to secondary to HE etc.). In this way, students with disabilities could have a common tailor made plan throughout their whole education, that will follow them from primary to secondary education and then from secondary to higher education.

Closely connected with the above issue is that EP will have to learn how to deal with students with disabilities from a psychological point of view and not only on a strictly educational basis. An experienced adult learners’ trainer from Greece, suggested that a common training framework could be developed based on communication, acceptance and mutual respect. The same expert mentioned multidimensional training for students with disabilities as an example of such a training framework.

In addition, the surveys’ results showed that EP should take into account the different learning paces of SD and adapt to them. Assessment and examination material should be tailor made to SD needs. Accessible learning should ensure the compatibility between the learning content and the disable student/user. This was succinctly put by one of the professors who attended the design meetings:

“Filtering the learning material used by students, it should be adaptable to the individual needs of the students, students receive and become aware of learning information in different ways and that is even truer for students with disabilities. Teaching methods are
adapted depending on the circumstances: Different techniques should be applied in big lecture amphitheatres where there are few students with disabilities attending and different in VET classrooms that could be addressed only to students with disabilities.”

During another design meeting it was stressed that many academics and trainers do not have the necessary pedagogic habits nor culture of diversifying their teaching methodology. Teaching methods can very often be characterized by their rigidity and inability to adapt. This culture and pedagogy referred to here can be nurtured through proper training. Towards this direction it was suggested that the application of Universal Design for Learning (UDL) could help. Learning should be supported via multiple ways of representation, implementation and expression of the information.

A key component of training is the use of assistive technologies. Survey results showed that availability is not so much an issue as much as the ability of professors and trainers to use them and incorporate them in the learning process. More specifically it was argued that accessible diagrams and tables, training on AT will complement teaching methods. Assistive technology should be more widely used: e.g. use of subtitling in the classroom for a better learning experience for students with hearing disabilities. Another suggestion of a focus group member was to make use of the daisy protocol, which is a kind of an electronic reader that increases text accessibility. ICT was universally accepted as an important element of teaching material and learning process. However a useful point was made when it was stated that in order for teachers/ trainers to be able to use curriculum materials appropriate for SD, they need to be continuously supported by relevant professionals such as archivists, graphic designers, etc. Needs assessment activities also demonstrated that there might be a need for student to be trained in using AT.

There were several recommendations made regarding the format of training and what it could or should include. However, a common theme that connected all of them was that training should be:

- Regular and not one off. This means that EP should be trained at regular intervals for example every six months. This will ensure that their knowledge and skills do not become obsolete.

- Appropriate training for both SD and education professionals should be a continuous process: Training needs must be recorded, covered and addressed all the time through new methods. Then these methods can be tested, tried, certified and the whole process can be repeated from the start.

- Make the existing resources visible as much as possible. It is not possible to train about everything, but it is reassuring to know the existing resources and where to go
in case you need them. Good experiences should be collected in a platform and serve as examples, as good teaching practices.

Finally the role of the educational institutions in supporting this process was stressed. There should be continuous communication and coordination between EP and SD / EP and HE-VET / SD and HE-VET. A view that was shared by many respondents and FG members is that there should be a central reference point: student support centres from where all SD and EP can communicate, coordinate and plan the learning process. As already stated above, this is very often the case on paper but it does not always function like that in reality. Student support centres and other similar structures are used in most cases, but they have to be improved so as to act as a focal point for all matters relating to accessibility and learning needs of SD and how EP will address them in their teaching. Another useful suggestion was the further mainstreaming of the use of Special Advisor Professors and/or Trainers, i.e. EP with significant experience of teaching SD who are appointed to support their peers. Such persons could also play an active role in the training process.
## 11. Annexes

### 11.1 Breakdown of completed questionnaires

<table>
<thead>
<tr>
<th>Category</th>
<th>Questionnaires on disabled students</th>
<th>Questionnaires on education professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VET</td>
<td>University</td>
</tr>
<tr>
<td>ES</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>IT</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GR</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Total per category</td>
<td>13</td>
<td>57</td>
</tr>
<tr>
<td>Grant total per country</td>
<td>511</td>
<td>34</td>
</tr>
</tbody>
</table>
11.2 ALdia Needs Analysis Questionnaire for students with disabilities

*Required

General questions

1. Please choose your gender. *
   - Male
   - Female

2. Are you a university or a VET student? *
   - University
   - VET
   - Other: [ ]

3. Area of knowledge in which you study: *
   - Humanities
   - Health Sciences
   - Social and Legal Sciences
   - Applied Sciences
   - Architecture and Engineering
   - Other: [ ]

4. For how many years have you been studying / training at your university / VET institution? *
   - 0-1
   - 1-2
   - more than 2

5. What is your disability? (Please select the most suitable description): *
   - Physical disabilities
   - Visual disabilities
   - Hearing disabilities
   - Dyslexia
   - ASD
   - Other: [ ]
Indicate to what extent you agree / disagree on the following statements, through the following assessment: 1. Strongly Disagree. 2. Disagree. 3. Neither agree nor disagree. 4. Okay. 5. Strongly agree.

1. There are various presentation methods and tools (written and verbal) being used by teachers / trainers, in order to make pedagogical material available and accessible to all students. *

2. Several options are provided on how to complete course workload like exams with multiple-choice or developmental questions; oral or written work. *

3. Teaching instructions are easy to understand and follow, regardless of student’s level of experience, knowledge, or skills. *

4. Essential information is communicated effectively and is available and accessible to all students, independently of the student’s sensory skills. *

5. Possible variations in student learning rates and skills are anticipated and considered; *

6. Classroom space is organized so that every student has the space he/she requires, regardless of size, posture, and mobility. *
7. Students with disabilities have guaranteed access to the services provided by our University / VET provider, same as with every other student. *

1 2 3 4 5
0 0 0 0 0

8. The classrooms are easily accessible to students with disabilities. *

1 2 3 4 5
0 0 0 0 0

9. The inclusion of students with disabilities at the university/VET provider depends largely on teachers' training on disability and assistive technologies. *

1 2 3 4 5
0 0 0 0 0

10. The environment supports interaction and communication among students and between students and professors / trainers. *

1 2 3 4 5
0 0 0 0 0

11. Students with disabilities in university/VET providers have to cope with more barriers regarding their participation in learning. *

1 2 3 4 5
0 0 0 0 0

12. The environment is supportive and facilitates the inclusion and participation of all students *

1 2 3 4 5
0 0 0 0 0

13. The university/VET provider must provide services and support structures for students with disabilities to pursue their studies/training normally like other students. *

1 2 3 4 5
0 0 0 0 0
14. The university/VET provider is prepared for the educational inclusion of students with disabilities. *

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15. Students with disabilities have guaranteed access to the institution’s facilities, same as with other students. *

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16. Which one of the following would you identify as the biggest obstacle in your education and/or training? *

- a. Teachers and trainers who are not adequately trained and prepared in working with students with disabilities
- b. Courses: Heavy workload
- c. Difficulties caused by the handicap/disability
- d. Courses: Level of difficulty
- e. Time management/organization
- f. Student material (notes, books, exams) not being adapted to my needs.

Other:

17. Does your university/VET provider make use of student support and/or adaptation services? *

(Adaptation and student support services help students with disabilities adapt to life and studies in the university/VET institution as well as provide support, advice and direction.)

- Yes
- No

18. If the answer to the above question is yes, how effective are these services in facilitating the students’ transition in their education/training?

- a. Not effective at all
- b. Could be more effective
- c. Adequately effective
- d. Very effective
Questions on assistive technology (AT)

1. Does your university or VET provider make use of AT? *
   - Yes
   - No

2. Do teachers/trainers consider assistive technology when planning and anticipating for students’ individual learning needs? *
   - a. Yes
   - b. No

3. How do you perceive the availability of assistive technology in your university or VET provider? *
   - a. Non-existent
   - b. Little
   - c. Adequate
   - d. Widespread

4. Which of the following types of assistive technology and tools are available in your university or VET provider? *
   - a. AT applications and software
   - b. Low-tech devices
   - c. Mid-tech devices
   - d. High-tech devices
   - e. None of the above

5. Depending on your disability please choose any of the assistive technology devices and tools that are most helpful when studying / training. *
   - Alternative keyboards—featuring larger- or smaller-than-standard keys or keyboards, alternative key configurations, and keyboards for use with one hand.
   - Electronic pointing devices—used to control the cursor on the screen without use of hands. Devices used include ultrasound, infrared beams, eye movements, nerve signals, or brain waves.
   - Wands and sticks—worn on the head, held in the mouth or strapped to the chin and used to press keys on the keyboard
Joysticks—manipulated by hand, feet, chin, etc. and used to control the cursor on screen.

Trackballs—movable balls on top of a base that can be used to move the cursor on screen.

Touch screens—allow direct selection or activation of the computer by touching the screen, making it easier to select an option directly rather than through a mouse movement or keyboard. Touch screens are either built into the computer monitor or can be added onto a computer monitor.

Braille embossers transfer computer generated text into embossed Braille output. Braille translation programs convert text scanned-in or generated via standard word processing programs into Braille, which can be printed on the embosser.

Keyboard filters are typing aids such as word prediction utilities and add-on spelling checkers that reduce the required number of keystrokes. Keyboard filters enable users to quickly access the letters they need and to avoid inadvertently selecting keys they don’t want.

Light signaler alerts monitor computer sounds and alert the computer user with light signals. This is useful when a computer user cannot hear computer sounds or is not directly in front of the computer screen. As an example, a light can flash alerting the user when a new e-mail message has arrived or a computer command has completed.

On-screen keyboards provide an image of a standard or modified keyboard on the computer screen that allows the user to select keys with a mouse, touch screen, trackball, joystick, switch, or electronic pointing device. On-screen keyboards often have a scanning option that highlights individual keys that can be selected by the user. On-screen keyboards are helpful for individuals who are not able to use a standard keyboard due to dexterity or mobility difficulties.

Reading tools and learning disabilities programs include software and hardware designed to make text-based materials more accessible for people who have difficulty with reading. Options can include scanning, reformatting, navigating, or speaking text out loud. These programs are helpful for those who have difficulty seeing or manipulating conventional print materials; people who are developing new literacy skills or who are learning English as a foreign language; and people who comprehend better when they hear and see text highlighted simultaneously.

Refreshable Braille displays provide tactile output of information represented on the computer screen. A Braille "cell" is composed of a series of dots. The pattern of the dots and various combinations of the cells are used in place of letters. Refreshable Braille displays mechanically lift small rounded plastic or metal pins as needed to form Braille characters. The user reads the Braille letters with his or her fingers, and then, after a line is read, can refresh the display to read the next line.

Screen enlargers, or screen magnifiers, work like a magnifying glass for the computer by enlarging a portion of the screen which can increase legibility and make it easier to see...
items on the computer. Some screen enlargers allow a person to zoom in and out on a particular area of the screen.

☐ **Screen readers** are used to verbalize, or "speak," everything on the screen including text, graphics, control buttons, and menus into a computerized voice that is spoken aloud. In essence, a screen reader transforms a graphic user interface (GUI) into an audio interface. Screen readers are essential for computer users who are blind.

☐ **Speech recognition or voice recognition programs**, allow people to give commands and enter data using their voices rather than a mouse or keyboard. Voice recognition systems use a microphone attached to the computer, which can be used to create text documents such as letters or e-mail messages, browse the Internet, and navigate among applications and menus by voice.

☐ **Text-to-Speech (TTS) or speech synthesizers** receive information going to the screen in the form of letters, numbers, and punctuation marks, and then "speak" it out loud in a computerized voice. Using speech synthesizers allows computer users who are blind or who have learning difficulties to hear what they are typing and also provide a spoken voice for individuals who can not communicate orally, but can communicate their thoughts through typing.

☐ **Talking and large-print word processors** are software programs that use speech synthesizers to provide auditory feedback of what is typed. Large-print word processors allow the user to view everything in large text without added screen enlargement.

Please add any additional remarks you may have on the above questions.

Thank you for your time!
11.3 Aldia Needs Analysis Questionnaire for academic and VET staff

*Required

General questions

1. Please choose your gender. *
   - Male
   - Female

2. Are you a university or a VET professional? *
   - University teacher
   - VET trainer
   - Other:

3. Area of knowledge in which you work: *
   - Humanities
   - Health Sciences
   - Social and Legal Sciences
   - Applied Sciences
   - Architecture and Engineering
   - Other:

4. Your educational level: *
   - Graduate level (BA etc)
   - Master
   - PhD
   - Other:

5. How many years of professional experience do you have as a university teacher /VET trainer? *
   - 0-5
   - 6-10
   - 11-16
   - 17-25
   - more than 26 years
6. Have you ever had any students with disabilities in your classes? *
   - ○ Yes
   - ○ No

If the answer to the above question is yes please answer the following questions. If your answer is no please continue with question number 7:

6.1. What kind of disabilities / special educational needs did these students have:
   - ○ Physical disabilities
   - ○ Visual disabilities
   - ○ Hearing disabilities
   - ○ Dyslexia
   - ○ ASD (Autism Spectrum Disorder)
   - ○ Other: [ ]

6.2. With how many students with disabilities have you worked with approximately?
   [ ]

6.3 Have you received any training on teaching students with disabilities?
   - ○ Yes
   - ○ No

6.3.a. Who provided this training?
   - ○ The university/VET provider
   - ○ The students themselves
   - ○ The university/VET provider advocate
   - ○ Self-trained
   - ○ Other: [ ]

6.3.b What type of training?
   - ○ Online
   - ○ Classroom
   - ○ One on one mentoring
   - ○ Other: [ ]
7. Are you aware of any service and support structure for students with disabilities at the university/VET provider you are working? *

- O Yes
- O No

Indicate how much you agree / disagree with the following issues relating to students with disabilities regarding their teaching at the university/VET provider, through the following assessment: 1. Strongly Disagree. 2. Disagree. 3. Neither agree nor disagree. 4. Okay. 5. Strongly agree.

1. The training that I have received on students with disabilities is limited. *

2. I do not know the meaning of inclusive education and its educational implications. *

3. I find it difficult to teach in a classroom that includes students with disabilities . *

4. I need to become more aware of the educational needs of these students. *

5. Regular advice and support to teachers/trainers, on students with disabilities is necessary. *

6. The principles of accessibility and universal design for all are present in the degree/course that I am teaching. *
7. Students with disabilities have guaranteed access to the services provided by our University / VET provider, same as with every other student. *

8. The classrooms where I teach are easily accessible to students with disabilities. *

9. The inclusion of students with disabilities at the university/VET provider depends largely on teachers. *

10. The reality is that students with disabilities at university/VET have more than physical and social barriers. *

11. The students with disabilities in university/VET providers have to cope with more barriers regarding their participation in learning. *

12. The students with disabilities in university/VET providers have to cope with more physical accessibility barriers. *

13. The university/VET provider must provide services and support structures for these students to pursue their studies/training normally like other students. *
14. The university/VET provider should plan specific qualification groups for students with disabilities. *

1 2 3 4 5

15. The implementation of a plan (e.g. prepared by a planning reception center) to host these students greatly improves their educational inclusion. *

1 2 3 4 5

16. The university/VET provider is not prepared for the educational inclusion of students with disabilities. *

1 2 3 4 5

17. Students with disabilities struggle to keep pace with the learning rhythms of other students, and may need mentoring. *

1 2 3 4 5

18. Conducting training courses within the university/VET provider on disability, helps teachers to become better acquainted with students with disabilities. *

1 2 3 4 5

19. I have little to no knowledge of assistive technologies or other communication systems, other than oral, such as sign language in order to be able to communicate with hearing impaired students or other students that face difficulties in communicating. *

1 2 3 4 5

20. You need more flexible work schemes to be followed by students with disabilities but the assessment should be the same for all students *

1 2 3 4 5
21. When I have students with disabilities in class it is quite difficult to adjust the contents and materials subject to the needs of the students. *

1 2 3 4 5

Below are a number of teaching situations, please indicate how often do you make use of them, with the following assessment: 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Fairly often; 5 = Always

1. The notes and the course material are supplied before classes. *

1 2 3 4 5

2. I start lectures with a reminder summary of the previous class. *

1 2 3 4 5

3. Visual aids are used during the classes (pictures, powers, diagrams ...) *

1 2 3 4 5

4. I encourage students to expand and do more research on the subject. *

1 2 3 4 5

5. In classes involving assignments of practical nature, working is organized in cooperative groups. *

1 2 3 4 5

6. Both in theoretical and in practical classes and training all students use the same materials (notes and case studies). *

1 2 3 4 5
7. I use different methodological formats to adapt to the learning styles of students. *

1 2 3 4 5

8. ICT is fundamental to the delivery of my content and implementation of the activities of students *

1 2 3 4 5

Questions on assistive technology (AT)

1. What is your level of knowledge and skills in using AT? *
   - a. No knowledge
   - b. Little knowledge
   - c. Some knowledge
   - d. Good knowledge
   - e. Extensive knowledge

2. Have you ever taken a course on AT? *
   - a. Yes
   - b. No

3. Interested in receiving training about AT? *
   - a. Yes
   - b. No

4. What would be your preferred method for learning about AT *
   - a. One-on-one individualized instruction
   - b. Hands-on instruction in group setting
   - c. Attending workshops or conference sessions
   - d. Formalized courses

Please write any additional remarks you may have on the above questions.
Thank you for your time!
### 11.4 ALdia Reporting Template – Design meetings on the training needs of the target groups

<table>
<thead>
<tr>
<th>Name of the Partner</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of the Design Meeting</td>
<td></td>
</tr>
<tr>
<td>Number of Participants</td>
<td></td>
</tr>
<tr>
<td>TGs represented</td>
<td></td>
</tr>
<tr>
<td>Methods used in recruitment and FG implementation</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
</tr>
</tbody>
</table>

#### Key findings (please sum-up the results of the discussion)

<table>
<thead>
<tr>
<th>Engagement questions’ results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration questions’ results</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training needs – students with disabilities’ perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training needs – HE/VET professionals’ perception</td>
</tr>
<tr>
<td>Accessible learning - students with disabilities’ perception</td>
</tr>
<tr>
<td>Accessible lectures design - HE/VET professionals’ perception</td>
</tr>
<tr>
<td>Challenges in designing / delivering accessible lectures (students with disabilities perception)</td>
</tr>
<tr>
<td>Challenges in designing / delivering accessible lectures (HE/VET professionals’ perception)</td>
</tr>
</tbody>
</table>

Exit questions’ results

Other comments

Evidences provided