adore
Accessibility in Digital Communication Higher Education Curricula

IO1 Gap analysis on accessibility training needs analysis for university teaching and training staff in fields related to communication

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1 Introduction

This report presents a gap analysis between the accessibility training needs for university teaching and training staff in fields related to communication. This report focuses on three main perspectives:

1) Analysis of the accessibility training needs of **university teaching and training staff** in fields related to communication.
2) Analysis of the accessibility training needs of university teaching and training staff in fields related to communication from the **students' viewpoint**.
3) Analysis of the issues faced by **end user groups** when it comes to accessing digital content.

The goal is to identify those areas where the staff require training in accessibility. It aims to identify the respondents' levels of knowledge in accessibility in different areas, such as legislation, the creation of accessible content and understanding the use of assistive technologies. It also addresses the extent to which the teaching and training staff consider accessibility in their current curricula.

The data was collected through 3 surveys. The target groups involved were (1) higher education teaching and training staff in fields related to communication, (2) students learning in fields related to communication and (3) end user groups, such as people with disabilities, older adults and people whose mother language is different from the majority population where they live. The surveys were implemented in the three different university partner countries and through other contacts with colleagues working in fields related to communication. These surveys generated an overview of training needs that need to be addressed by the project ADORE. This gap analysis can be transferred to other universities in Europe looking to identify the accessibility

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training needs of their teaching and training staff working in the field of communication.

This report forms the foundation of the needs-based accessibility training toolkit that is produced in Result 3. The report guides the project team on what needs to be covered by the training resources to be aligned with the current level of accessibility knowledge/training of university teaching and training staff working in the field of communication and end user needs.

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2 Methodological background

In order to develop the gap analysis on the accessibility training needs for university teaching and training staff in fields related to communication, the project team used the following methodology that was based on the elaboration of three surveys. These surveys were created in an online environment, using the EU survey tool.

2.1 Defining accessibility

To make sure that respondents would understand what they were being asked in the questionnaire, respondents were asked to read the following definition of accessibility before completing the questionnaires.

Accessibility (to put it simply) is when all individuals, regardless of ability, can participate in society in an independent way. This can cover anything from being able to move and orientate oneself in the physical environment to absorbing information and performing services. Nevertheless, it is also about being treated well and having a chance to communicate on your own terms. Accessibility is about the whole of life, and the whole person.

When it comes to the digital world, accessibility can be defined as all individuals being able to use Information Communication Technology (ICT) systems, hardware, software, and tools, perform services and understand the content.

2.2 Survey development and validation

Three surveys were developed covering the student, staff, and end user perspectives. It should be highlighted that the student survey was not contemplated during the proposal stage; however, it was added in order to

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gain additional insights that can help guide the elaboration of the training toolkit in result 3.

2.2.1 Student questionnaire

A total number of 16 questions were asked to the students learning in the field of communication (see the questionnaire in Appendix A). The questions were divided into demographic and main questions. The demographic questions mainly included the characteristics of the participants as well as their educational and cultural backgrounds.

2.2.2 Staff questionnaire

The participants were asked a total of 22 questions (see the questionnaire in Appendix B). Questions focused on the participants' characteristics, as well as their professional background, and their approaches to digital accessibility.

2.2.3 End-user questionnaire

The participants were asked a total of 10 questions (See the questionnaire in Appendix C). The questions focused on understanding the how end users use the internet and what accessibility issues cause them the most problems. This survey was created based on the results of research that has been carried out in other EU-funded projects.

2.3 Survey translation

To increase the uptake amongst the target groups, particularly those that do not feel confident in reading and writing in English, the surveys were translated into 6 different languages, covering the main languages used in the project partner countries.

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Each survey was made available in the following languages:

- English
- Estonian
- Russian
- Slovenian
- German
- Swedish

The translated version of the surveys can be found in Appendix D of this document.

2.4 Survey implementation

All partners were encouraged their contacts to take part in and distribute the survey. Due to the nature and experience of the ADORE consortium, the roles in the distribution of the survey were divided as follows:

- TALLINN, MARIBOR, and SALZBURG universities were in charge of distributing the student and staff surveys within their university departments and amongst any external networks and partners they may have.
- FUNKA and INUK were in charge of distributing the end user survey amongst their networks and partners.

The data collection period for the survey was from 18.03.2022 to 18.05.2022. Respondents were found using a convenience sample where, in the universities participating in the project, a request for a response was sent as an email to the email lists of students and staff in the field of communication, three reminder emails were sent, including, in the case of the staff, reminder phone calls.

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Members of the International Academy for Intercultural Research (IAIR), International Communication Association (ICA), European Communication Research and Education Association (ECREA) and European Masters in Intercultural Communication (EMICC) network were also sent an email invitation to take part in the survey if they are students or staff in the field of communication.

The aim was to collect 50 completed questionnaires from staff and 100 from students and end users.

This was an exploratory study aimed at gathering primary information on the topic of digital accessibility. The results cannot be generalised to the general population of students and staff in the field of communication in the participating countries.

2.5 Data collection and analysis

The following chapters in this document analyse the information collected in the surveys, draw the main conclusions, and highlight potential gaps in the training needs of the university staff and teachers in the field of communication. This analysis provides the groundwork for the development of the accessibility of training toolkit in Result 3.

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3 Student survey results

3.1 Student profile

In total, 182 students (N=182) participated in the research. A very small number of participants chose to ignore some questions; hence, the responses, in this case, were classified as 'No answer'. Full-scale descriptive statistical breakup has not been performed since the data is mainly categorical, of which the majority is nominal. However, analysis has been done based on the mode/frequency of variables.

As shown in Figure 1, the bulk of the participants were studying in Estonia (114), and based on the analysis in Figure 2, the students mainly studied at Tallinn University. Slovenia (34) and Austria (21) took the second and third positions respectively. Some students (3) did not declare their country of study, while other students studied in some other countries (10).

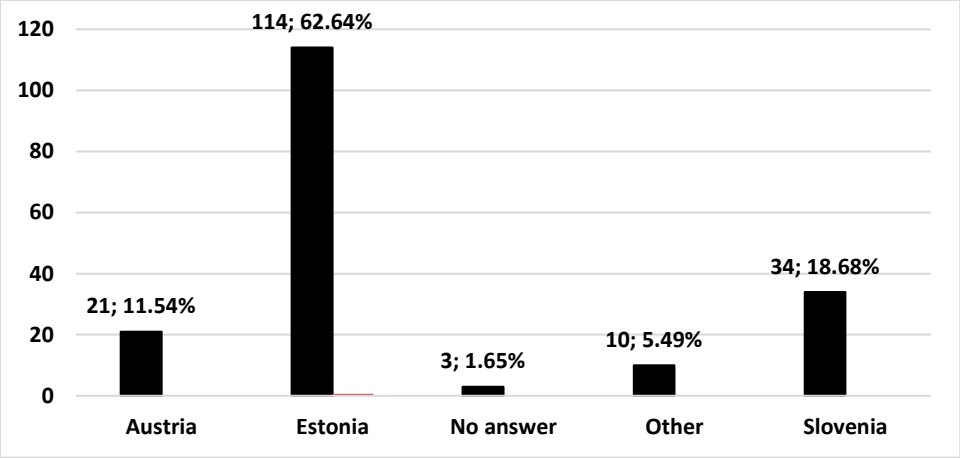

Figure 1 In which country do you currently study?

The questionnaire was designed in a way that allowed students to participate from different universities, as the research does not restrict the participants to specific universities. However, participants could type their university names into the text box without restriction on formats. While participants from the

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same university used different names, such as typing the names in different languages, unique names were extracted based on the most frequently used name formats. For instance, some participants used the name Tallinna Ülikool, which is the Estonian name of Tallinn University. Other participants used TLU, which is the short form of Tallinn University. However, the recurring name was Tallinn University, so the other names were changed accordingly to attain a unique value. As shown in Figure 2, the majority of the participants (63%) were students of Tallinn University in Estonia, followed by University of Maribor in Slovenia (16%) and Paris Lodron Universität Salzburg, aka Paris Lodron University of Salzburg in Austria (12%) respectively. All the participating universities were Europe-based, except University of South Florida, which is a North American university.

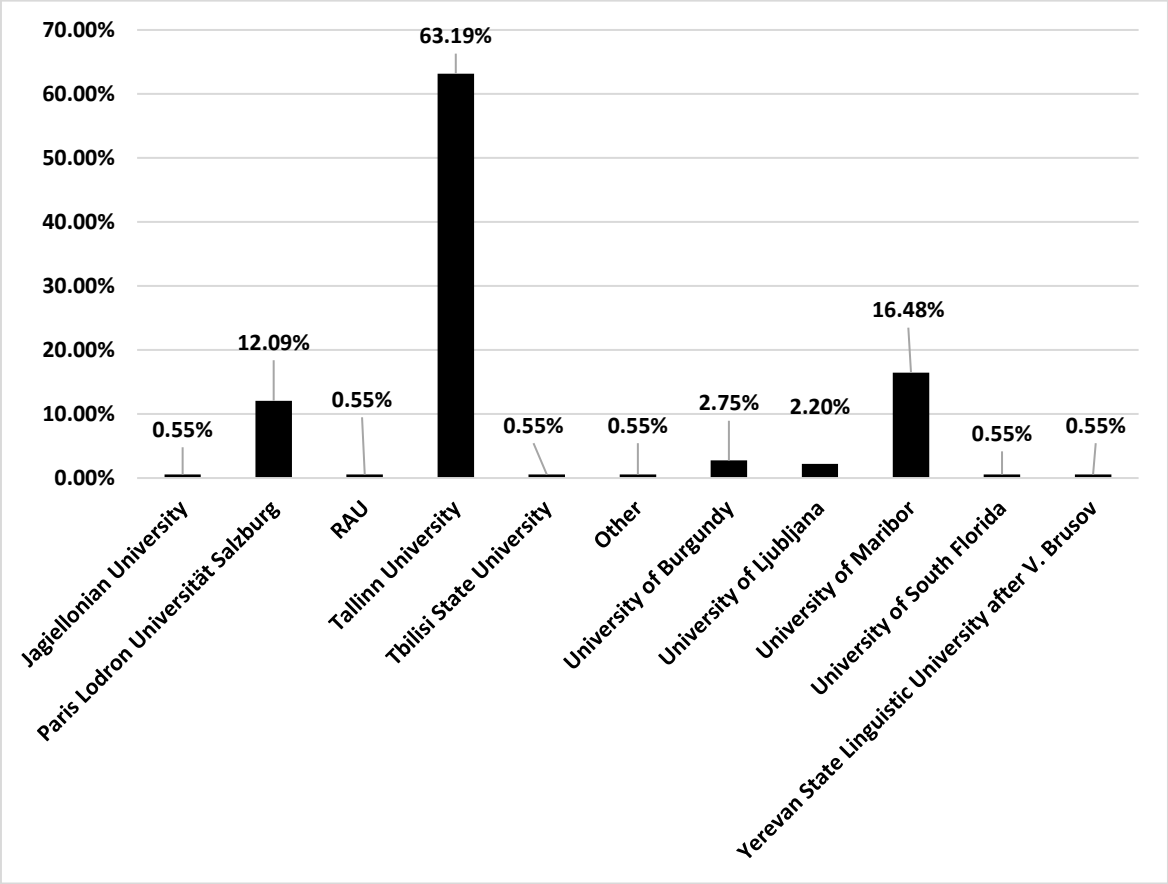

Figure 2 What is the name of your university?

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In trying to understand participants' programmes of study, they were asked to answer the question, 'What is the name of the programme you are studying?'. Answers were structured to be open-ended to allow participants to freely identify their study programmes. Hence, there are no unique values for study programmes.

Figure 3 shows the gender segregation in a pie chart format. 59% of the participants were female while 38% were male. A very small portion of the participants (1%) identified as being neither male nor female. 2% of students chose not to answer this question. The ratio of male to female is 0.63, which means that the female sample is 1.59 times bigger than the male sample.

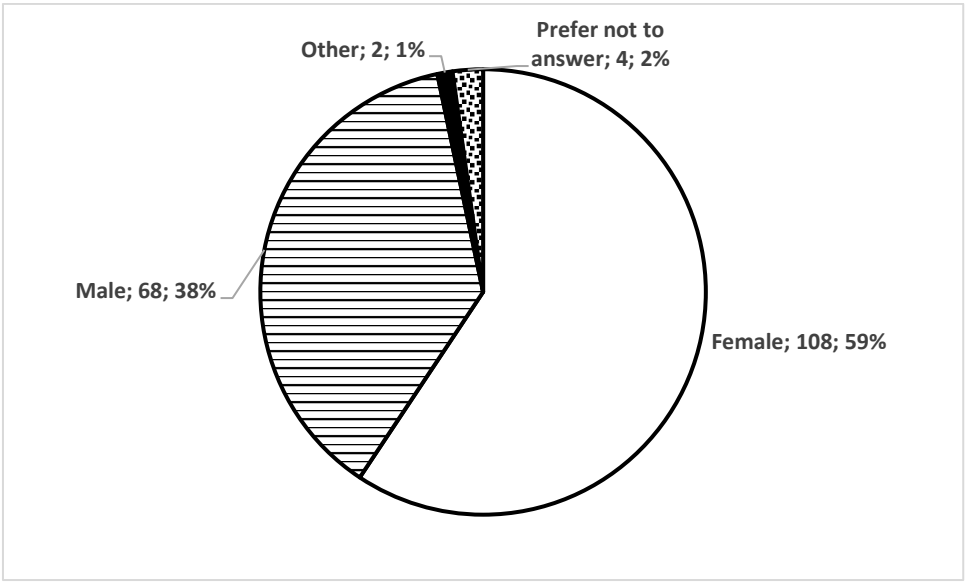

Figure 3 What is your gender?

The questions were structured to acquire participants' ages based on age groups. As shown in Figure 4, most of the participants lean toward the younger generation, with the dominating age group being 18-30, followed by 31-49. Only 3% of the participants confirmed to be older than 50 years old.

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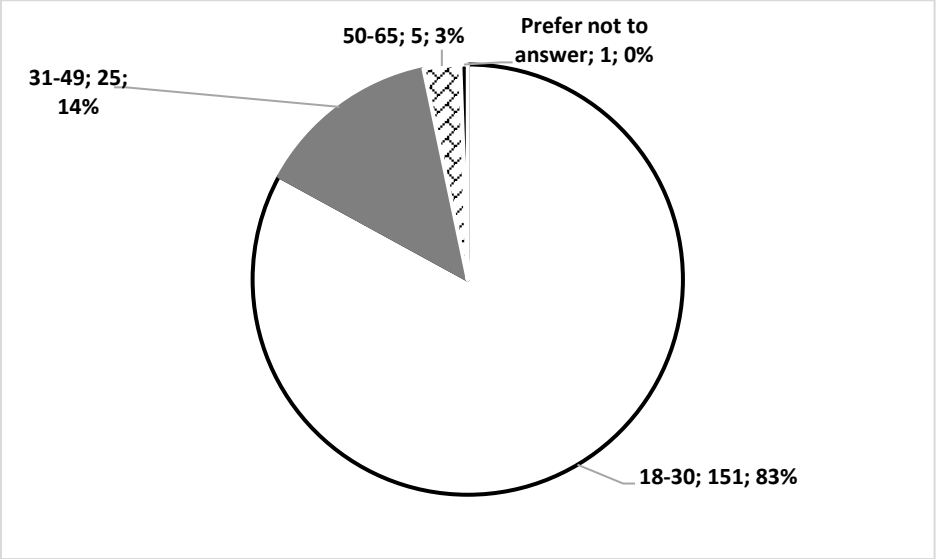

Figure 4 What is your age?

As shown in Figure 5, the participants were mostly bachelor's degree students, which is evident in the age group segregation. Some participants were taking integrated BA/MA programmes. Only nine (9) participants were PhD students. While some participants have identified themselves as bachelor's and master's students, this analysis will only consider the unique identified values (i.e. those that have selected Bachelor's student or Master student options) in comparing the count of bachelor's degree students with master's degree students. Bachelor's degree participants, at a total of 96, were 1.43 times higher in number than master's degree participants, 67.

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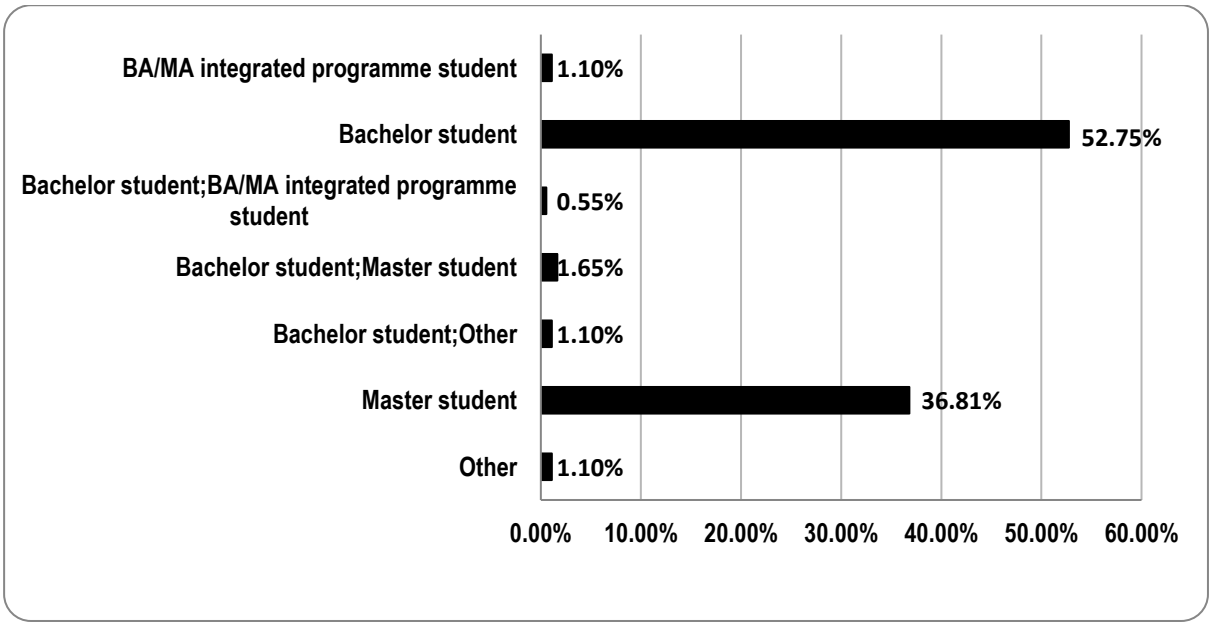

Figure 5 I am responding as a: (multiple answers allowed)

Figure 6 shows the results of the question on disability and linguistic background. Participants were allowed to select multiple answers, considering that more than one option may be applicable. The results show that most of the participants did not associate themselves with disability. However, some participants claimed to be caring for people with disabilities, or older adults. Those who associated themselves with disability (i.e. selected the options, 'a person with disabilities' or 'having a recognised disability') were small in number, accounting for 7.77% of the total. Four (4) participants considered themselves as older adults. 26 participants claimed to speak languages different from the language of the majority population, which signifies a presence of international students among the participants.

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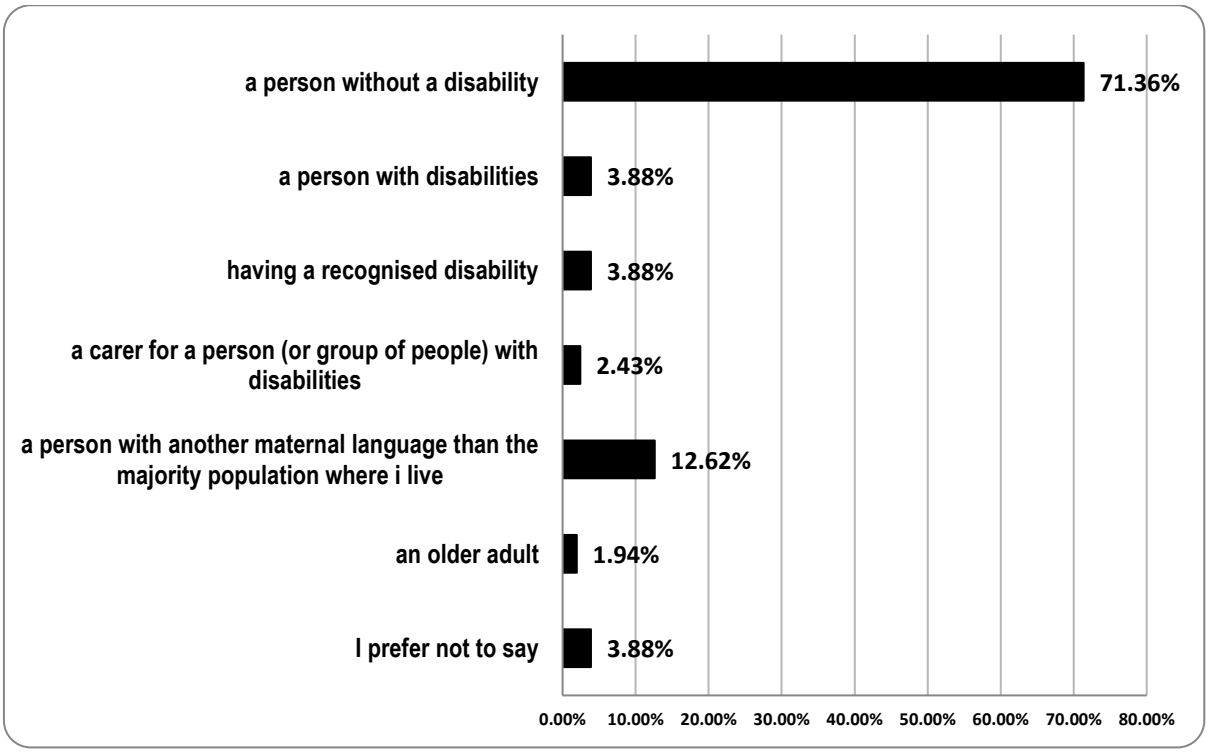

Figure 6 I would describe myself as: (multiple answers allowed)

3.2 Students: career field and digital accessibility

Figure 7 shows the preferred career of the participants. As multiple answers were allowed, one participant could have chosen more than one career field. The vast majority (58.34%) of the participants leaned towards the communication field, of which Social Media, Marketing, and Public Relations (PR) were the most preferred fields (12.50%, 12.14% and 11.78% respectively). The results show that participants are least interested in political participation (1.81%). As for technology-focused fields other than media, participants were less interested in human-computer interaction or interaction design (4.53%) than in other fields, but many showed interest in working in the technology field (8.33%). As it would turn out, the participants showed less interest (7.25% of them) in the fields that are most related to digital accessibility (human-computer interaction, digital inequalities / digital divide).

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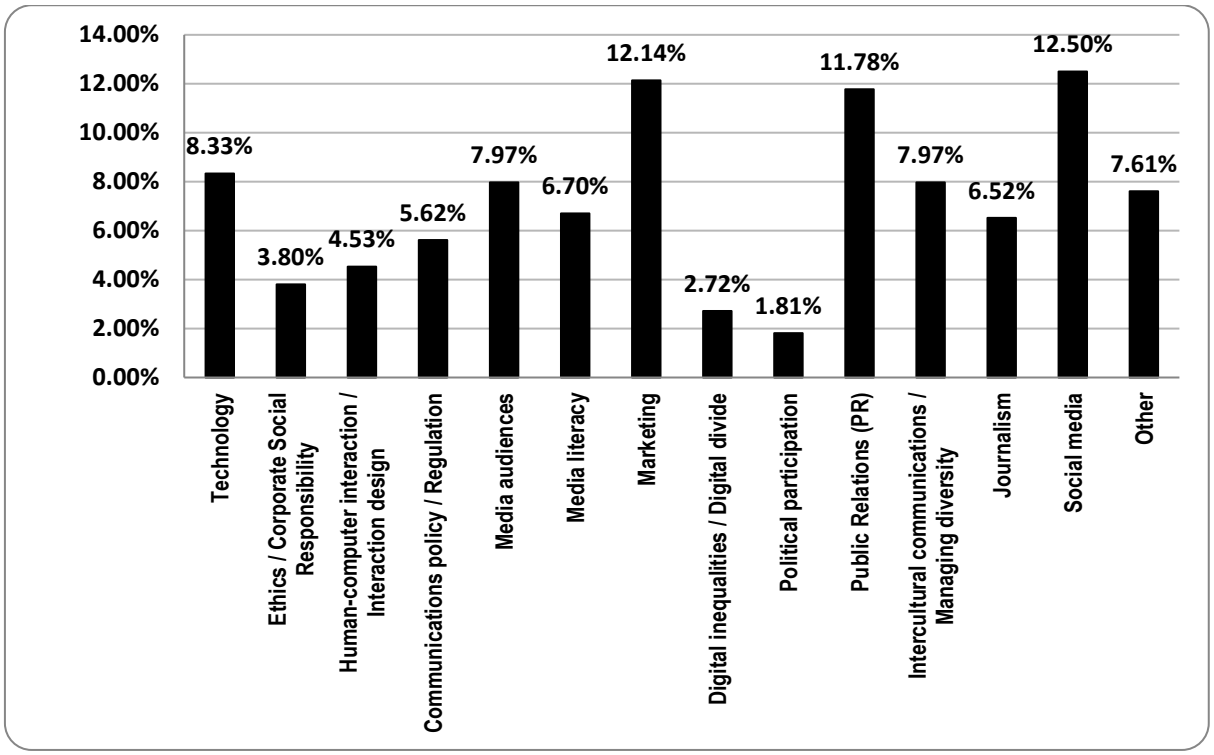

Figure 7 What career field would you like to go into?

As shown in Figure 8, the participants were asked to describe their knowledge of digital accessibility on a scale of 0-5, where 0 signifies 'No knowledge on digital accessibility' and 5 signifies 'High level of knowledge on digital accessibility'. 34.07% of participants stated that they had low awareness of digital accessibility (selecting options 0...2 on the scale). At a scale of 4, most of the participants (26.92%) claimed to have sufficient knowledge on digital accessibility. 17.58% of the participants picked 5 on the scale, showing a high level of knowledge on digital accessibility. Exactly 12.64% of the participants picked 1 on the scale, which means they have some knowledge on digital accessibility or have heard about it. Participants who picked 2 and 3 on the scale accounted for 35.71% of the total, signifying that they have awareness of digital accessibility. In general, the participants were fairly knowledgeable about digital accessibility, as those with little knowledge are only a small fraction of the sample population.

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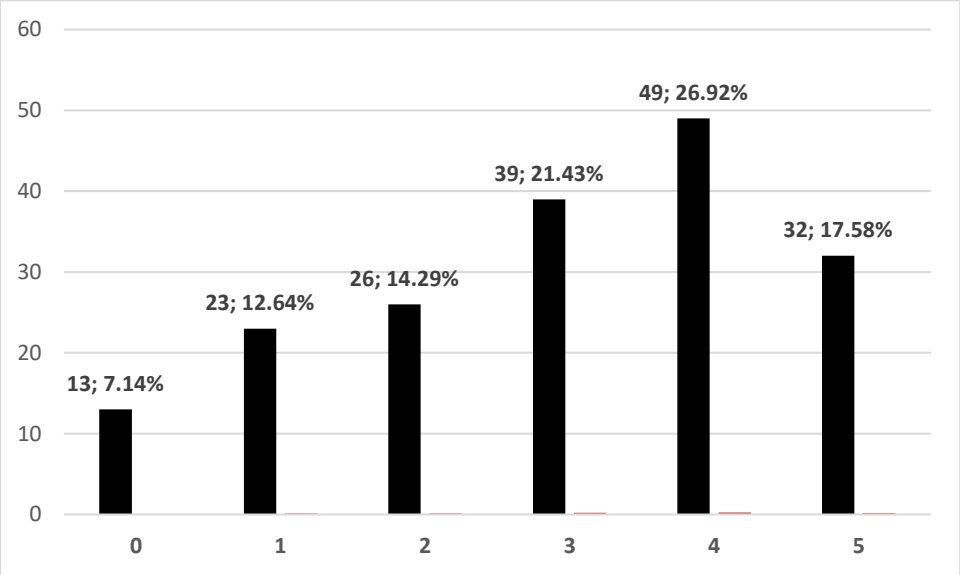

Figure 8 On a scale of 0-5, how would you describe your knowledge of digital accessibility?

Regarding the level of knowledge about digital accessibility, the scope of this study included participants' interest in learning about digital accessibility (Figure 9). Based on ratings 2 and 3 on the scale, about 41.76% of the sample population learned towards the middle, which means they may undergo training on digital accessibility. However, most of the participants learned towards the higher level, and accounted for about 47.8% of the sample population based on ratings 4 and 5. Based on ratings 1 and 2, only a small fraction of the sample (10.44%) showed little interest in learning about digital accessibility.

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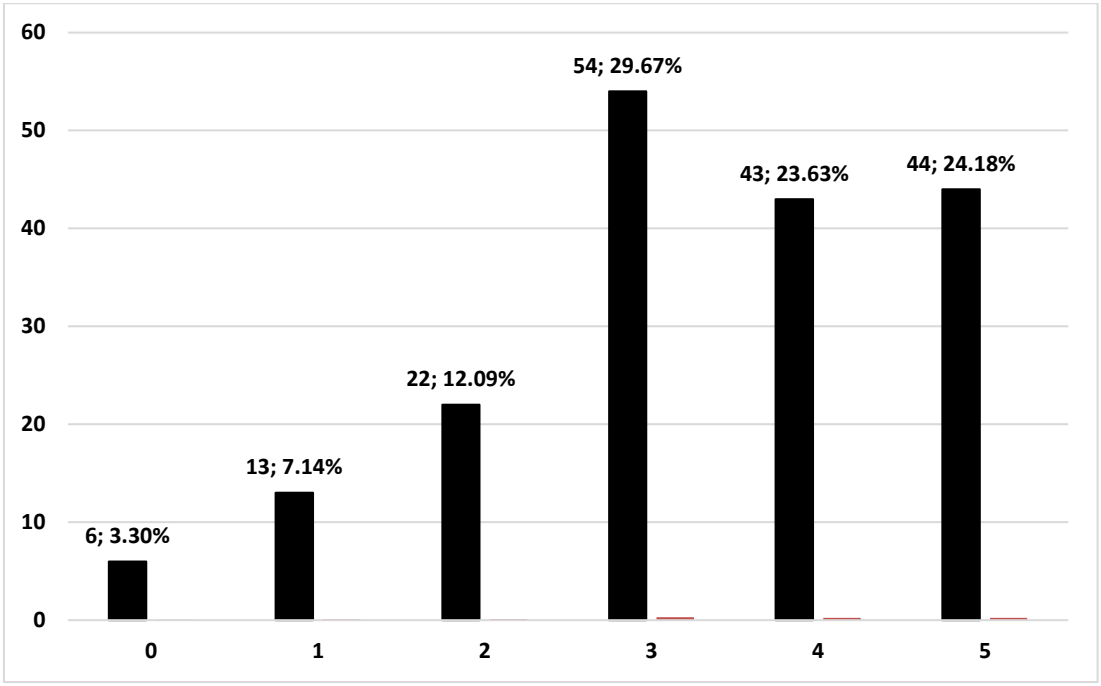

Figure 9 On a scale of 0-5, to what extent would you be interested in learning about digital accessibility?

3.3 Study-related situation about specific support services for students: From the students' view

As Figure 10 shows, in regards to accessibility training, 57.14% of the participants claimed to have not participated in any training on accessibility, 24.73% claimed to have received training, while 18.13% said they did not know.

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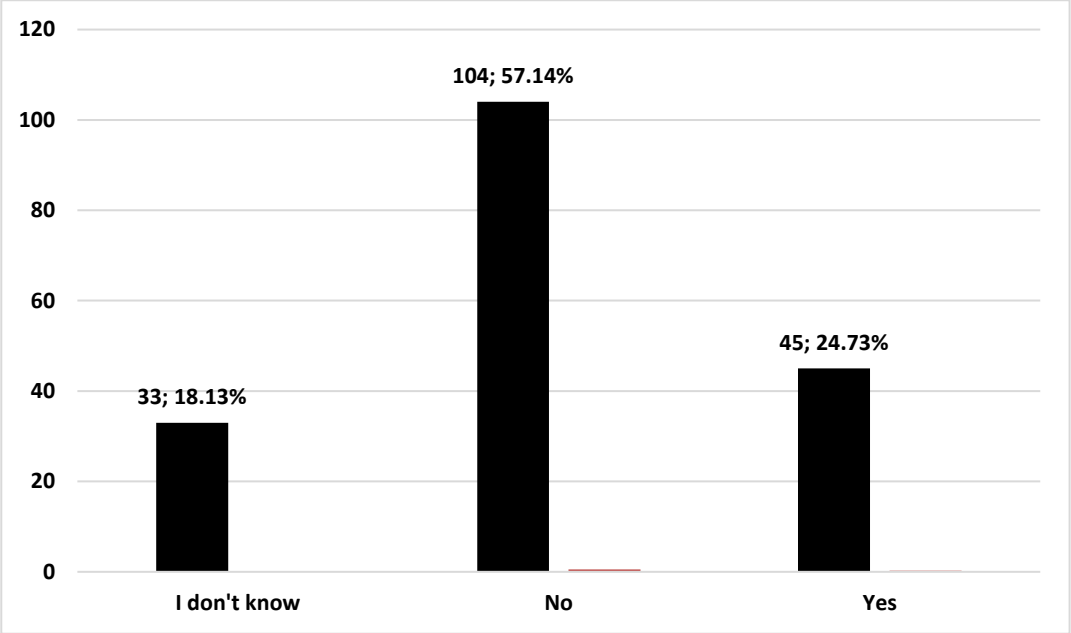

Figure 10 During your studies, have you taken part in any training (face to face, online, blended learning) on the subject of accessibility?

More than half of participants (52.20%) asserted that digital accessibility would form an important part of their future career (see Figure 11). A low portion (3.85%) claimed that digital accessibility would not form an important part of their future career. 33.52% of the participants chose 'maybe', signifying that they see a possibility such an occurrence-taking place, while 10.44% were unsure.

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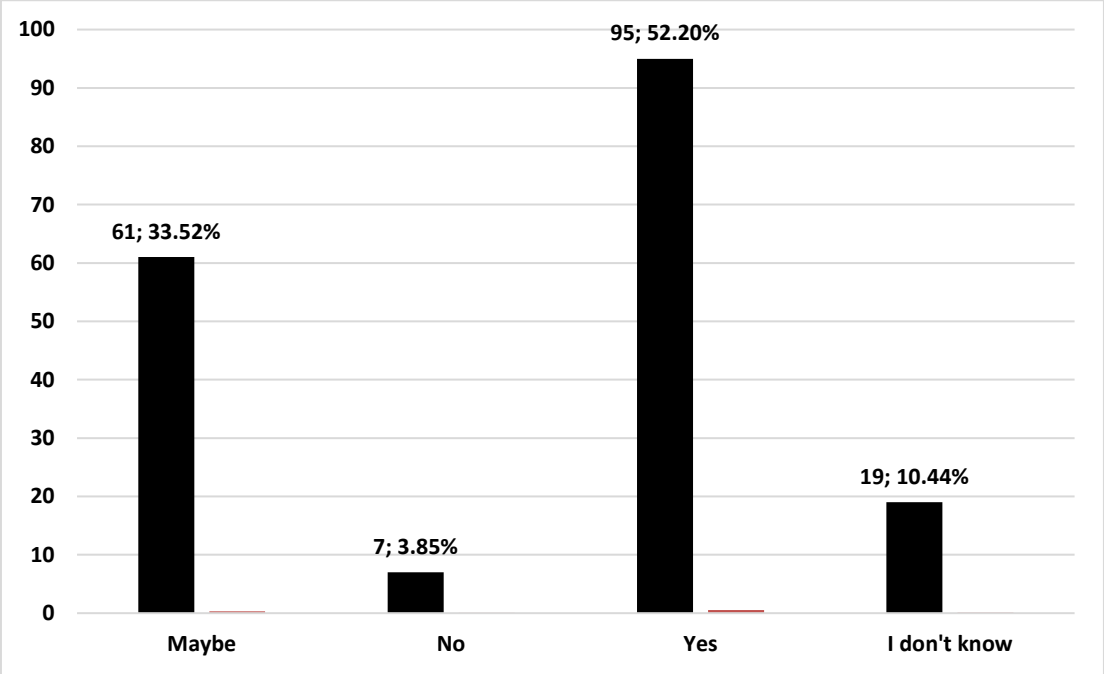

Figure 11 Do you think that accessibility will form an important part of your future career?

According to Figure 12, 39.56% of the participants ascertained that their universities provide learning support for students with disabilities, 53.30% were unaware of such a setting, while the last 7.14% affirmed that their universities do not provide disability-learning support.

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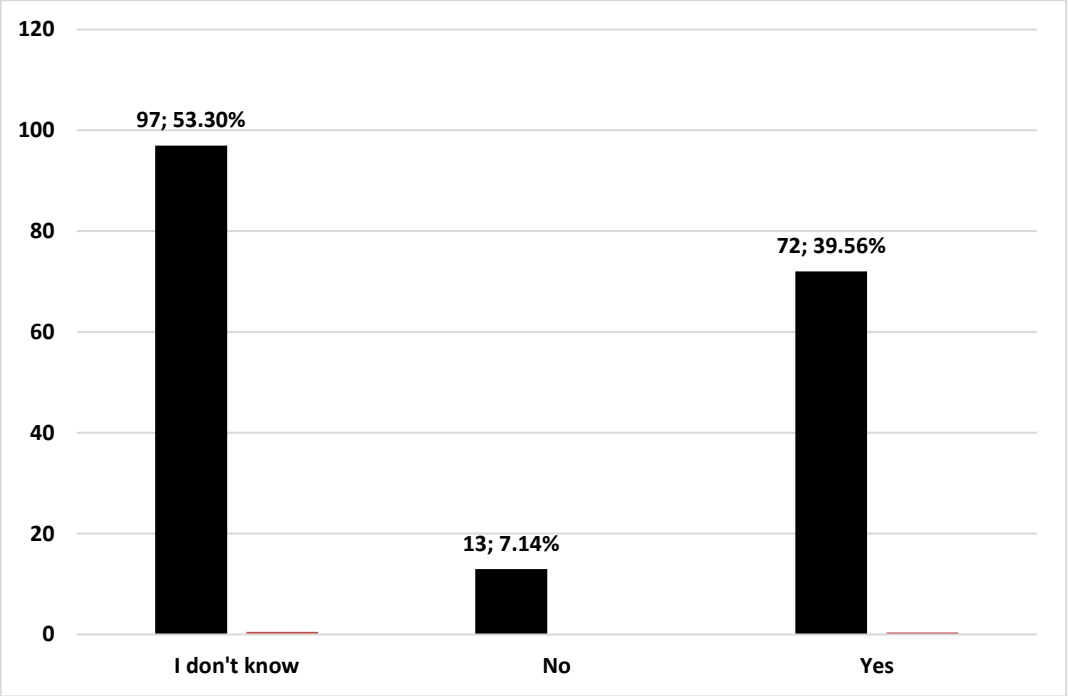

Figure 12 As far as you know, in your university, are learning support services provided for students with disabilities?

Related to study materials, most participants affirmed having the materials in accessible formats and incorporation of multiple ways of learning, which account for 54.95% (see Figure 13) and 61.54% of the sample (see Figure 14), respectively.

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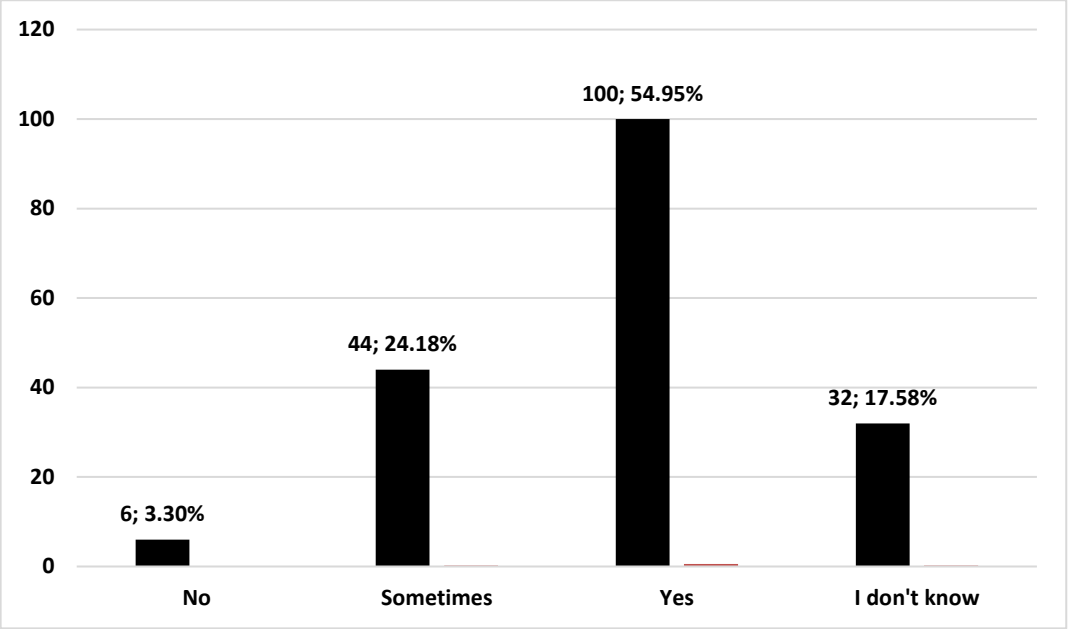

Figure 13 Do you have access to learning materials in accessible formats?

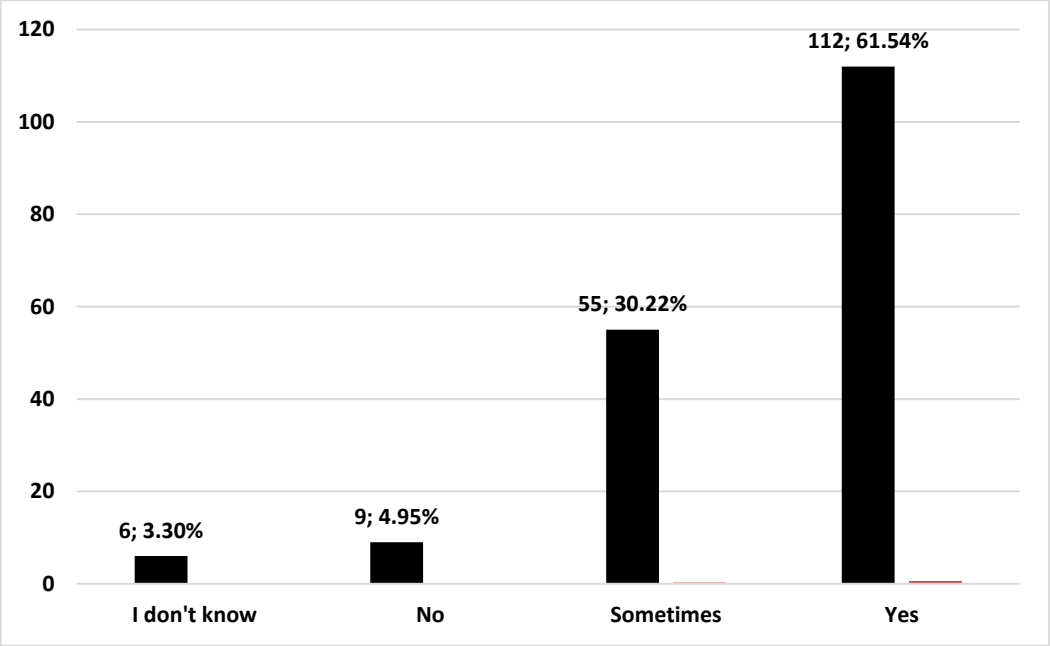

Figure 14 Are you provided with multiple ways of learning (e.g. combination of text/video/audio/image)?

As for recorded lectures for later viewing (see Figure 15), the majority of the participants claimed that they were sometimes available during their studies

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(47.25%), although 28.02% still reported to have this option in place. 23.08% of the participants reported not having access to recorded lectures.

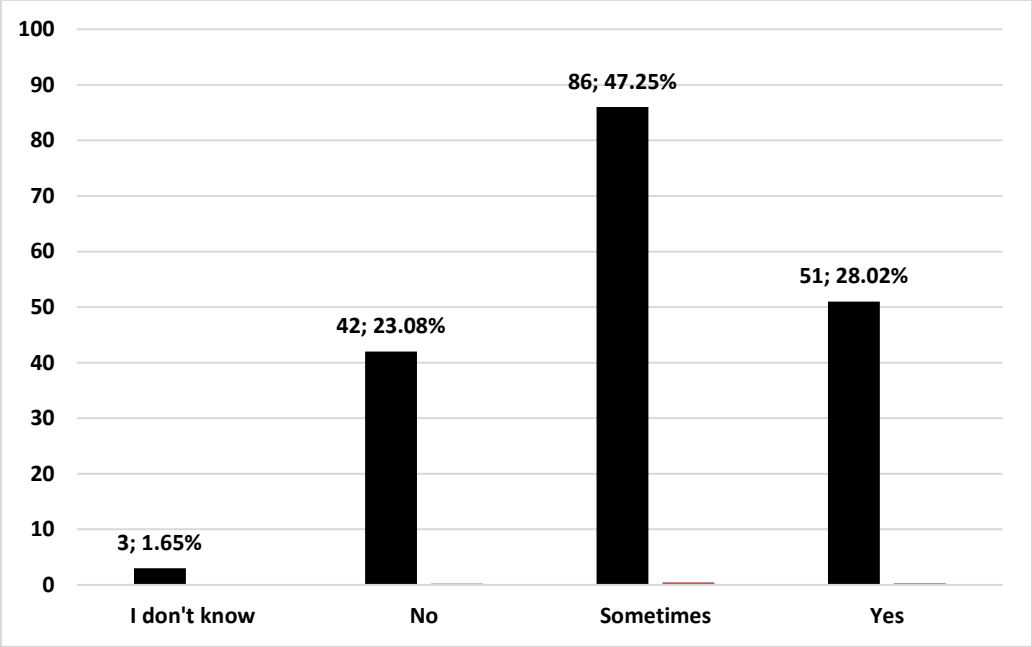

Figure 15 Do you have access to recorded presentations or lectures for later viewing?

3.4 Summary

The students in this study are students at European universities and come from major communication fields such as Social Media, Public Relations, and Marketing. The results show that the students have a considerable interest in learning about accessibility. They are not sure about learning support services at their universities. The students state they know quite a lot about accessibility. However, our educated guess is that this is due to a misunderstanding as to what accessibility means. This would have to be one of the first things to clear up in any training material that is provided. It seems that the students do not understand the real importance of accessibility. It would be a good idea to include an aspect in the training toolkit on what

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accessibility is and whom it does affect to show understanding and importance of the issue.

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4 Staff survey results

4.1 Staff profile

The research enlisted the help of 57 staff members (N=57). Because a tiny percentage of participants chose to ignore certain questions, the replies in this circumstance were categorized as 'No answer'.

41 (71.93%) of the survey participants defined themselves as teaching or training staff members, while the other 16 (28.07%) participants stated that they were not teaching or training staff (see Figure 16).

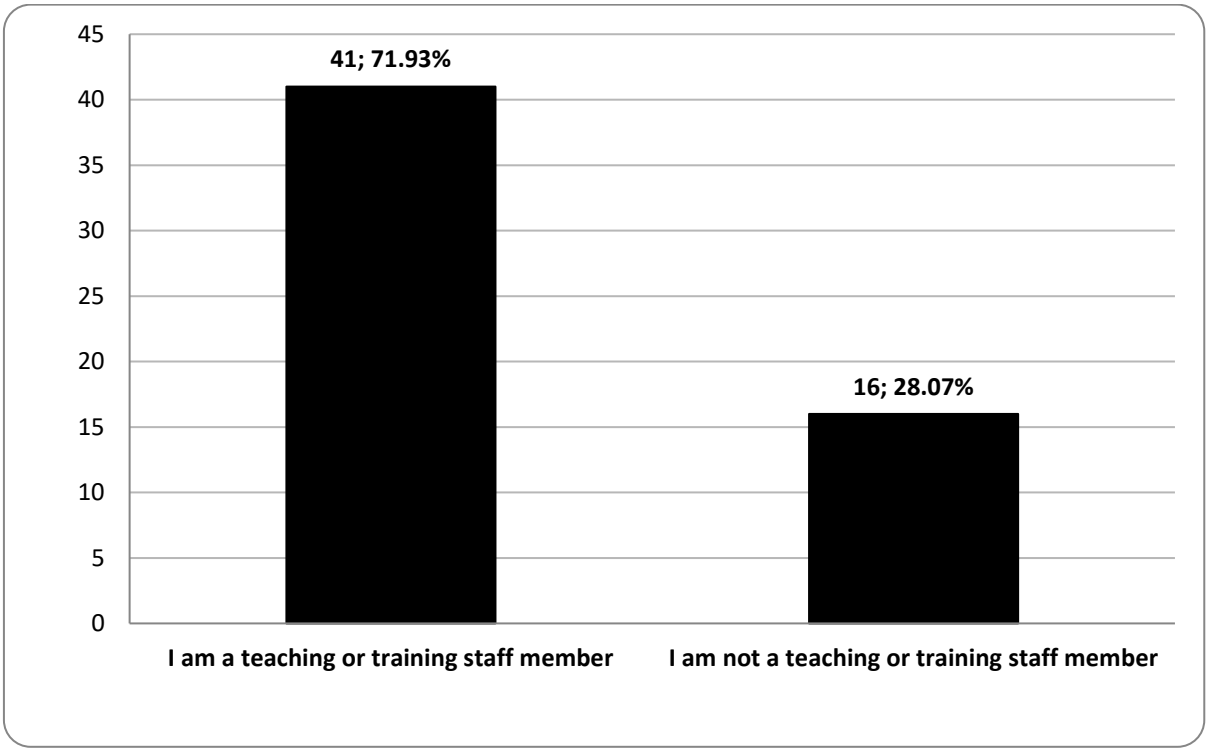

Figure 16 Are you a teaching or training staff member?

As shown in Figure 17, most of the participants are working in Estonia (15).

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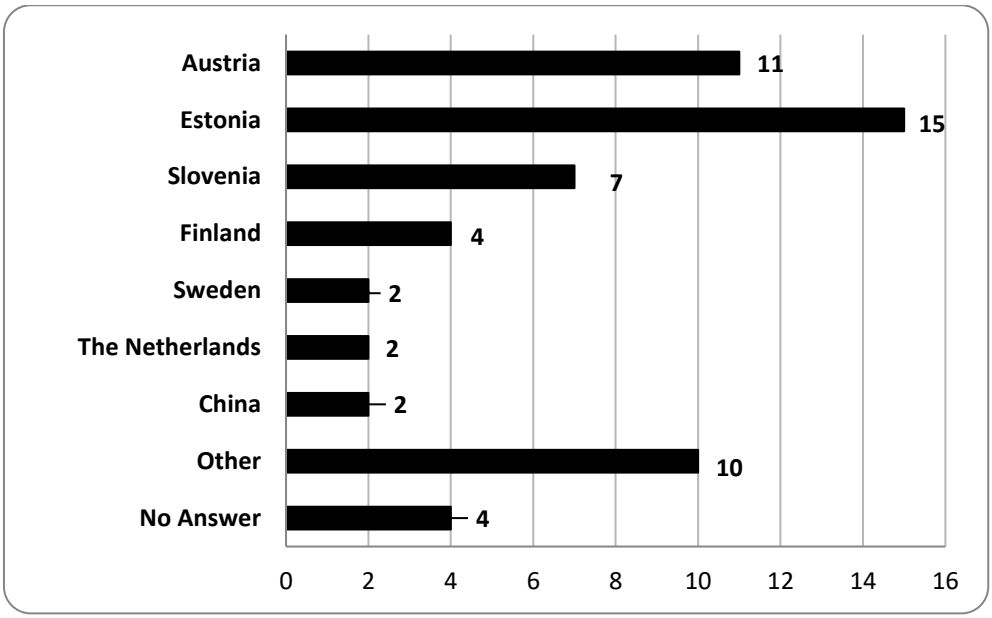

Figure 17 In which country do you work?

Based on the analysis in Figure 18, the staff members mainly work at Tallinn University (14 responses). Austria received 11 responses followed by Slovenia with 7 responses. Some participants (4) did not declare their country, while other staff members work in some other countries (10).

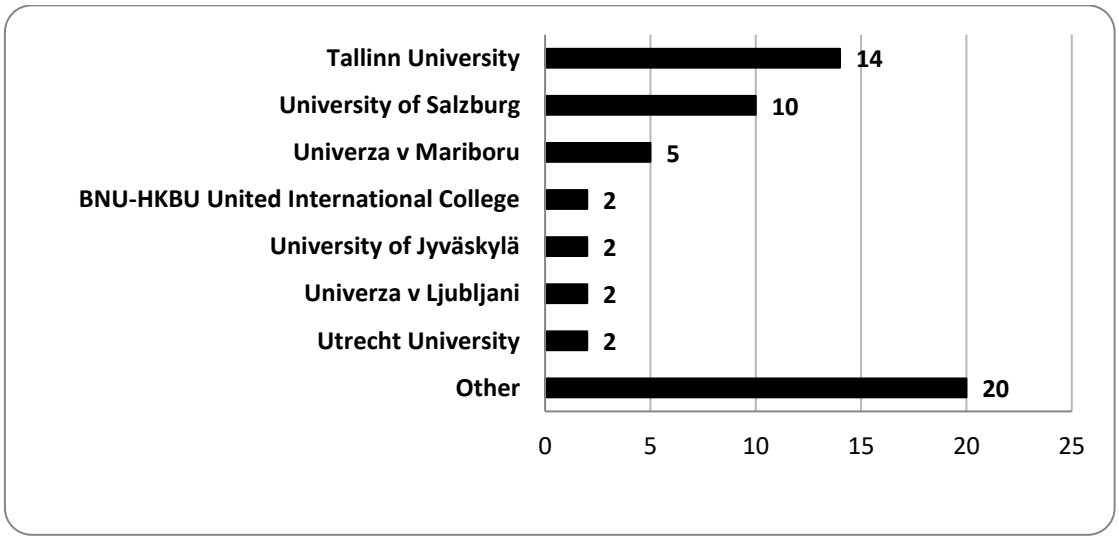

Figure 18 What is the name of your university?

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The questionnaire was designed in a way that allowed staff members to participate from different universities, as the research does not restrict the participants to specific universities. However, participants could type their university names into the text box without restriction on formats. While participants from the same university used different names, such as typing the names in different languages, unique names were extracted based on the most frequently used name formats. For instance, some participants used the name Tallinna Ülikool, which is the Estonian name of Tallinn University. However, the most recurring name was Tallinn University, so the other names were changed accordingly to attain a unique value. As shown in Figure 18, the majority of the participants (26%) are staff members of Tallinn University in Estonia, followed by University of Salzburg in Austria (18%) which is also known as Paris Lodron Universität Salzburg and University of Maribor in Slovenia (9%) respectively.

As multiple answers were allowed, one participant could have chosen more than one option for this question. As shown in Figure 19, the participants were mostly teaching staff (75%). Some participants are staff working in the employees' training (4.69%) and learning support (4.69). Only four (4) of them are management staff. None of the participants was staff working in the communication and marketing department. Six (6) of the participants (9.38) answered as 'other'.

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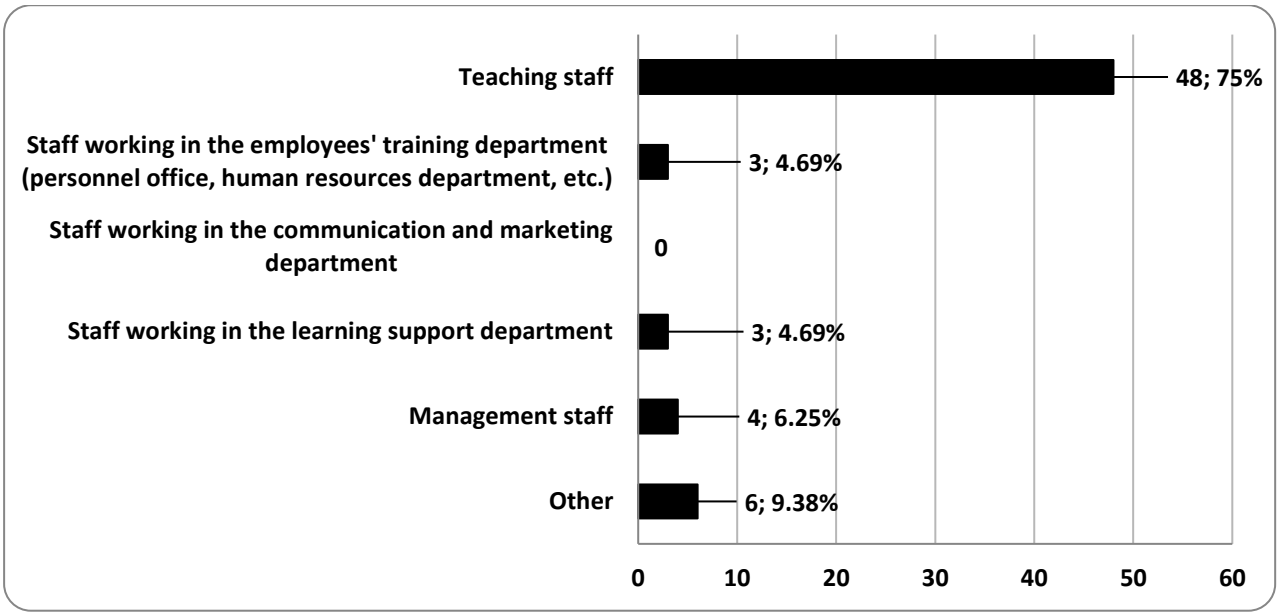

Figure 19 I am responding as a member of the… (multiple answers allowed)

Figure 20 shows the gender segregation in a pie chart format: 50.88% of the participants were female while 45.61% were male. A very small portion of the participants (1.1%) identified as being neither male nor female. The ratio of male to female is 0.63, which means that the female sample is 1.59 times bigger than the male sample.

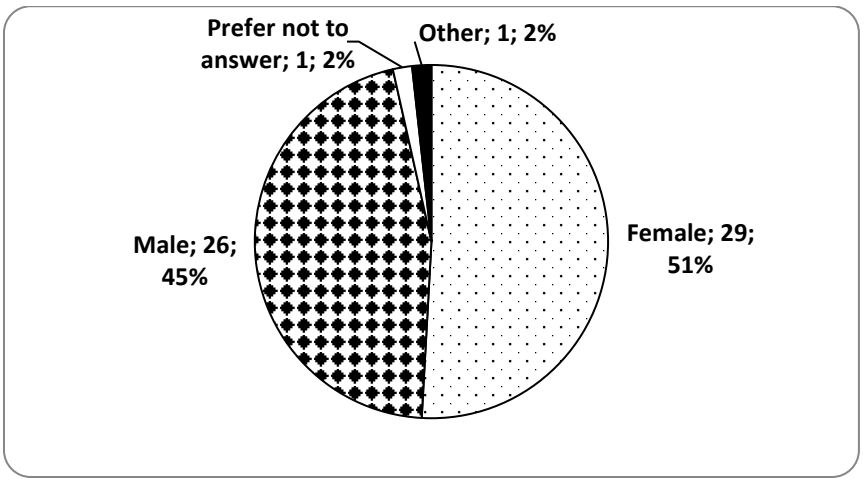

Figure 20 What is your gender?

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The questions were structured to acquire participants' ages based on age groups. As shown in Figure 21, most of the participants with the dominating age group being 31-49, followed by 50-65. Only 3.51% of the participants were confirmed to be older than 65 years old; 5.26% of the participants preferred not to mention their ages.

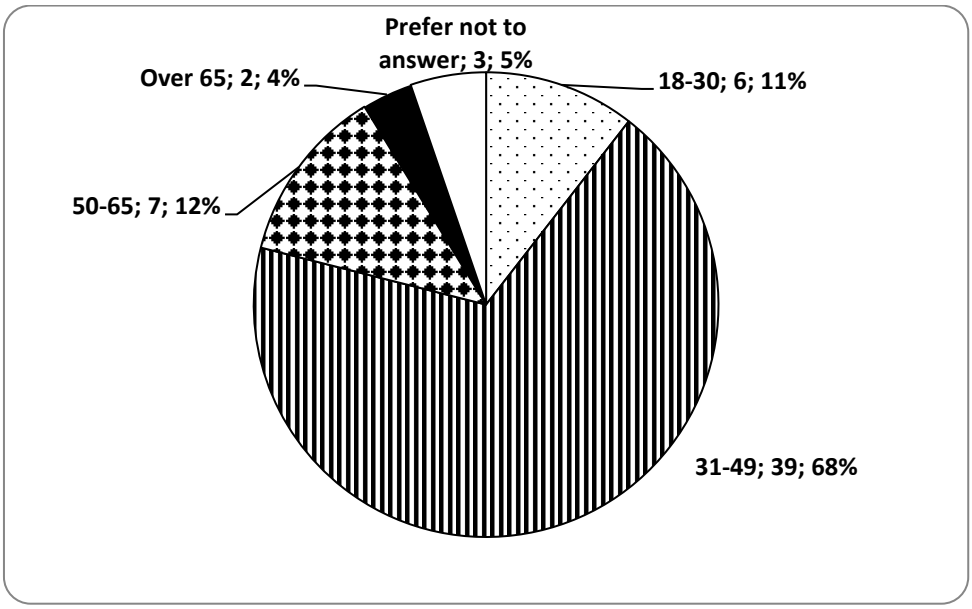

Figure 21 What is your age?

Figure 22 shows the results of the question on disability and linguistic background. Participants were allowed to select multiple answers, considering that more than one option may be applicable. The results show that most of the participants did not associate themselves with disability (73.02%). However, some participants claimed to be caring for people with disabilities (4.76%), or older adults (3.17%). Those who associated themselves with disability (i.e. selected the options, 'a person with disabilities' or 'having a recognised disability') were small in number, accounting for 6.35% of the total. Two (2) participants considered themselves as older adults, and five (5) participants preferred not to say. 6.35% of participants claimed to speak languages different from the language of the majority population.

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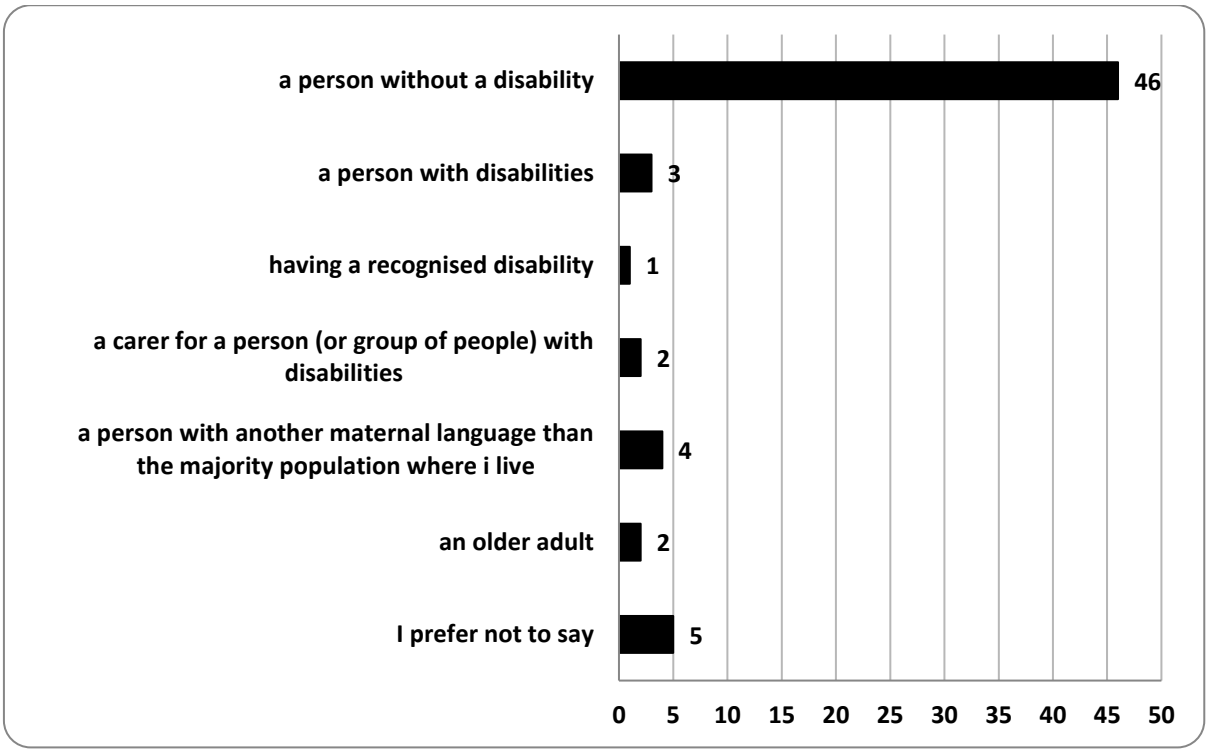

Figure 22 I would describe myself as… (multiple answers allowed)

4.2 Staff: digital accessibility aspects

Figure 23 illustrates the awareness of participants about accessibility requirements in a pie chart format. 47% of the participants affirmed that they have information about the obligation of the European Web Accessibility Directive. 53% of participants chose no as an answer to this question.

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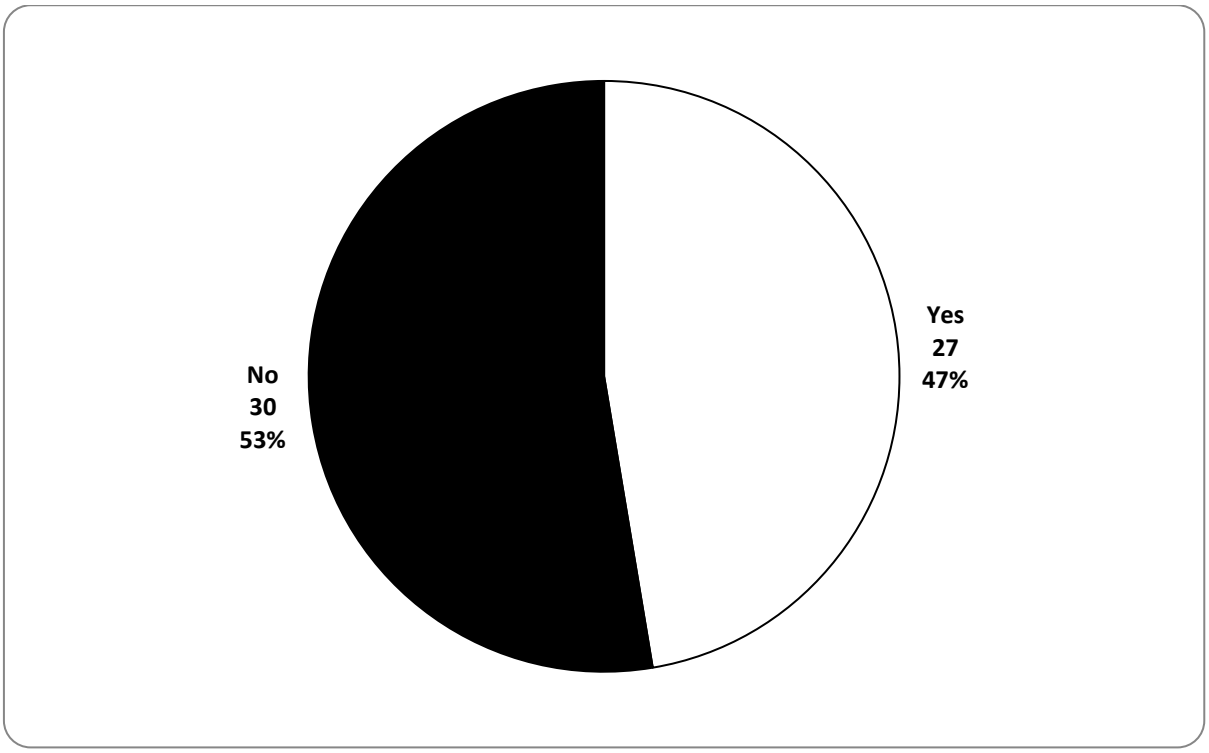

Figure 23 Are you aware that since September 2020, the European Web Accessibility Directive obliges public sector websites, documents and apps to comply with minimum accessibility requirements?

As shown in Figure 24, the participants were asked to describe their knowledge of digital accessibility on a scale of 0-5, where 0 signifies 'No knowledge on digital accessibility' and 5 signifies 'High level of knowledge on digital accessibility'. 49.13% of participants stated that they had low awareness of digital accessibility (selecting options 0...2 on the scale). At a scale of 2, most of the participants (26.32%) claimed to have awareness of digital accessibility. Only 5.26% of the participants picked 5 on the scale, showing a high level of knowledge on digital accessibility. Exactly 8.77% of the participants picked 1 on the scale, which means they have some knowledge on digital accessibility or have heard about it. Participants who picked 3 and 4 on the scale accounted for 45.62% of the total, signifying that they have sufficient knowledge on digital accessibility. In general, the participants were

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fairly knowledgeable about digital accessibility, as those with little knowledge are only a small fraction of the sample population.

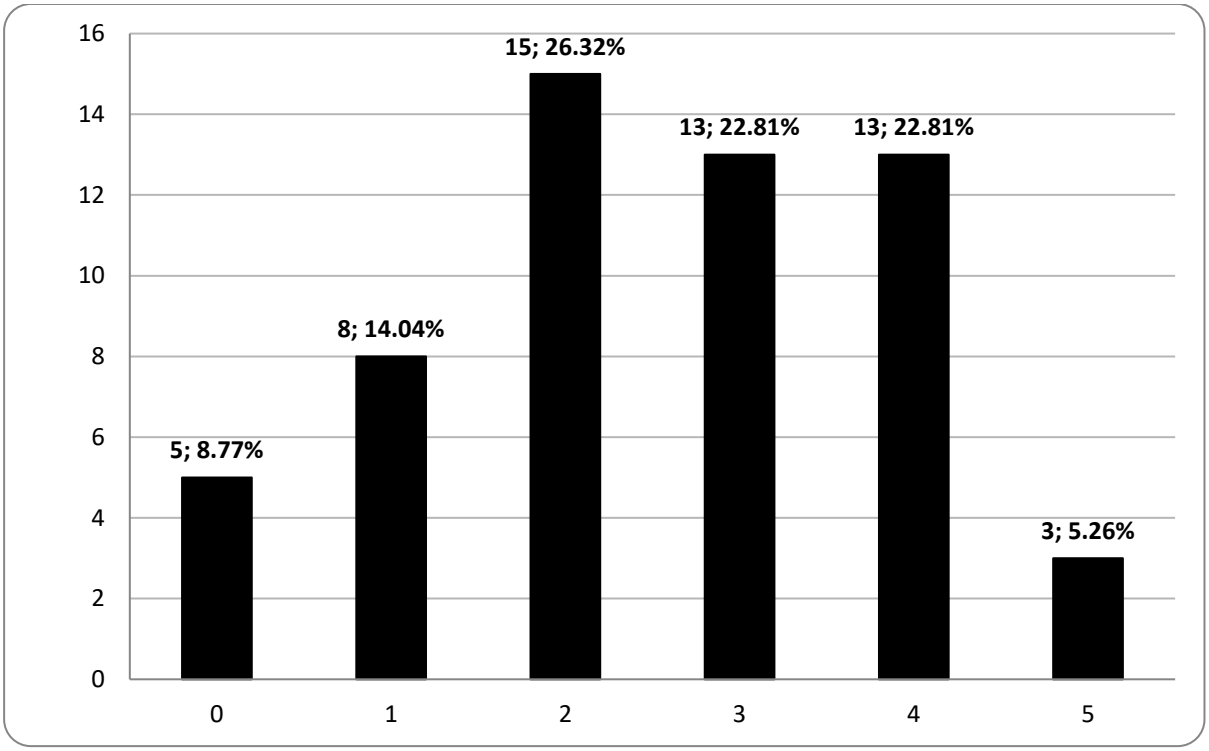

Figure 24 How would you describe your knowledge of digital accessibility on a scale of 0-5?

Figure 25 shows the results of the question on gaining knowledge methods on digital accessibility. Participants were allowed to select multiple answers, considering that more than one option may be applicable. Majority of participants (42.42%) chose self-study. 31 participants (31.31%) mentioned that they gained their knowledge by direct experience with students and 12 participants (12.12%) chose training as a method to learn digital accessibility.

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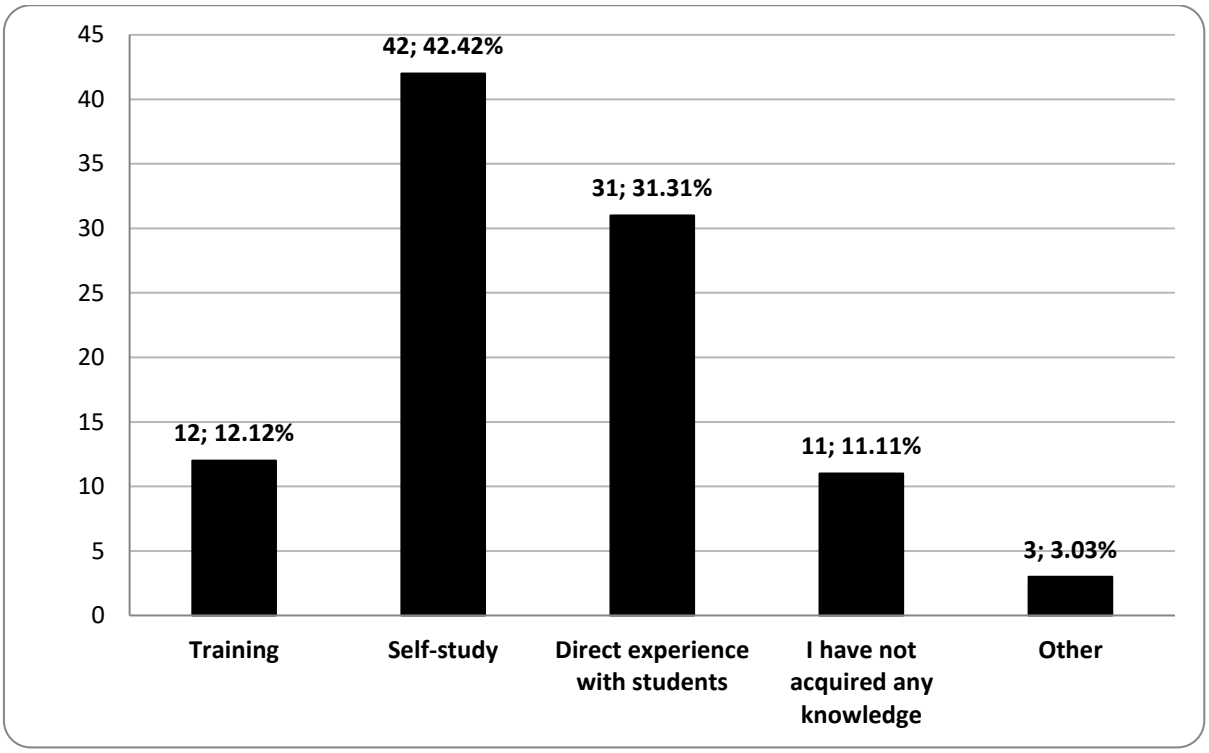

Figure 25 How did you gain your knowledge on digital accessibility? (multiple answers allowed)

Figure 26 depicts the resources that our participants find most useful in their work. Multiple answers are allowed to this question. The responses were fairly evenly distributed across available answers. We obtained nearly the same number of responses on 'Good practices on accessibility', 'Accessibility tips', and 'Online toolkits on accessibility', totalling 75.95% of all responses. While 33 of our participants (20.89%) chose 'Training activities on accessibility', five (5) (3.16%) chose 'other'.

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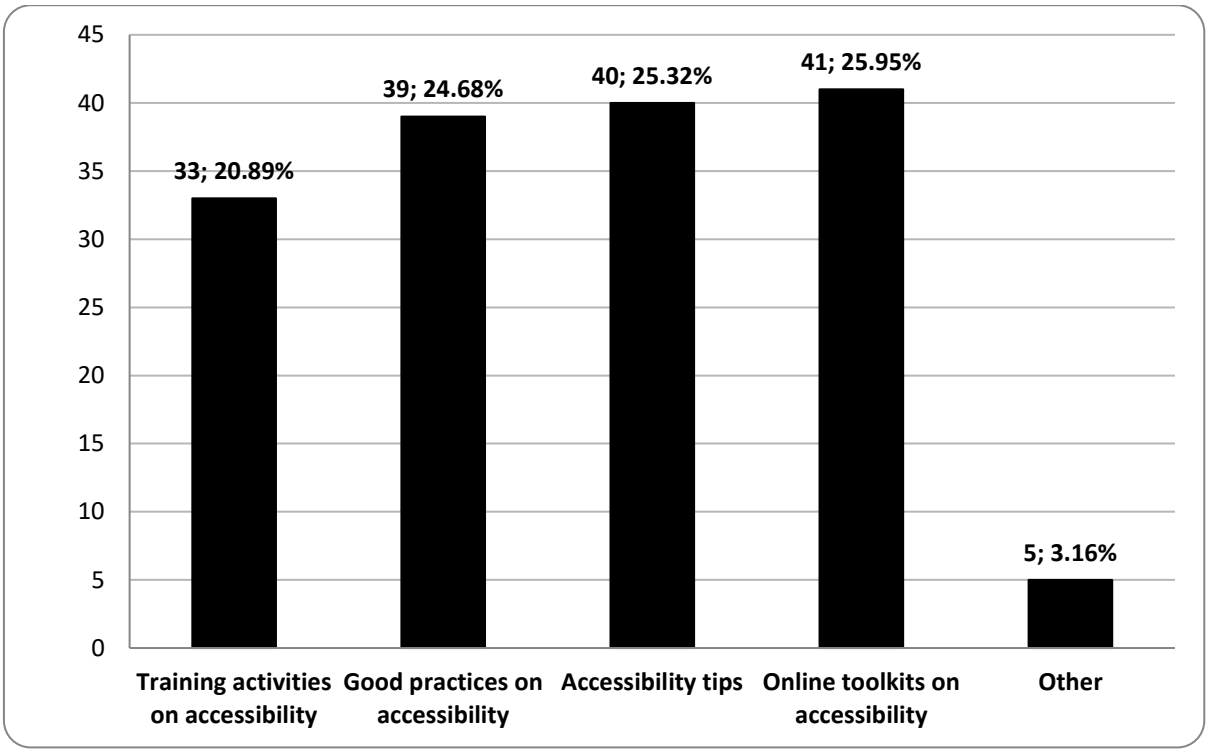

Figure 26 What kinds of resources (documentation, courses, etc.) do you think would be useful to help you with your work? (multiple answers allowed)

The responses to the question of how much time you are willing to spend on accessibility training courses are shown in Figure 27. The majority of our participants (47.4%) answered as 4 hours. It is followed by 8 hours, which is 35.1% of answers. Our participants who responded that 0 hours and 20 hours made a total of eight (8), representing 14.0% of the total number of participants. Two of our participants (3.5%) chose the "more than 20 hours" option.

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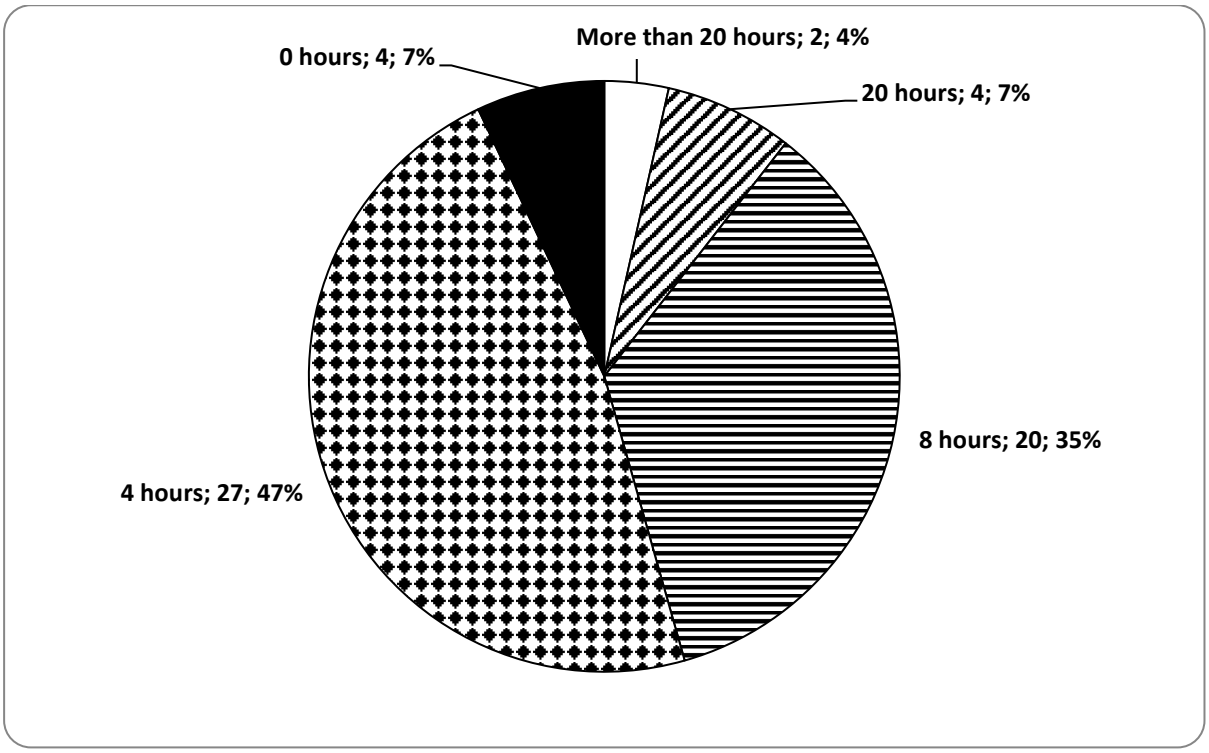

Figure 27 How much time would you be willing to spend on an accessibility training course?

Figure 28 shows the distribution of participants' answers to the question about which areas of accessibility are most relevant for them in teaching activities. Multiple answers were allowed to this question. The majority of respondents answered 'Creation of accessible content' (33.08%) and 'Assistive technology' (29.23%). The least relevant fields were 'Introduction to accessibility' (20%) and 'Legislation related to accessibility' (16.92). Only 1 (0.77%) participant gave the answer 'other'.

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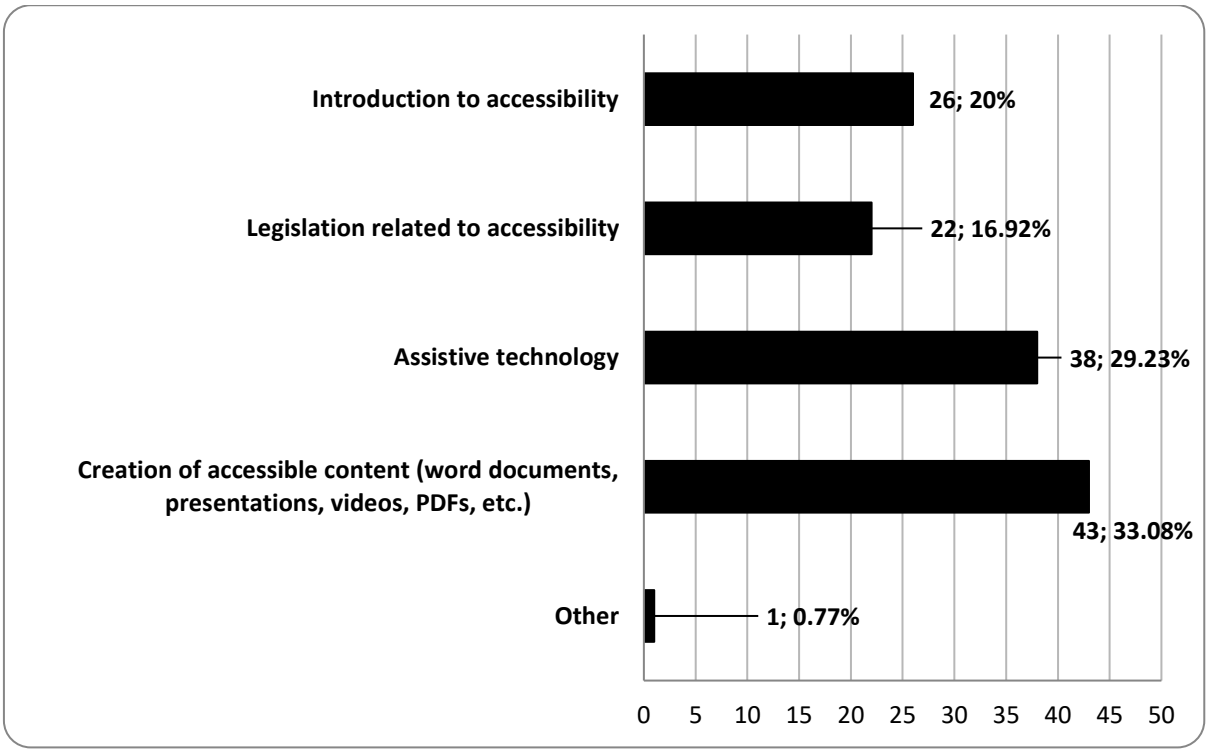

Figure 28 What areas of accessibility would you consider to be the most relevant to your teaching activities? (multiple answers allowed)

Figure 29 shows the results of the question on learning methods about accessibility. Participants were not allowed to select multiple answers to this question. Majority of participants (33.33%) chose the 'online course' answer. 15 participants (26.32%) mentioned that they prefer to learn about accessibility by a combination of online and face-to-face experience and 13 participants (22.81%) chose self-guided study as a preference to learn about accessibility.

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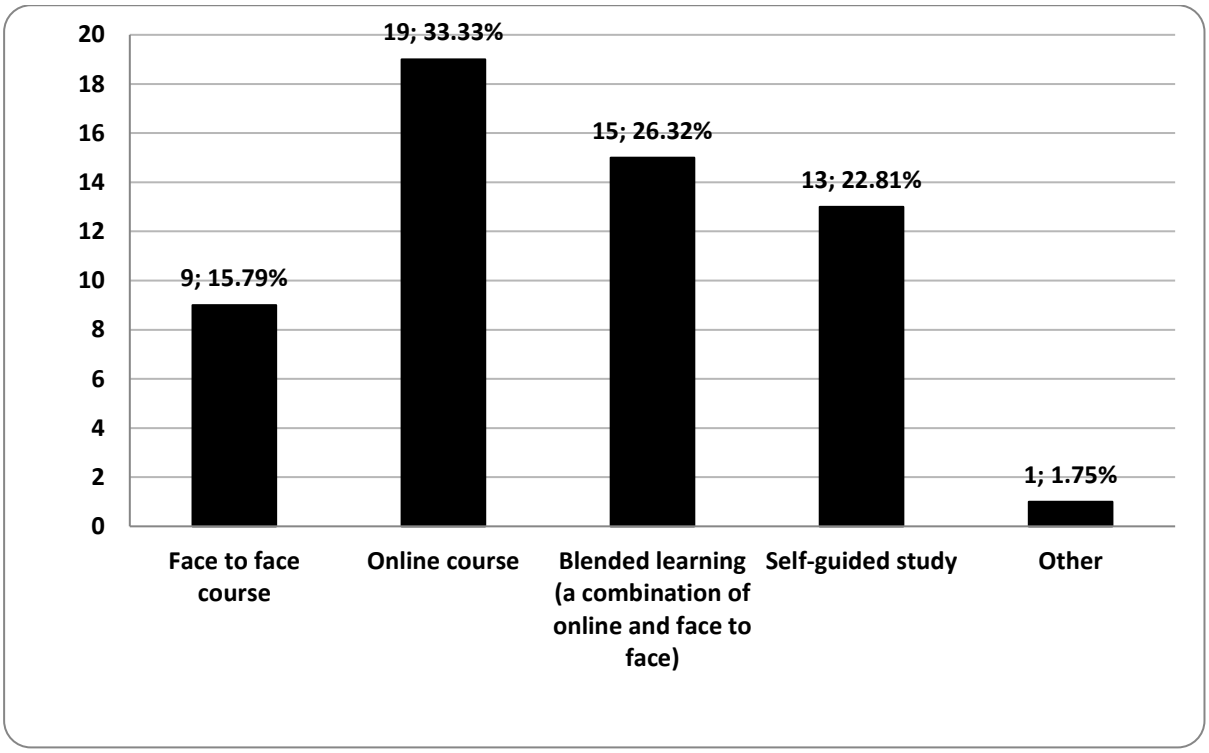

Figure 29 How would you prefer to learn about accessibility?

In Figure 30, there is an answer to whether the participants will use it as a course content if sufficient materials related to accessibility are provided. A total of 41 people (71.93 %) said they would use a potential material. While 12 participants (21.05%) remained undecided about whether or not to use it, two (2) participants (3.51%) answered that they would not. Two (2) people (3.51 %) who did not respond ignored this question.

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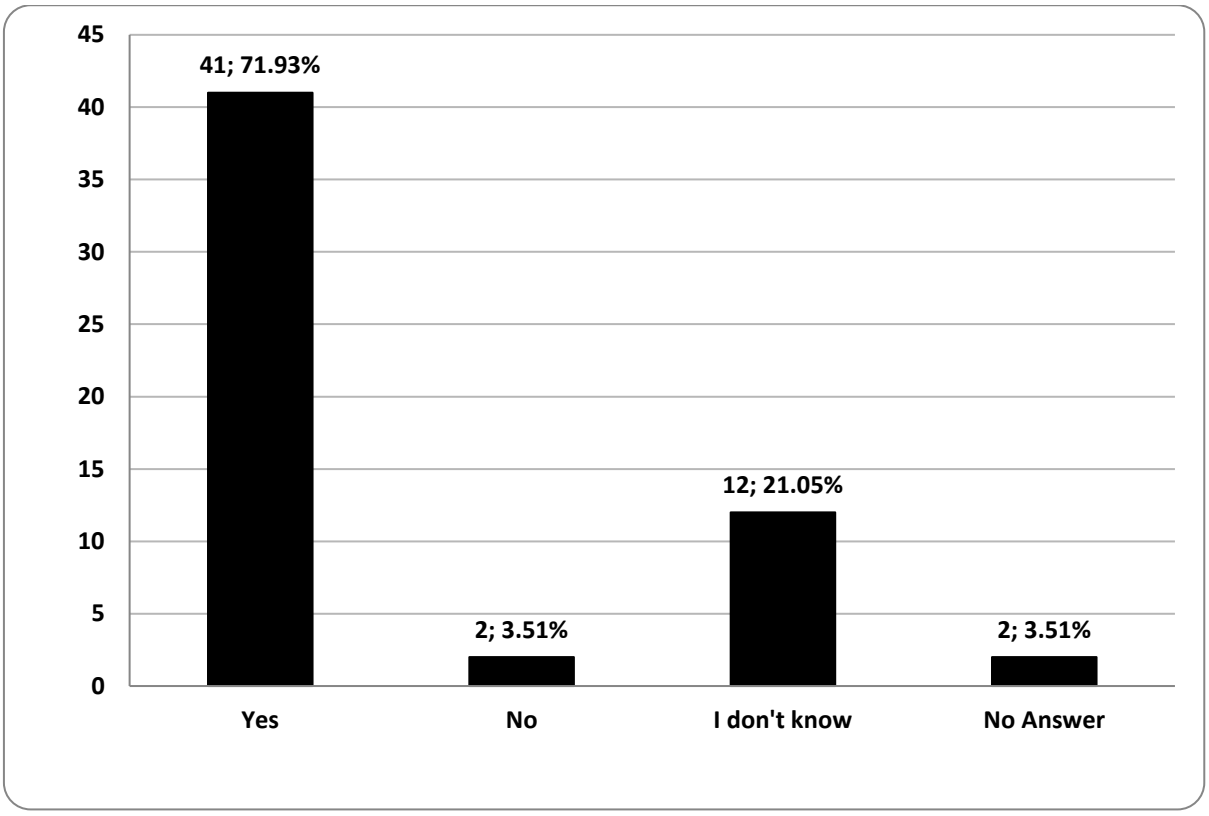

Figure 30 If there was training material available about accessibility, would you use it as content for your teaching/everyday working?

4.3 Study-related situation about specific support services for students: From the viewpoint of staff personnel

Participants were asked to indicate their amount of training in how to establish an inclusive learning environment for children with impairments on a scale of 0-5, where 0 signifies 'very poor' and 5 signifies 'excellent', as shown in Figure 31. The majority of the participants (33.33%) chose 0 which means student disability offices did not train lecturers. Only 10.53% of those polled chose 5, indicating that office-trained lecturers are excellent at creating an inclusive learning environment. 8.77% chose 2 on the scale, indicating that they thought the training was poor. Participants who chose 3 or 4 on the scale said the training was fair or good, totalling 33.33%. All of the participants answered the question.

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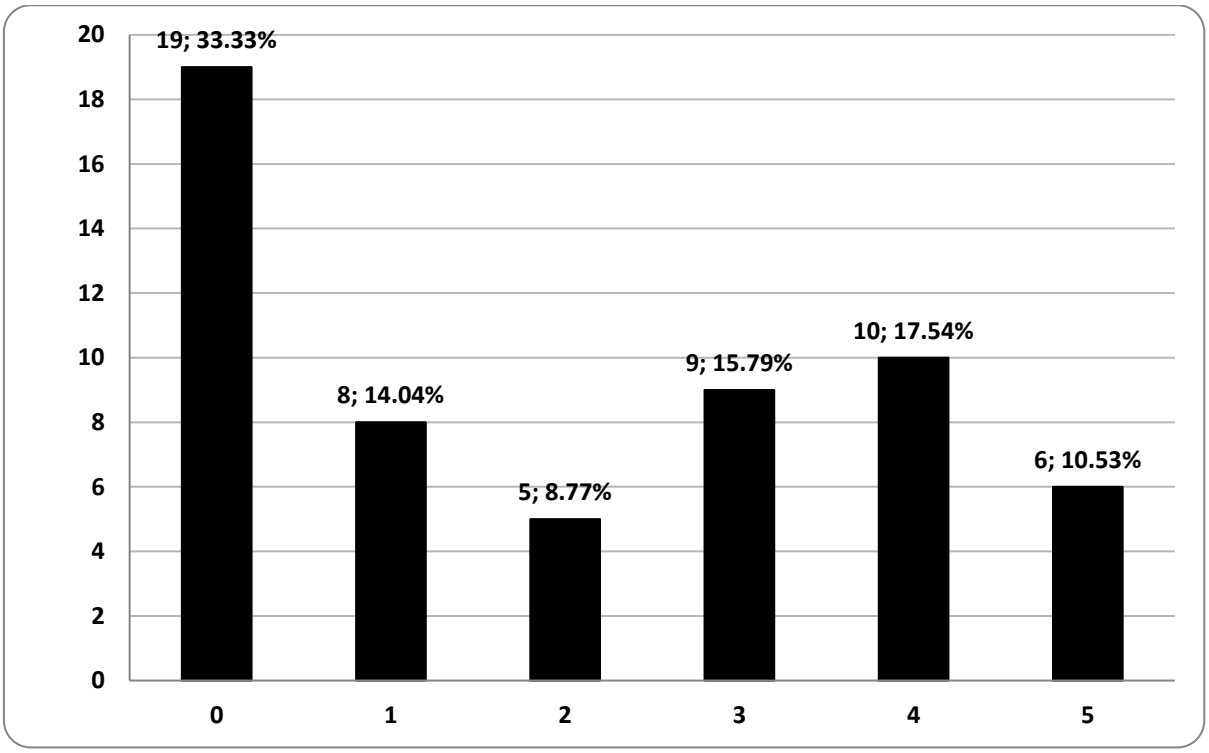

Figure 31 To what extent do the student disability offices train lecturers on how to create an inclusive learning environment, as opposed to taking over the task themselves (on a scale of 0–5)?

Figure 32 shows the awareness segregation of participants in a pie chart format. 63.16% of the participants ascertained that their universities provide learning support for students with disabilities, 33.33% were unaware of such a setting, while the last 3.51% affirmed that their universities do not provide disability learning support.

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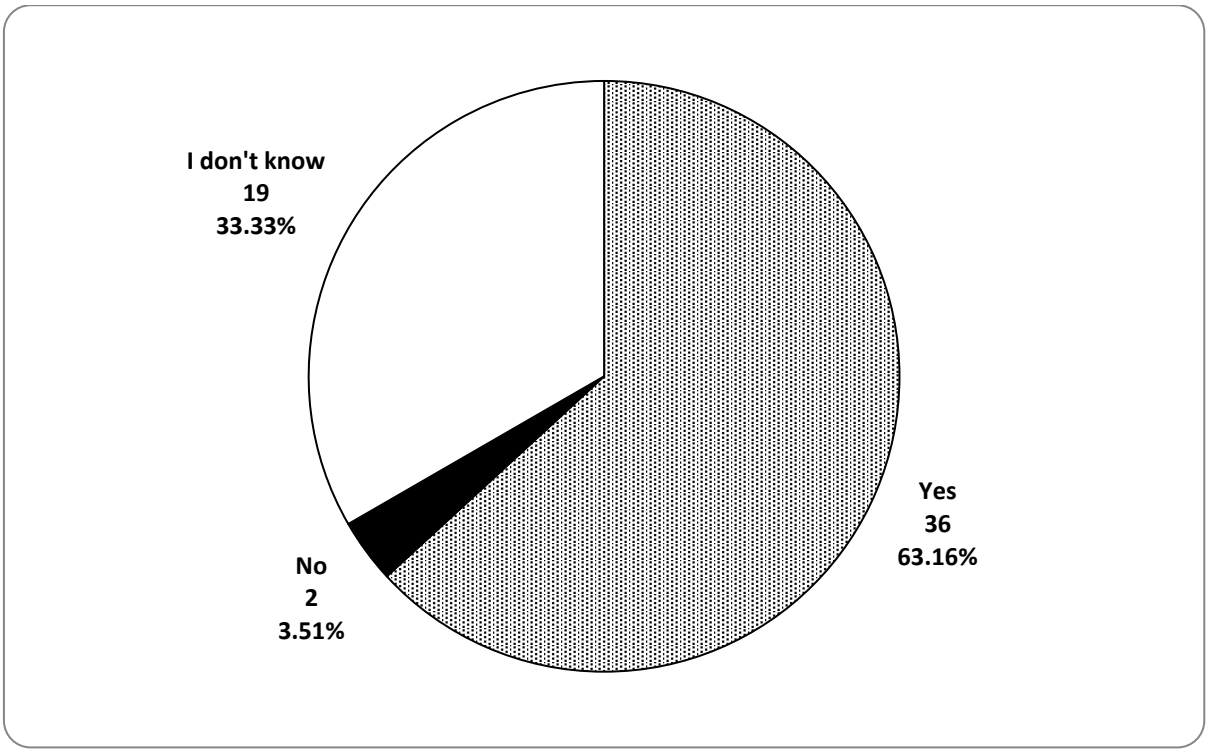

Figure 32 As far as you know, in your university, are learning support services provided for students with disabilities?

Figure 33 shows the answers given by the participants to the question of whether accessibility is a transversal teaching objective or a specific module/subject at their university. It is understood from the answers that most of the participants do not know much about this subject. Of the 57 participants, 18 (31.58%) did not answer at all, and 19 (33.33%) chose the option 'I don't know'. The other 20 participants answered the choices almost equally. Four (4) people (7.02%) answered 'A specific module/subject', both 5 people (8.77% each) answered 'Disability is included but not accessibility in terms of communication' and 'Not included at all', 6 (10.53%) chose the option 'Transversal teaching objective'.

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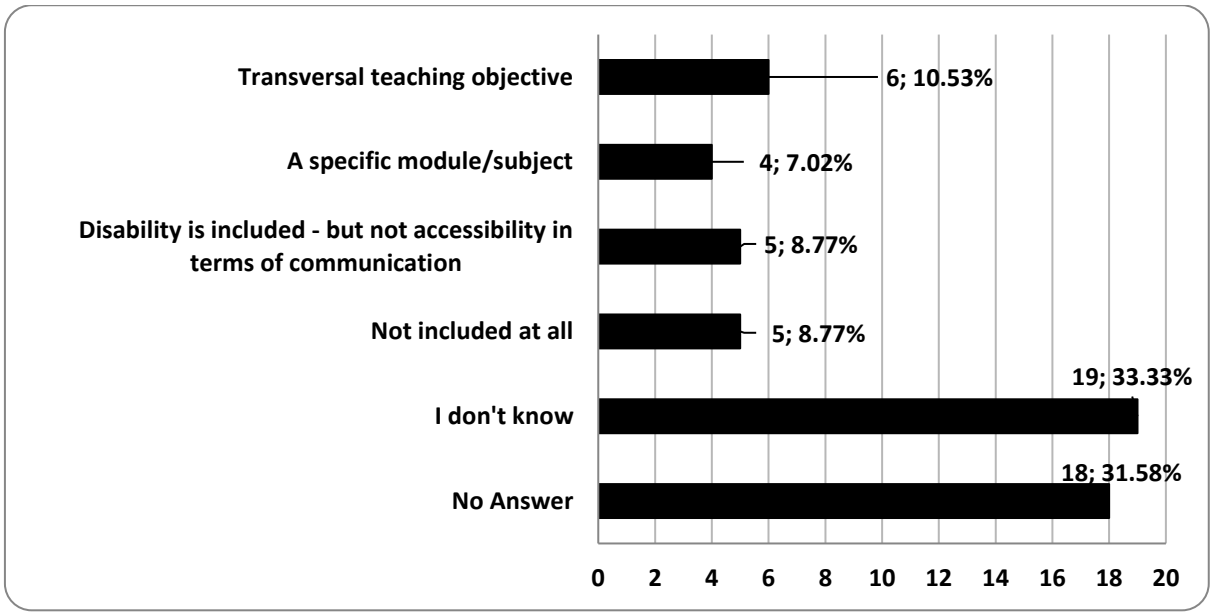

Figure 33 At your university, is accessibility included as a transversal teaching objective or is it addressed as a specific module/subject? (multiple answers allowed)

Figure 34 shows the answers to the question of why accessibility is not included in the current topics in teaching activities. Participants were allowed to choose more than one answer for this question. In this question, which received a total of 62 answers, most of the participants (26.58%) choose the answer 'I don't know'. While 12 of the participants (15.19%) thought that the reason for this was lack of knowledge, 11 of them (13.92%) stated that it was because of lack of awareness. 6 participants (7.59%) stated that it was not needed, 6 participants (7.59%) stated that it was not requested by the institution, and six (6) people (7.59%) stated that it was not required by law. 17 of the participants (21.52%) passed without answering the question. The participants were also given the opportunity to add their own reason, but this option was left unselected (other: 0).

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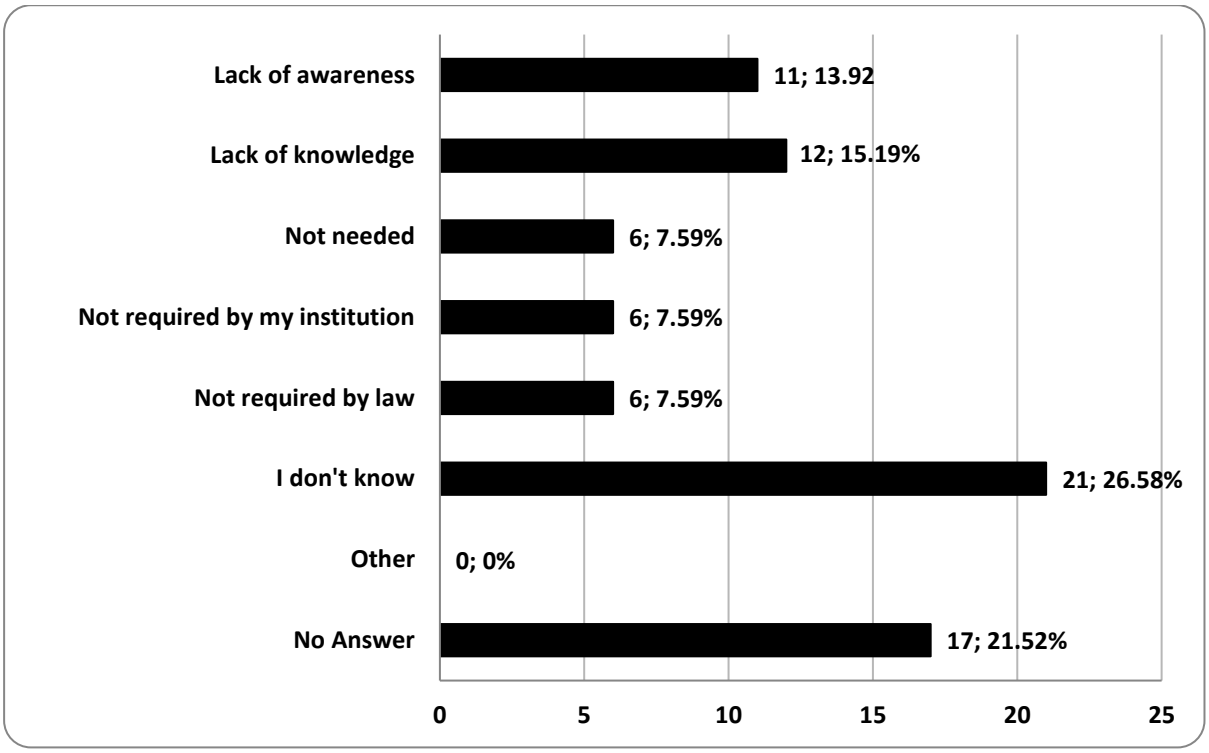

Figure 34 Why do you think that accessibility is not currently included as a topic in your teaching activities? (multiple answers allowed)

Figure 35 shows the preferred topics where accessibility could be included as a transversal skill. As multiple answers were allowed, one participant could have chosen more than one topic field. The vast majority of the participants leaned towards topics in the communication field, of which intercultural communications, communications policy were the most preferred fields. The results show that participants are least interested in topics in public relations, marketing, political participation, and media audiences. As for topics in technology-focused fields other than media, participants were more interested in human-computer interaction or interaction design and technology than other fields; also, many showed interest in topics in the Ethics or Corporate Social Responsibility field. As it would turn out, 19 participants did not answer the question at all.

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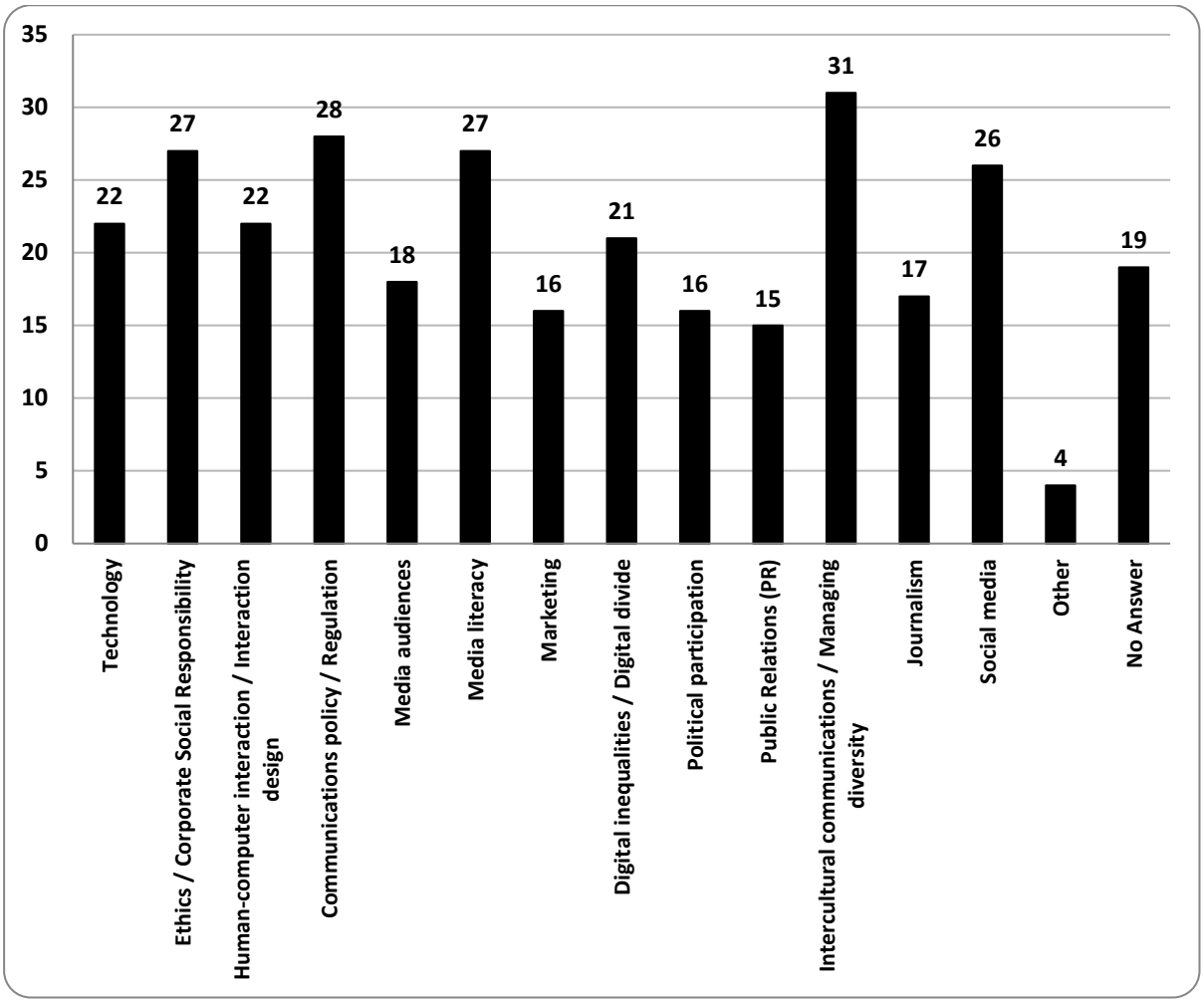

Figure 35 Please choose the topics taught at your university where you think accessibility could be included as a transversal skill. (multiple answers allowed)

Figure 36 illustrates the answers to the question of how much the participants consider accessibility when they prepare the course content. The majority of the participants (35.09%) stated that if there is a disabled student in their class, they take it into account, 10 of them (17.54%) sometimes consider it, and 5 of them (17.54%) always consider it. Two (2) of the participants (3.51%) stated that they did not consider it because student support services took care of it. 1 participant (1.75%) said that they did not take it into account, and one (1)

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participant (1.75%) said that they never perform such activities. 31.58% of the participants chose not to answer this question.

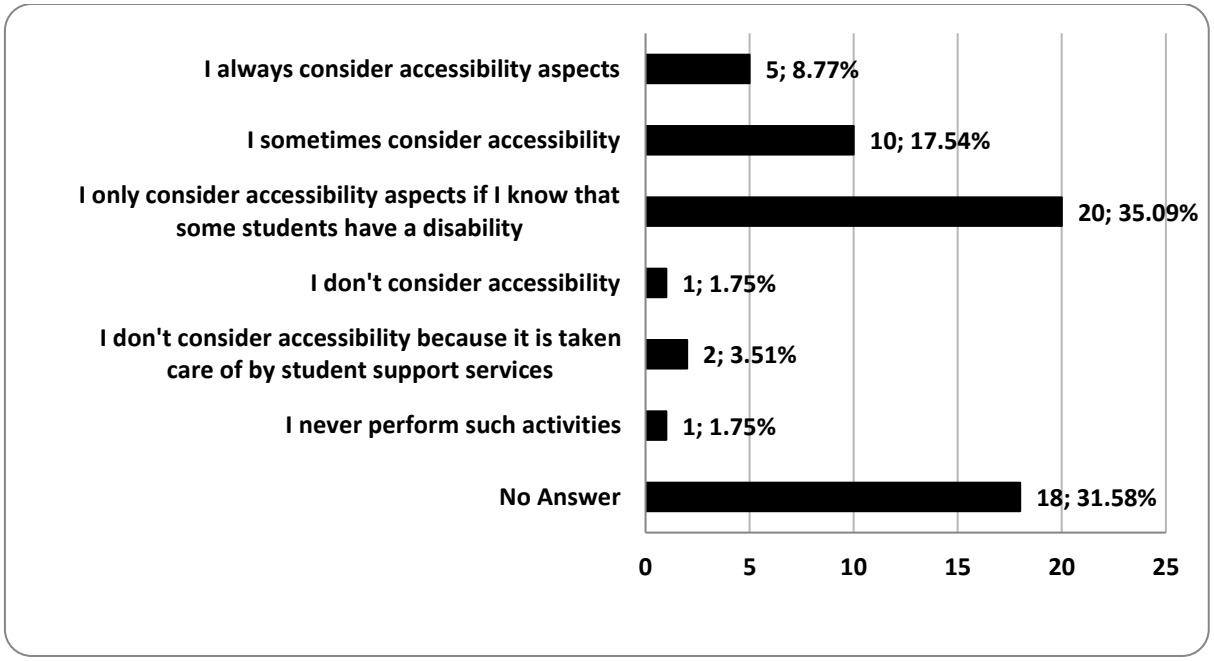

Figure 36 When I create presentations, videos, pictures, written material during class activities…

Figure 37 depicts the responses to the survey's last question. At last, the participants were asked if they wanted to share the materials, they had prepared with the rest of the class. The majority of staff members (27.50%) said they share both during and after the class. 18 participants (22.50%) said they share the materials before the class, 13 staff members (16.25%) said they share it after the session, and nine (9) participants (11.25%) said they share it during the lesson. Although only one (1) person (1.25%) said that they did not share it but had seen it during the lecture, 17 staff members (21.25%) completed the survey without responding to this question.

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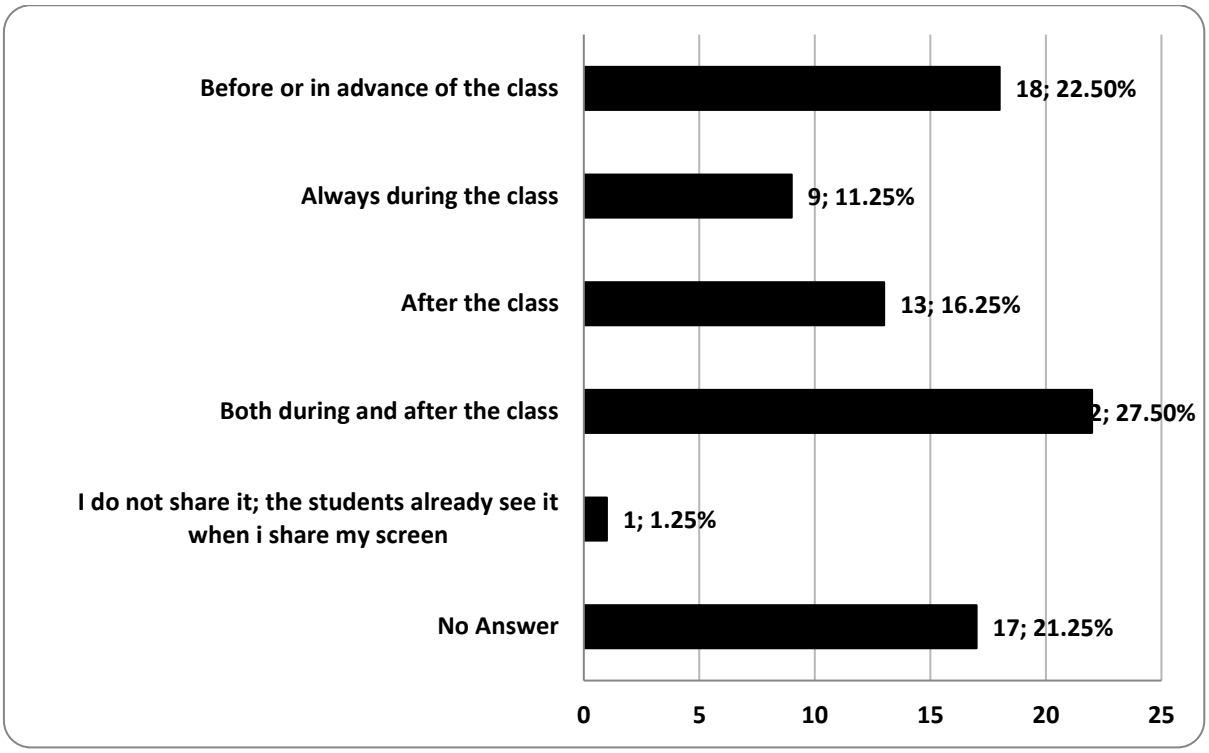

Figure 37 Do you share the materials you prepare with the class? (multiple answers allowed)

4.4 Summary

Regarding the staff survey, the results show a more modest level of knowledge about accessibility than among the students. They also highlight a distinct lack of training on accessibility and the need for experience in this issue. Staff believe that all types of training resources would be helpful. They are also willing to spend between 4-8 hours on training on this subject. Creating accessible content is one of the most interesting topics for them, along with practical examples showing assistive technology in use and the subsequent impact of accessible content. There are notable differences between how the student disability support offices work in each of the countries and the support they provide. Thus, the different models should be investigated and shown. The staff stated that they would use any training materials and resources that were developed on this subject. They are most

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open to blended learning, combing both, online and offline study. There is a general lack of awareness around the issue of accessibility amongst staff. They tend only to consider accessibility if one of their students has a disability.

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5 End user survey results

The end user survey was implemented to identify the issues faced by specific end user groups, such as People with Disabilities, older adults and people whose maternal language is different from the majority population where they live, when it comes to accessing digital content. The focus of the survey, which can be found in Appendix C, is to understand the type of online that cause the most problems in terms of accessibility for the aforementioned groups and identify the specific needs that should be take into account when creating and publishing online content.

When comparing the results of this survey to the previous two surveys, targeting the university staff and students respectively, the results will form the foundation of the needs-based accessibility training toolkit that is produced in Result 3.

5.1 End user profile

In total, 399 end users (N=399) participated in the research. Four questions were included in the survey to determine the profile of the end users involved. The analysis of the results of these four questions can be found below.

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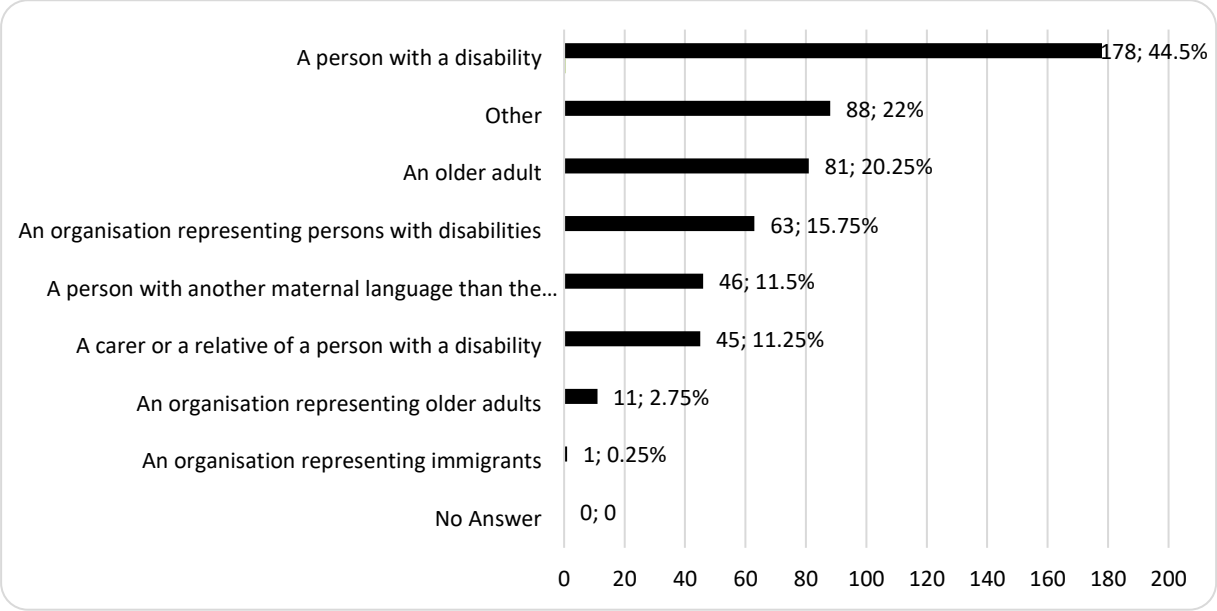

Figure 38 I am responding as...

All the main target groups are covered amongst the respondents of the questionnaire, although the majority of the people answering the survey consider themselves to be a person with a disability (44.5%). This is followed by older adults (20.25%) and other (22%). There is also a strong presence from the organisations representing people with disabilities (15.75%), carers or a relative of a person with a disability (11.25%) and a person with another maternal language than the majority of the population where they live (11.5%). Organisations representing older adults and organisation representing people with another maternal language than the majority population where they live represented 2.75% and 0.25% of the responses respectively. No one left this answer unanswered.

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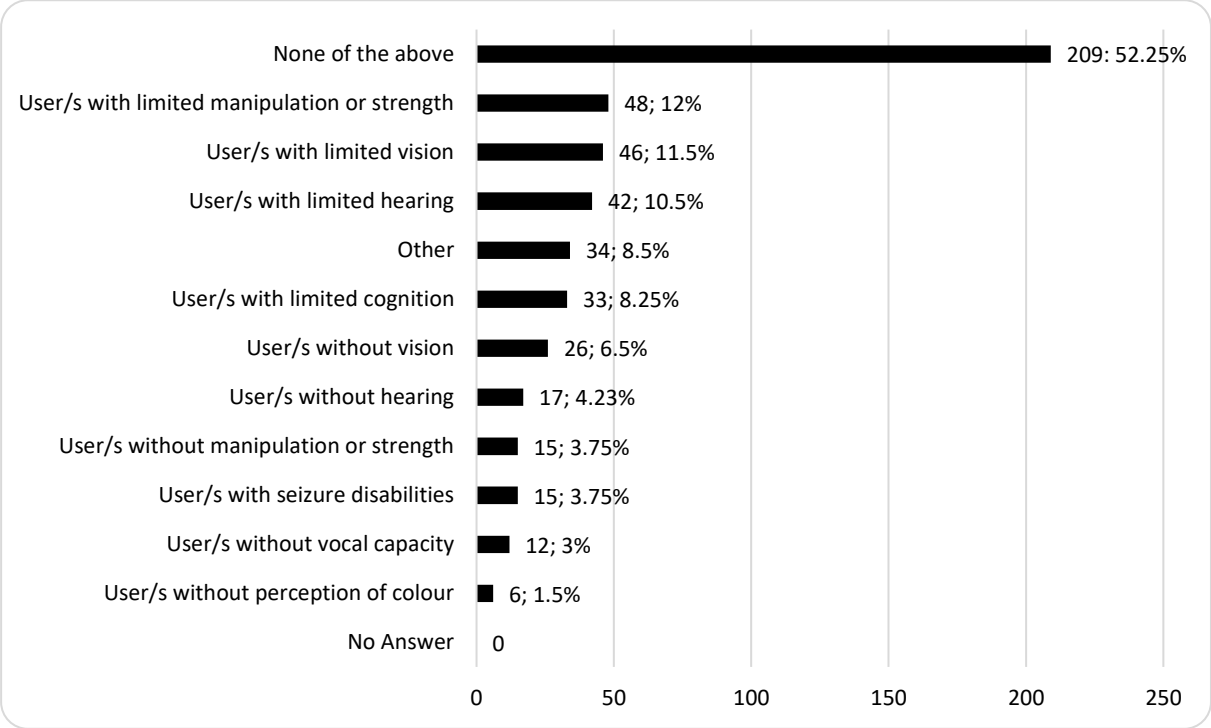

Figure 39 I would describe myself as/I represent…

It is interesting to highlight that 52.25% of the people responding to the questionnaire stated that they do not describe themselves as any of the above. Out of the disabilities that are represented in the survey, users with limited vision (11.5%), users with limited hearing (10.5%) and users with limited manipulation or strength (12%) are the most represented. They are followed by other (8.5%), users without vision (6.5%), users without hearing (4.23%), users without manipulation or strength (3.75%), users with seizure disabilities (3.75%), users without vocal capacity (3%) and users without perception of colour (1.5%). No one left this question in unanswered.

For this question, multiple choices were allowed suggesting that those respondents with a known disability may have more than one.

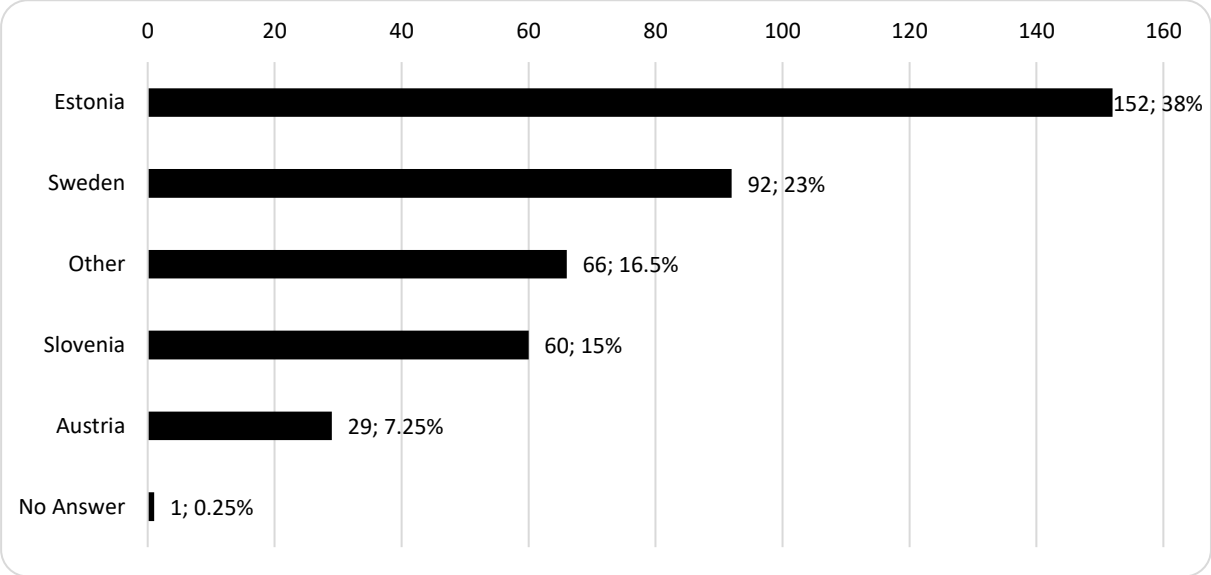

Figure 40 In which country do you live?

When looking at where the people responding to the survey are from, there is a mixed representation from the partner countries in the ADORE project. Most respondents live in Estonia (38%), followed by Sweden (23%), Slovenia (15%) and Austria (7.25%). It is worth highlighting that almost 17% of the answers come from countries outside of the ADORE project partner countries. In this category there are respondents from other European countries such as Germany, Spain, Finland, Hungary, UK, Poland, and Portugal. There are also answers from countries outside of Europe such as Australia, Azerbaijan, USA, South Africa, India, and Bangladesh.

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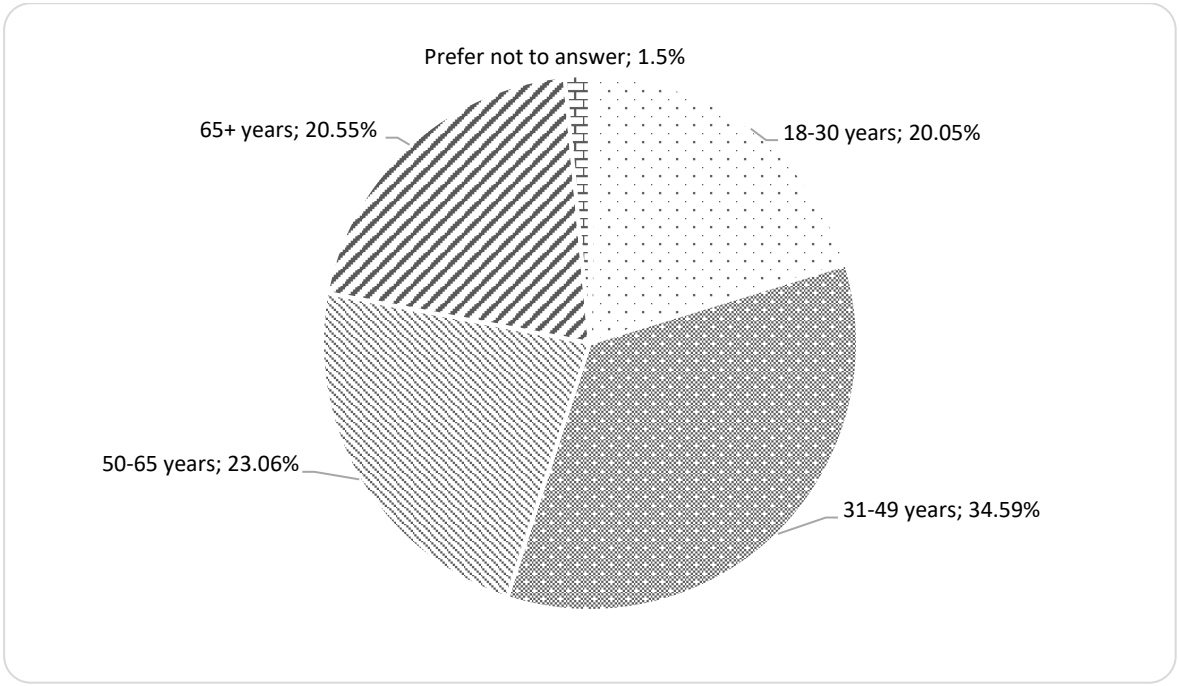

Figure 41 How old are you?

Looking at the age range of the respondents, the largest group falls in the 31-49 years old category (34.59%). However, it is interesting to see the strong presence of older adults, with 20.55% of the answers coming from people over the age of 65 years old. Respondents between the ages of 50-66 accounted for 23.06% of the answers. Respondents between the ages of 18-30 years old accounted for 20.05% of the answers. 1.5% of the respondents prefer not to answer.

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5.2 Internet use

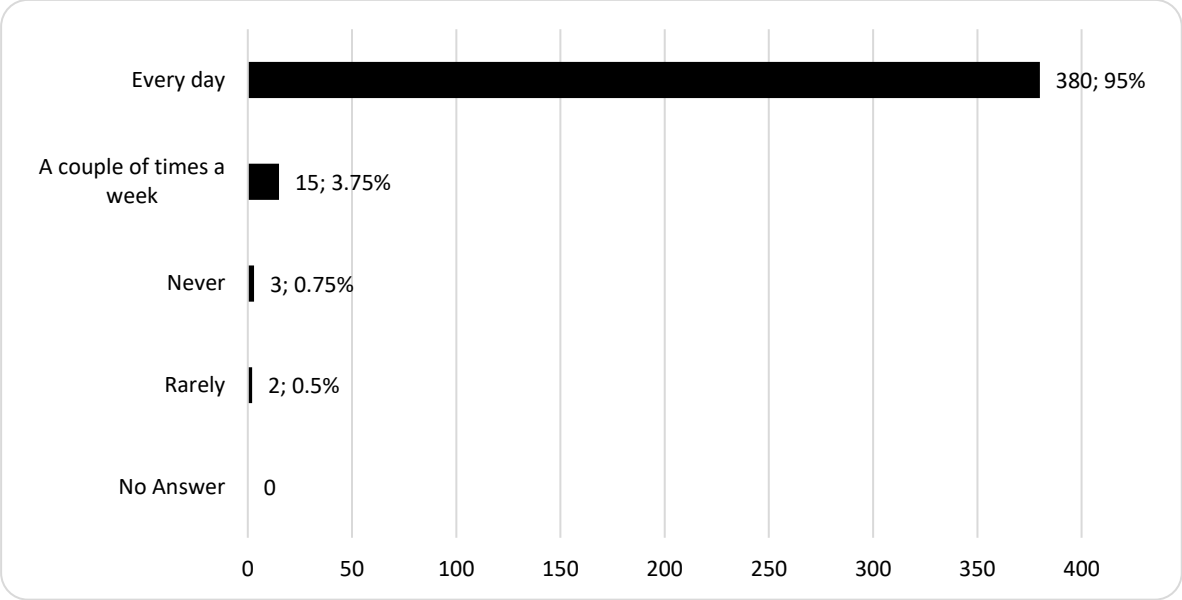

Figure 42 How often do you use the internet?

95% of the respondents stated that they use the internet every day. This is extremely interesting considering the mix of different ages that we saw responding to this survey. 3.75% of respondents stated that they use the internet a couple of times a week. Only 0.75% of respondents said that they never use the internet, closely followed by 0.5% stating that they rarely use the internet.

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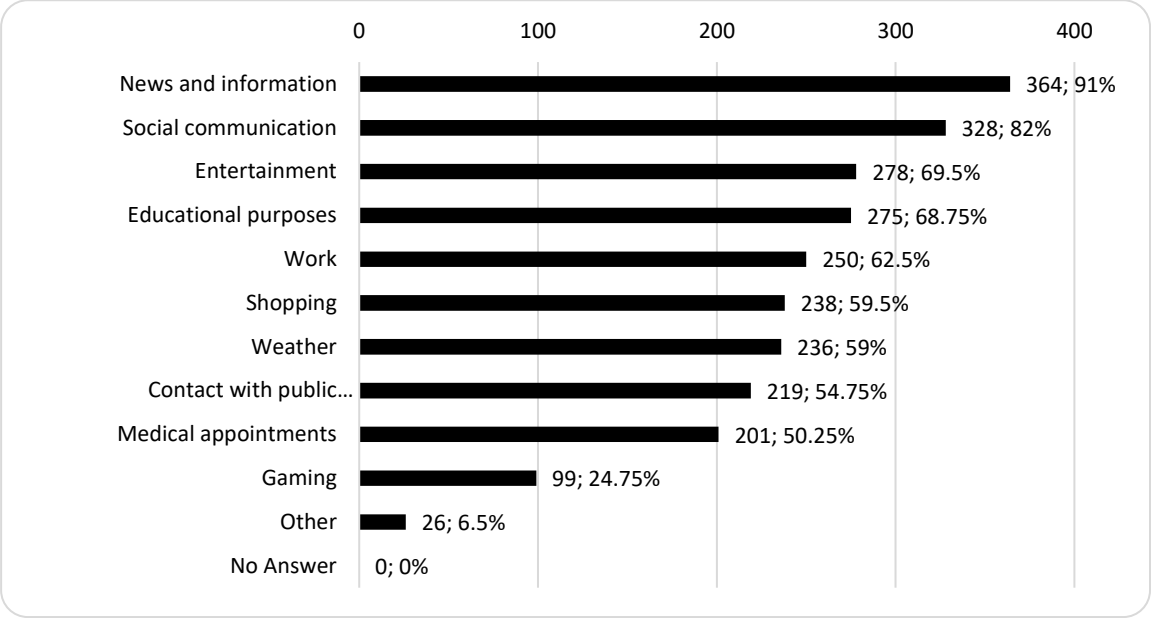

Figure 43 What do you use the internet for?

When looking at what people use the internet for, we can see that it is used for all types of activities. All the different categories received votes here as multiple choices were permitted. However, news and information (91%) and social communication (82%) are the main activities which are used according to the survey. Entertainment (69.5%) and educational purposes (68.75%) are also very popular.

Other activities include work (62.5%), shopping (59.5%), weather (59%), contact with public administration (54.75%), medical appointments (50.25%), gaming (24.75%) and other (6.5%). No one left this question unanswered.

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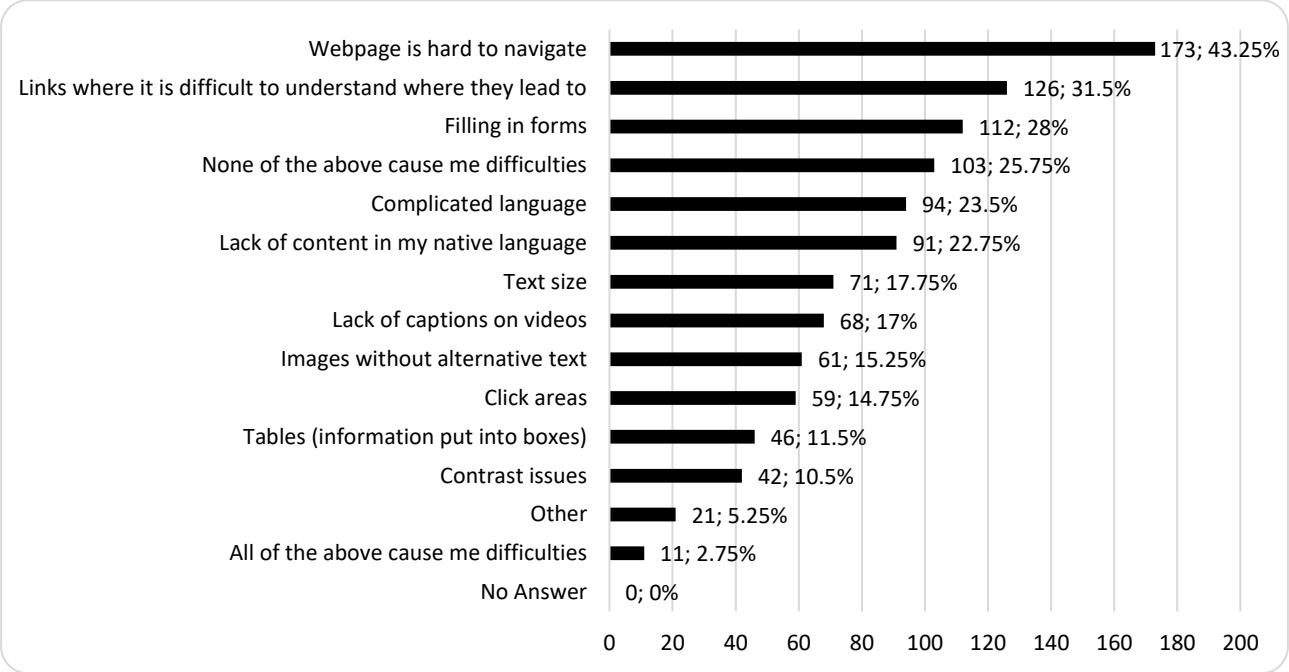

Figure 44 When using websites, have any of the following caused you difficulties?

Navigation issues appear to be the element that causes most difficulties when using websites for the respondents (43.25%). Misleading links (31.5%) and filling in forms (28%) were other issues that are mentioned the most by the respondents. Many of the issues received between 10-23% of the responses, suggesting that all the elements that are listed are important, but of different importance for each of the user groups. 25.75% of the responses state that none of the listed issues causes the difficulties. This is not surprising considering that 45% of the respondents consider themselves as not having a disability.

Other difficulties faced by the respondents include complicated language (23.5%), lack of content in my native language (22.75%), text size (17.75%), lack of captions on video (17%), images without alternative text (15.25%), click areas (14.75%), tables (11.5%), contrast issues (10.5%), Other (5.25%) and all of the above (2.75%). No one left this question unanswered.

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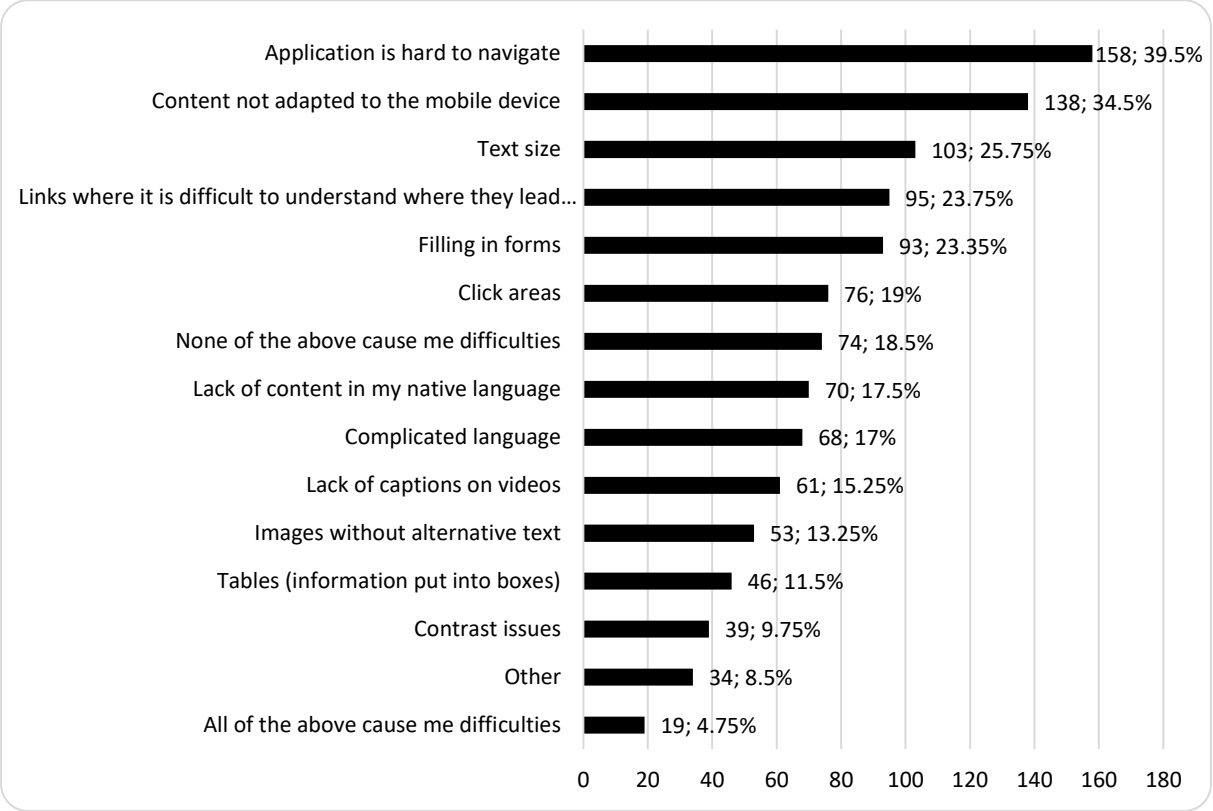

Figure 45 When using mobile applications, have any of the following caused you difficulties?

When asked about difficulties using mobile devices, once again navigation is highlighted by most respondents (39.5%). Content not adapting to the mobile device was also one of the difficulties that was mentioned the most by respondents (34.5%). Perhaps the biggest difference to difficulties when using websites was that 25.75% of the respondents mentioned text size as one of the main difficulties when using mobile devices, most probably due to the difference in screen size when using mobile devices in comparison to desktop computers and laptops. Similarly to websites, misleading links (23.75%) and filling in forms (23.25%) were other issues that were mentioned the most by the respondents. The number of respondents who experience problems with click areas also increases from 15% (websites) to 19% (mobile devices).

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Other issues faced by respondents include none of the above (18.5%), lack of content in my native language (17.5%), complicated language (17%), lack of captions on video (15.25%), images without alternative text (13.25%), tables (11.5%), contrast issues (9.75%), other (8.5%) and all of the above (4.75%).

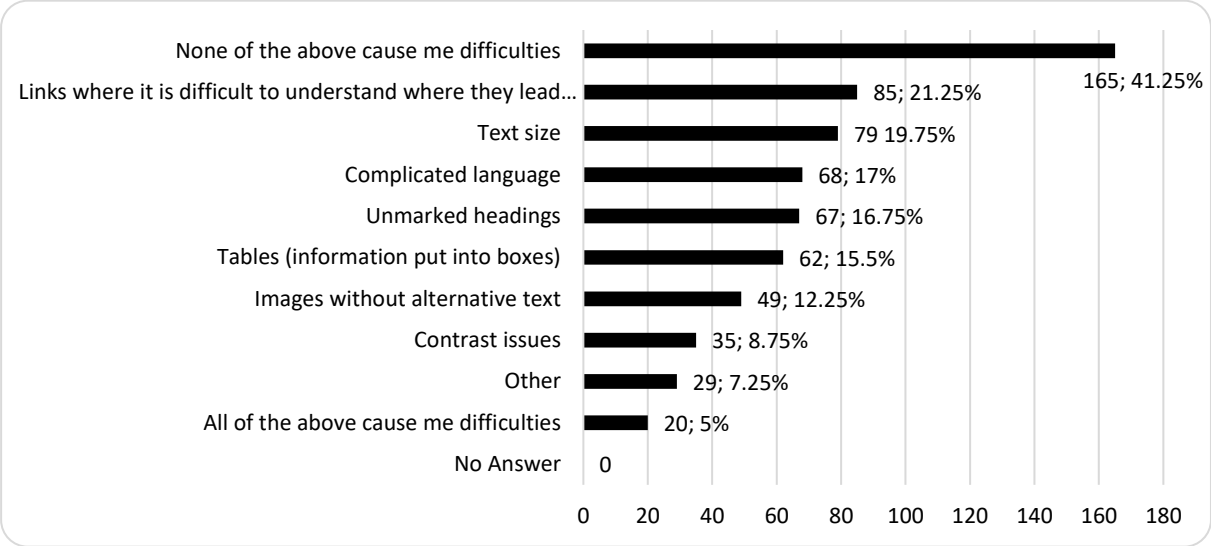

Figure 46 When using documents (Word, PDF and PowerPoint), have any of the following caused you difficulties?

When it comes to documents, it seems that links (21.25%) are the area that causes most problems for users. This is also followed by text size (19.75%) and complicated language (17%). It is interesting that 41.25% of the respondents stated that none of these issues had caused them problems. Again, this is perhaps not surprising taking into account that 45% of the respondents consider themselves to not have a disability.

Other issues faced by respondents include unmarked headings (16.75%), tables (15.5%), and images without alternative text (12.25%), contrast issues (8.75%), other (7.25%) and all of the above (5%).

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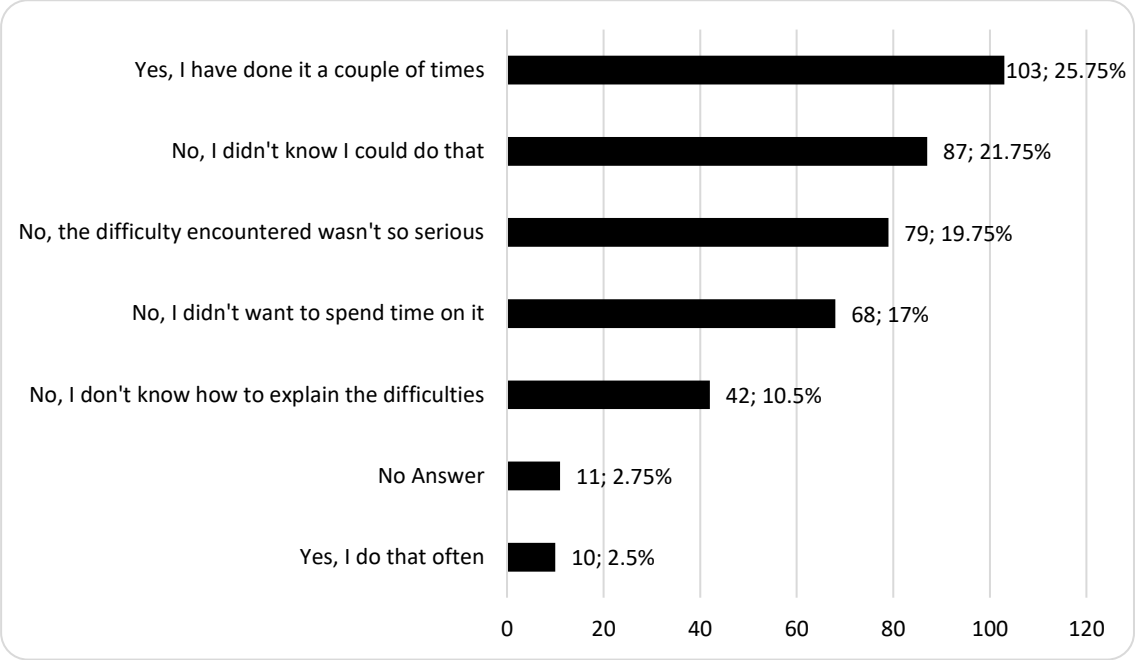

Figure 47 Have you ever given feedback about the difficulties you encounter to the owner of a website or mobile application?

When looking at providing user feedback on the accessibility issues on a mobile application or website, almost 70% of the respondents do not provide feedback. The main reason why the respondents do not provide feedback is that they do not know that this is a possibility (21.75%) or they didn't think that the difficulty they encountered was so serious. Only 28.25% of respondents state that they have provided feedback. With 25.75% suggesting they have done it a couple of times and only 2.5 % stating that they do it often.

5.3 Preliminary conclusions from the end user survey

5.3.1 Profile of the respondents

The number of respondents was sufficiently large to get an indication of the main accessibility issues faced by end users. There was an adequate balance between the user groups, geographic location and age of the respondents,

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suggesting that we have a user profile on which to base our assumptions regarding the main accessibility issues faced by them. More specifically:

- All the main target groups (People with disabilities, older adults and people with another maternal language than the majority of the population where they live) are covered by the respondents in the survey.
- Over half of the respondents stated that they do not describe themselves as having a disability. Of those that did identify as having a disability, there was broad representation from the different user groups, indicating that many of these respondents may also have more than one identified disability.
- The location of the respondents is also quite mixed with representation from all of the ADORE partner countries and beyond.
- The age of the respondents is very balanced with representation from all the main target groups. A strong presence of the respondents who are 65+ should be highlighted, as it shows the representation of older adults in the survey.

5.3.2 Use of the internet

Internet is evidently key to the activities carried out daily by almost all the respondents. Although there are predominant issues depending on whether the respondent is using the internet, mobile applications or documents, it is clear that end users face a wide range of accessibility issues. More specifically:

- Almost all respondents highlighted that they use the internet on a daily basis and that this use was for a wide range of activities.
- Navigation, misleading links and filling out forms are the most common problems faced when using the internet, suggesting that training materials on these issues should be included in the toolkit. However,

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many of the issues received some kind of response, meaning that all of the potential accessibility issues are important to the users.

- When looking at the issues faced when using mobile applications, navigation is once again top of the list. Content not adapting to the mobile device and text size were also ranked highly as the main issues faced by users, suggesting that training materials should be included on these issues. However, once again, many of the issues received some kind of response, meaning that all of the potential accessibility issues are important to the users.
- When using documents, links are one of the major problems areas, followed by text size and complicated language. As most of the potential issues received a response, this suggests that all the accessibility issues are important to the users.
- Training on providing feedback regarding accessibility is needed and should be included in the training toolkit as most users do not do this and many did not even though that this was an option.

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6 Gap analysis

In this section, we triangulate the information received from the three surveys that were launched to the students, staff and end users to define the preliminary training areas that should be covered by the online training toolkit kit that will be developed later in the project (Result 3). It should be highlighted that this is the preliminary analysis which will be built on and complemented by the other activities and the end user interaction that will be carried out as part of the ADORE project.

6.1 Main gaps to be covered by the ADORE Online Training Toolkit

6.1.1 A clear use case for the ADORE project

It is evident that there is a use case for the ADORE project. The student survey showed an interest in learning about accessibility issues in their university courses, highlighting the need for the creation of learning resources on this issue as part of the project. This notion is further supported by the distinct lack of training and experience on accessibility amongst the teaching staff who responded to the staff survey. Finally, the need for training on this subject for both university staffs and subsequently students can be seen by the large amount of accessibility issues that are faced by end users both on websites, apps and when using documents such as Word, PDF and PowerPoint.

6.1.2 Need for general awareness on accessibility

What is clear from both the student and staff surveys is that some clarification is needed as to what accessibility means in general terms and why it is important in the learning environments and in the field of communication. An overview or introduction to accessibility should be the starting point for the toolkit to ensure that teaching staff has the basic knowledge and awareness on the subject. At present, accessibility is only taking into account on a case-

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by-case basis when one of the students has identified themselves as having a disability. The toolkit should aim to increase awareness about the importance of accessibility in learning environments and how they can benefit all students.

6.1.3 Use of practical examples to help understanding

The staff who responded to the survey have expressed their interest in the use of practical examples in the training resources to show accessibility in action and the impact it can have both from the educational perspective and in the future careers of the students. Examples such as showing assistive technology in use should be taken into account.

6.1.4 The creation of accessible content is a key area of interest

The staff who took part in the survey highlighted that the creation of accessible content is a strong area of interest for them and training resources on this subject should be included in the online training toolkit. However, the end user survey shows that there are many different accessibility issues that are faced by users both on websites, apps and documents. Therefore, whilst some areas will be prioritised according to the demand shown, a basic understanding on different accessibility topics should be included in the training toolkit in accordance to the result identified in the end user survey.

6.1.5 Blended learning as a preference

The staff stated that they are most open to blended learning, combining both online and offline study. This should be taken into account when developing the content for the online training toolkit, providing both online and offline content and within a timeframe that can be managed by the university staff.

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6.1.6 Ambitious but achievable goals

Whilst there is a strong interest in leaning about accessibility, both from the staff and student perspectives, the leaning goals for the online toolkit should be ambitious but achievable. The university staff expressed that they would be willing to spend between 4-8 hours on training on this subject. Therefore, the level of detail will have to be controlled to not overload the staff with information that will not be used.

6.1.7 No specific format for learning materials is specified

Regarding how the type of training materials should be provided (e.g. Tips, good practices, etc.) no specific format was specified by the staff who took part in the survey. They are open to all types of training resources and so this decision should be left to the study team, choosing the most appropriate format for the messages that is to be transmitted.

6.1.8 Provide additional information on learning support services at universities

There is a clear need to improve the information available about the existing student support services at universities and how they can help students who have a disability. From the student perspective, there is a lack of information on what services are provided. From the staff perspective, communication with the support services should be strengthened and staff in these units should have access to the ADORE training materials so that they are aware about the project and can improve their knowledge on the subject. It should be noted that there are differences between how these services work at different universities and so university-specific information should be developed in this case.

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6.2 Next steps

The areas that have been identified after analysing the three surveys will be incorporated into the design of the online training toolkit that is being carried out in the ADORE project as part of Result 3.

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