



ACCESS

Needs Analysis & Knowledge Sharing

*D.1.2 Needs Analysis Report: Assistive technology
+ Needs & Skills gaps*

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Prepared by University of Macedonia



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1. INTRODUCTION

The main purpose of WP1 addresses the acute lack of significant, extensive, valid and comparative data on disability within the context of each partner countries HE system and in the region in general. The analysis of these data will contribute to tailor-made and fine-tuned project activities, to the needs of target groups and to engage right from the onset with project stakeholders. Activities within this WP will also contribute to generate dynamics of experience exchange and good practice sharing between European partners and PC.

Within the framework of this work package, T.1.1 formulated and implemented the “Analysis Methodology & Data Collection” of the in-depth research methodology which has fed into a Needs Analysis exercise to assess the accessibility situation and discriminatory/inclusive practices within each partner institution in terms of disability. The research strategy will be designed according to international standards in terms of disaggregated data collection on disability and will combine quantitative and qualitative methods to fully grasp the situation of student with disabilities. Thereafter, T.1.2. will compile the analytical conclusions of these needs analysis research. Analytical compilation of insights from the needs analysis disaggregated by partner country and HEI, contextualizing information and providing structural links which can inform future project activities. As such, this specific data analysis will focus on two areas: AT needs to trigger a quick and efficient equipment purchase (WP3) as well as skills and knowledge gaps to inform topics selection for the trainings (WP2). The instruments that have been decided are a combination of quantitative (questionnaires) and qualitative (focus groups and interviews) data collection methodologies for comparative and rigorous analysis of students with disabilities conditions, according to international standards on disability data management.

Due to COVID-19 and the lock down in all countries there are a lot of difficulties on conducting the research as it was initially planned. Taking into consideration the feedback from partners and their willingness to keep working on project activities it was suggested to have three online questionnaires for each target group

- for students with disabilities (see Annex 1, 1.1),
- for academic and no academic staff (see Annex 1, 1.2), and

- for students with and without disability and staff (academic and no academic) (see Annex 1, 1.3).

ITCR has prepared the online accessible questionnaires based on the instruments that have been already finalized.

Additional focus groups and interviews were conducted online based on the guidelines that UOM has provided. The questions for each research tool is in Annex 2 (2.1 Interviews and 2.2 & 2.3 Focus group for all stakeholders)

2. METHODOLOGY

2.1. Participants

2.1.1 Students with disabilities (quantitative research)

A total of 211 students with disability (SwD) living in RD (n= 93, 44.1%), Cuba (n= 62, 33,9%) and CR (n= 33, 15.6%) participated in the study. Among participants, 103 (48.8%) were men, 106 (50.2%) were women and 2 participants didn't provide data for their gender. SwDs' age ranged from 18 to 46 years old ($M= 22.61$, $SD= 4.26$). Apart their gender and age, SwD were also asked to provide data for several demographic and background variables (see Table 1)

Table 1: Demographic/ Background variables for students with disability

	Frequency (n)	Percent (%)
Disability		
Auditory	30	14,2
Visual	81	38,4
Physical	55	26,1
Mental / Psychosocial	23	10,9
Intellectual	7	3,3
[Multiple disabilities]	15	7,1
Area of origin		
Urban	136	64,5
Rural	75	35,5
University		
ITCR	29	13,7
CENFOTEC	4	1,9
UNAH	22	10,4

UMCC	21	10,0
ULT	21	10,0
UNICA	21	10,0
UNAPEC	19	9,0
INTEC	3	1,4
ISFODOSU	35	16,6
UCE	23	10,9
UASD	13	6,2
Full-time Studies		
Yes	129	61,1
No	82	38,9
Scholarship (Economic)		
Yes	82	38,9
No	129	61,1
Live in student residences (provided by the university)		
Yes	27	12,8
No	184	87,2
Studying in your University (Duration in years)		
Less than 1 semester to 11 years (M= 2.45, SD= 1.75)		

2.1.2 Staff (quantitative research)

A total of 374 academic and non-academic staff from RD (n= 171, 45,7%), Cuba (n=138, 36,9%) and CR (n=65, 17,4%) participated in the study. Participants worked in different Universities and held a wide range of roles/ responsibilities. A detailed description of the staff sample presented below (Table 1).

Table 2: Personal and professional characteristics of academic and no academic staff participants

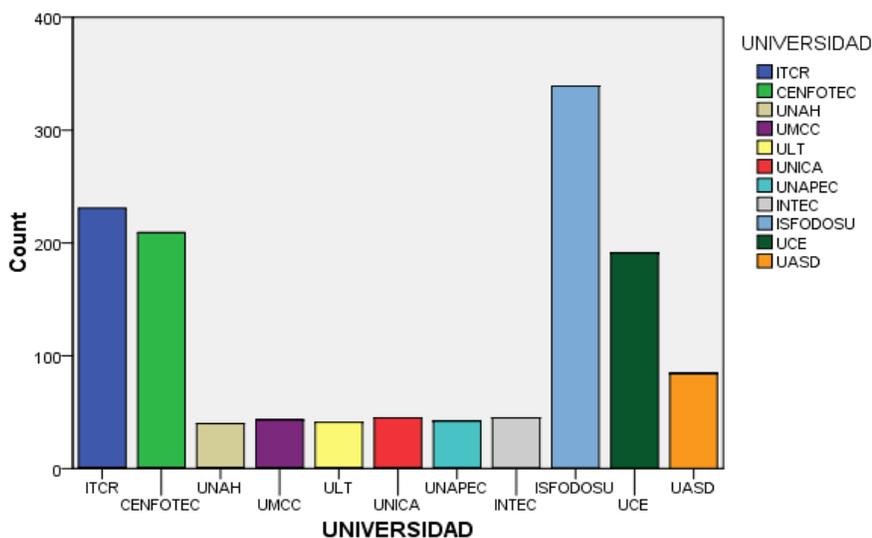
Personal and professional characteristics	Frequency (n)	Percent (%)
Country		
RD	171	45,7
Cuba	138	36,9
CR	65	17,4
University		
ITCR	23	6,1
CENFOTEC	40	10,7
UNAH	40	10,7
UMCC	30	8,0
ULT	35	9,4
UNICA	33	8,8

UNAPEC	59	15,8
INTEC	15	4,0
ISFODOSU	43	11,5
UCE	56	15,0

Role/ Position at University		
Manager / Director - Attention and Support Students	75	20,1
University staff for inclusion	47	12,6
Student service staff	3	0,8
Program manager - general programs for students	9	2,4
Program manager - general programs for students with disability	3	0,8
Professor / teaching staff	148	39,6
Support staff	28	7,5
General administrative support	42	11,2
Other	19	5,1

2.1.3 Students with and without disabilities and staff (academic and no academic) (quantitative research)

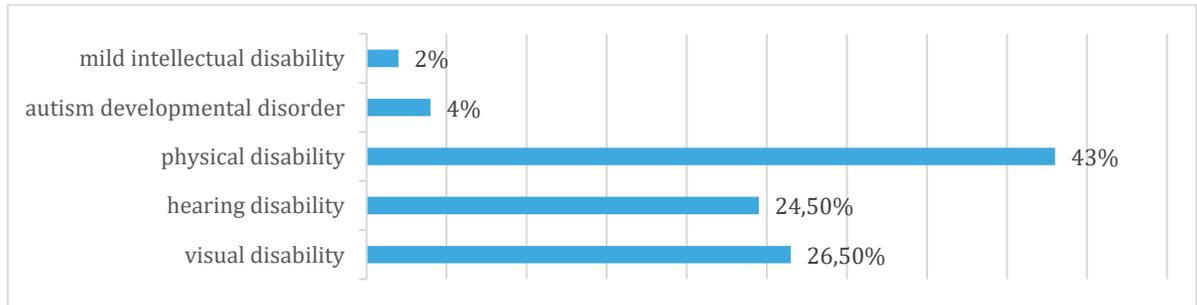
A total 1310 students with and without disabilities and staff completed the questionnaire from RD (n= 701, 53.5%), Cuba (n=169, 12.9%) and CR (n=440, 33.6%) (see Graph 1).



Graph 1: Participants per university

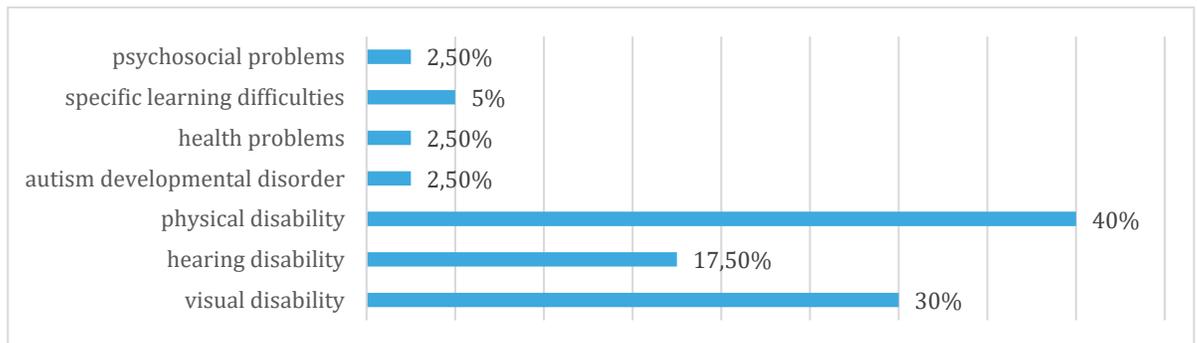
2.1.4 Participants (qualitative research)

Interviews were conducted to 50 students with disability (52% male and 48% female), 43% of the students were with physical disability and very few with autism developmental disorder (4%) and with mild intellectual disability (2%) (see Graph 2).



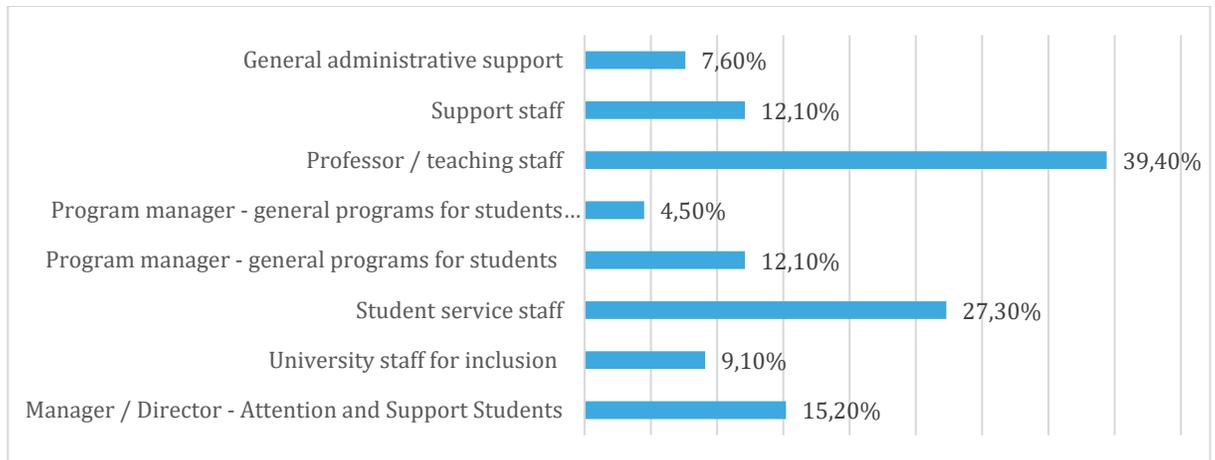
Graph 2: Students' disability (interviews)

Focus groups have been conducted with students with disability and staff (academic and no academic). Fifty-one (51) students with disability (59% male and 41% female) participated in the focus group. Forty percent of the students were with physical disability, 30% with visual disability, and 17,50% with hearing disability (see Graph 3).



Graph 3: Students' disability (focus group)

Sixty-six academic and no academic staff (57,1% academic staff and 42,9% no academic staff) participated in the focus group (66,7% female and 33,3% male).



Graph 4: Role of the staff

Concerning their role in relation supporting students with disability (see Graph 4) 39,4% was academic staff and 27,3% was working as a student service staff, 9,10% was university staff for inclusion and 4,5% was program manager for students with disability.

2.2. Instruments

2.2.1 Questionnaire for students with disabilities

Students with disability were asked to fill in, a self-report, tailor-made questionnaire in on-line form. The questionnaire was developed to provide partners with extensive, valid, and comparative data on disability within the context of each country HE system and in the region in general. The instrument consisted of 25 questions which cover a wide range of issues concerning SwD access to HE (e.g., access to their studies under conditions of equal opportunities, the barriers SwD faced when first entered university and/ or barriers and challenges they still face, Universities practices for support SwD studies, SwDs’ awareness and evaluation concerning support and / or equipment provided by their University). SwD asked to provide their answers on both open-ended and close-ended questions (e.g., Yes/ No, Likert Type etc.).

2.2.2 Questionnaire for staff

Academic and non-academic staff were asked to fill in a self-report, tailor-made questionnaire in on-line form. The questionnaire consisted of three questions referred to staff personal and professional characteristics and 11 main questions. The first 10 close-ended questions referred to staff's involvement with SwD and the knowledge they hold concerning their University's policy (e.g., initiatives, programs, procedures, services, sources allocation) for attracting and supporting SwD at University. Participants had provided their answers either on a binary Yes/ No scale or on a 5-point Likert type scale with 1= "Strongly Disagree" and 5= "Strongly/ Fully agree". In addition, participants could select the answer "I don't know" in case they could not provide any answer. The last question was an open-ended one designed to capture staff's suggestions/ propositions concerning the acts that could be made by their university to better meet the needs of SwD.

2.2.3 Questionnaire for students with and without disabilities and staff

Academic/ non-academic staff as well as students with and without disabilities were asked to fill in a self-report, tailor-made questionnaire in on-line form, that included the same questions. Participants have provided their answers on a 5-point Likert type scale with 1 = not satisfactory; 2 = insufficient; 3 = satisfactory and 4 = exceeds the requirements; 5= do not know. The questionnaire was divided into 5 subscales

- Environment [*refers to spaces where people learn and interact, such as classrooms, common spaces*]
- Administration / Organization
- Relations
- Hiring and professional development
- Student participation

The objective of this questionnaire was to assess the strengths and areas for improvement at each university.

2.2.4 Focus group and Interviews

Since focus group and interviews need to be conducted also online a methodology guideline has been prepared (see Annex 4). When preparing Online Focus Groups and interviews, the researchers need to adjust the traditional, in-person procedure regarding:

1. The confidentiality agreements,
2. The maximum number of participants per group,
3. The duration of each session,
4. The online tools,
5. The discussion guide,
6. The use of stimuli during the sessions,
7. The skills of the moderator, and finally,
8. The tests of the technology before the sessions.

The duration of each session should be kept between 60-90 minutes. It has to be stated that there is not a strict rule about the duration of an online session, nevertheless, it should be defined with the aim of keeping the participants focused the whole time. The Video-conferencing tools that the researcher will choose should allow face to face interaction with all participants, video recording and streaming. Ideally participants can access the session by clicking on a link without the need to install any software. There are a few options available on the market: Zoom, GoToMeeting, Microsoft Teams, WebEx, Google Hangouts.

Both interviews and focus group have been designed focusing on similar topics (see Annex 2). Specifically:

Interviews and focus groups of students with disability

- Barriers before entering the university
- Types of support and equipment
- Barriers during studying
- Recommendations for supporting future students with disability
- Policies and procedures (i.e. transition plan, agreement regarding the support and the equipment)
- Inclusive practices

Focus group of (academic and no academic)

- Types of support and equipment
- Policies and procedures (i.e. transition plan, agreement regarding the support and the equipment)
- Inclusive practices

2.3. Procedure – Data analysis

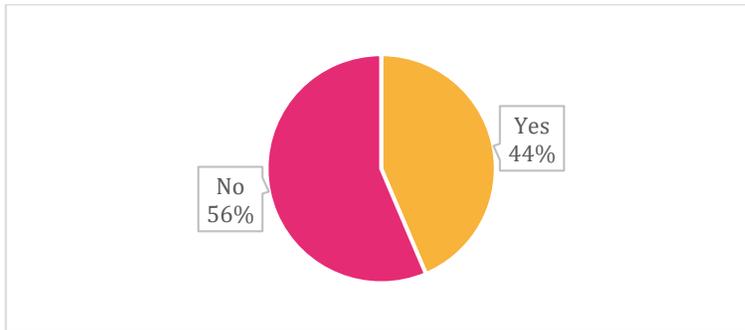
All partners were informed about the procedure on time and based on the guidelines the data collection has started online for the quantitative research on June 2020 and was completed on February 2021. Data analysis for quantitative research has been conducted with SPSS 20.

The qualitative research started on February 2021 and ended on March 2021. Data analysis for the interviews and the focus group has been conducted based on the content analysis. Based on the guide for interviews and focus group that has been created, partners have provided the encoded data for interviews and focus group (see Annex 3).

3. RESULTS OF THE QUANTITATIVE RESEARCH

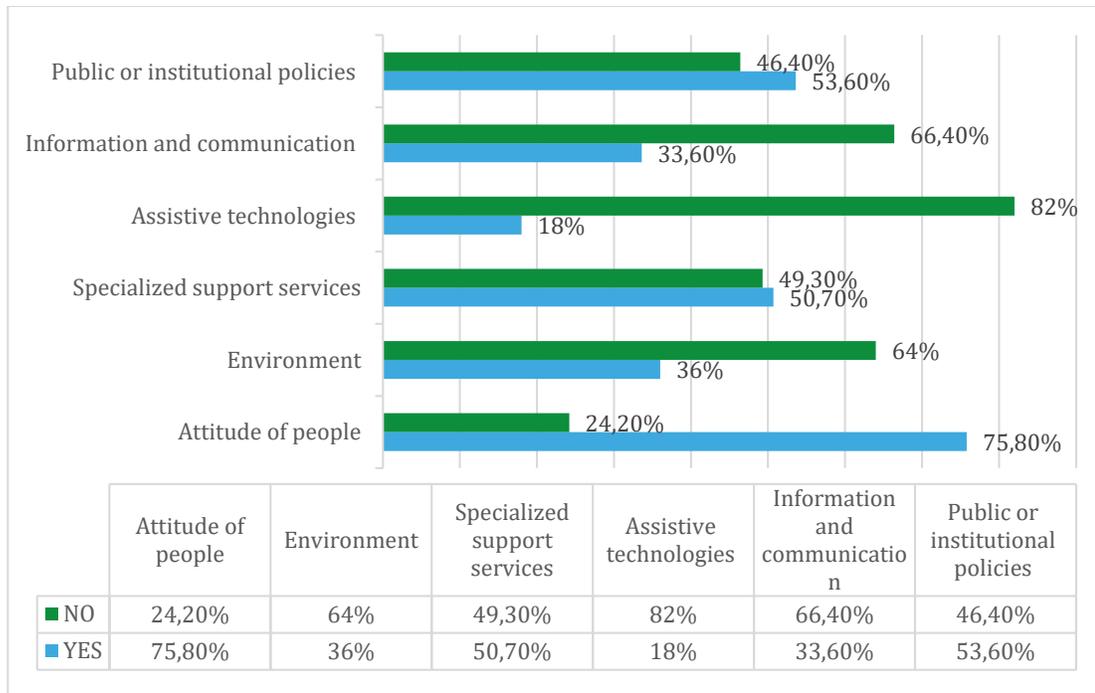
3.1. Questionnaire for students with disabilities

What follows is a detailed report of the results we reached after analyzing data derived from the questionnaire addressed specifically to SwD. Question C1 to C8 covered issues concerning the support SwD received (or not) by their University to access their studies under conditions of equal opportunities. At the beginning, SwD were asked whether their University provided them educational support such as academic note takers, readers, practical assistants, and sign language interpreter. From the total of 211 SwD, 119 (56,4%) answered positive to this question while 92 SwD (43,6%) (see Graph 5).



Graph 5: Has the university provided SwD with support to access their studies under conditions of equal opportunities?

Then, SwD asked to report in detail what kind/ type of support received by their University in order to access their studies under conditions of equal opportunities. As it can be seen (see Graph 6), the support received by the majority of SwD referred to attitudes of people (75,8% positive answers), followed by the more general public or institutional policies e.g., regulations, services, budgets, regulatory framework, administrative management (53,6% positive answers) and more specialized support services such as psychological, educational, customer service, transportation (50,7% positive answers). However, only 38 SwD (18%) did report that they received assistive technologies such as Braille lines, screen readers, wheelchairs etc.



Graph 6: SwD answers on supports they received to access their studies under conditions of equal opportunities.

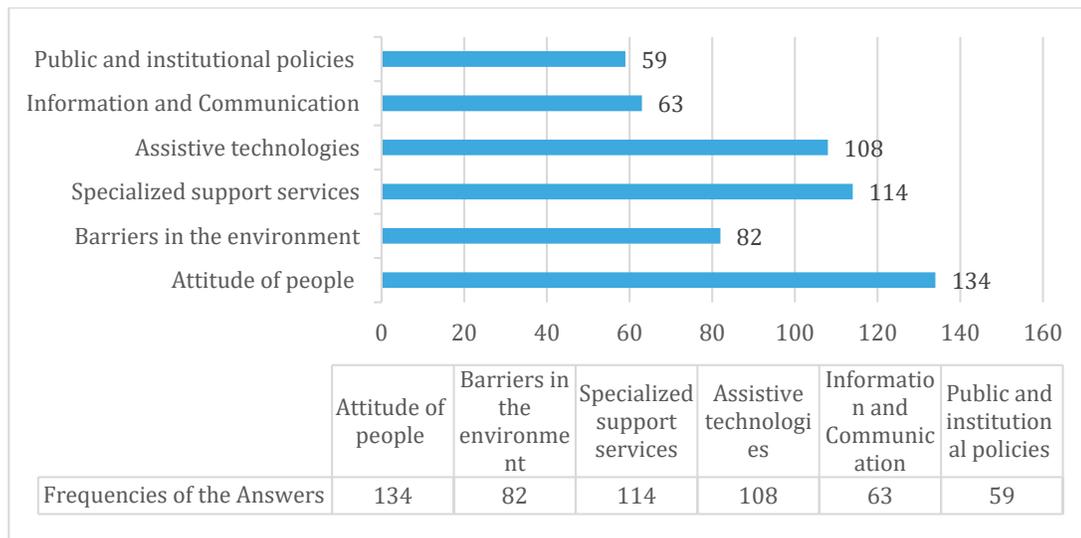
In order to have a more detailed picture concerning support SwD received (or not), we then asked them to answer the following question “In case you have not received educational supports, indicate the reasons”. As it can be seen (see Table 3) apart from a small proportion of SwD (n= 25, 11,8%) that they don’t need any educational support or equipment; the rest of SwD provide several reasons. Specifically, SwD reported that they did not receive educational support because (a.) other organizations (e.g., disability support organizations) provide SwD with support/ equipment they need (n= 49, 23,2%) (b.) SwD lack of awareness that their university can provide them specific support (n= 43, 20,4%), (c.) their University does not provide the support/ equipment SwD need (n=31, 14,7%) and (d.) because SwD do paid themselves the support/ equipment they need (n=5, 2,4%). Finally, 35 SwD (16,6%) answered that other reasons, then the aforementioned one, for not receiving educational support.

Table 3: SwD answers on why they did not receive educational support

Reasons	n	%
I don't need any educational support or equipment	25	11,8

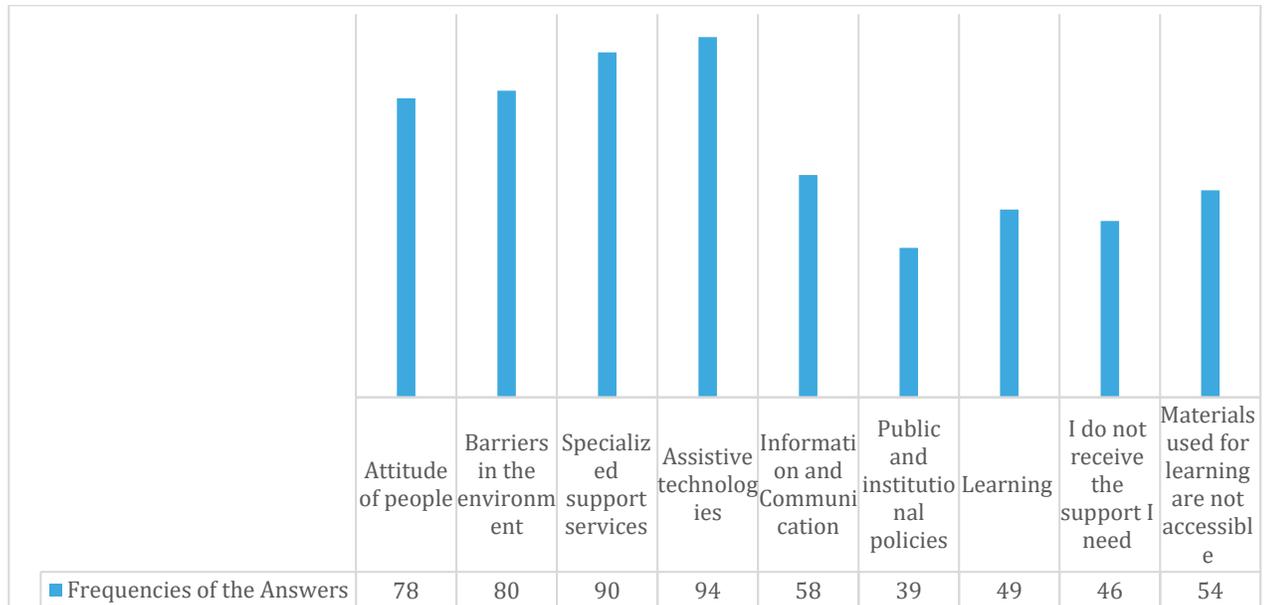
I did not know that I could access educational and team support at my university	43	20,4
My university does not provide the educational support or equipment I need	31	14,7
I access the support and / or equipment of other organizations (for example, disability support organizations)	49	23,2
I pay for the support and / or equipment I need	5	2,4
Other	35	16,6

Support provided (or not) to SwD during their studies is just one side of the coin. It is equally critical for as to understand what barriers do SwD have (or think they have) to face entering the University. To this end, SwD then asked to answer two relevant questions: (a.) “What barriers did you think you would face before entering the University?” and (b.) “What barriers or challenges do you still face?”. Answers provided by SwD were truly enlighten (see Graph 7). Concerning the barriers, SwD *thought* they would face before entering the University the vast majority referred “Attitude of people” (n= 134), followed by lack of specialized support services such as educational, psychological etc. (n= 114), and lack of assistive technologies (n= 108). Quite less SwD referred “Barriers in the environment e.g., physical space architectural etc. (n=82), barriers concerning information and communication (n= 63) and barriers related to more generally public and institutional policies (n= 59).



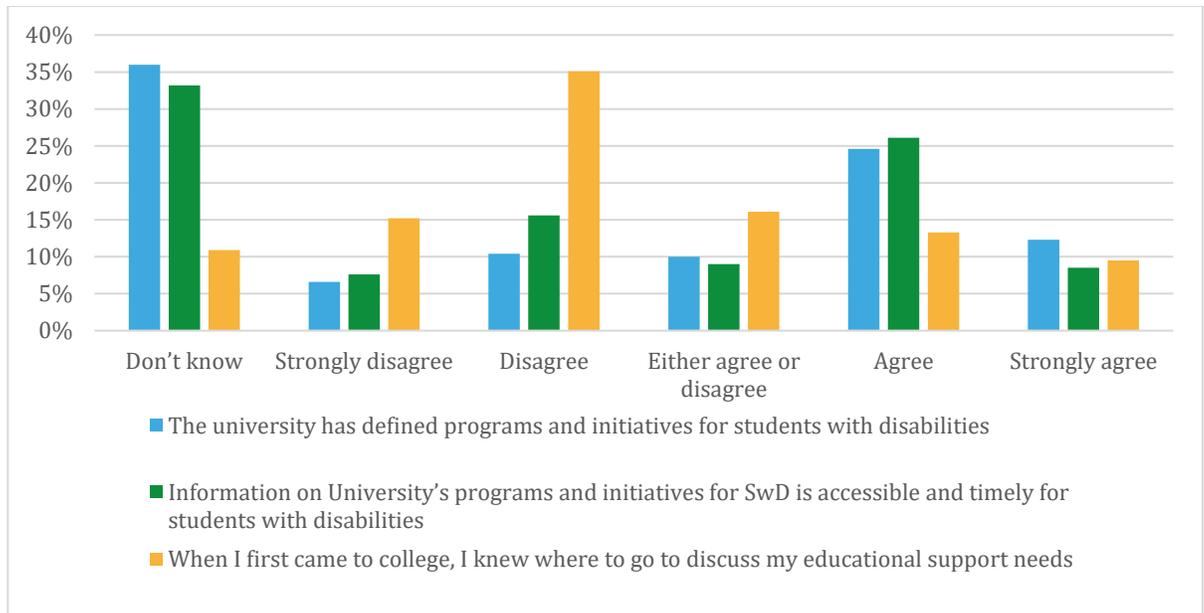
Graph 7: SwD answers on what barriers did they think they would face before entering the University

Did reality confirm SwD concerns regarding the barriers they thought they would face during their studies? It seems that SwD, quite so, have to deal with several barriers after entering HE (see Graph 8). It is interesting to note that “Lack of assistive technologies” (n=94), “Lack of specialized support services” (n= 90) and “Attitude of people” (n=78) -the most frequently “feared barriers” referred by SwD- are also the most frequently “real barriers” mentioned by SwD; that is the barriers SwD still face.



Graph 8: Barriers or challenges SwD reported that that they still face regarding during their studies.

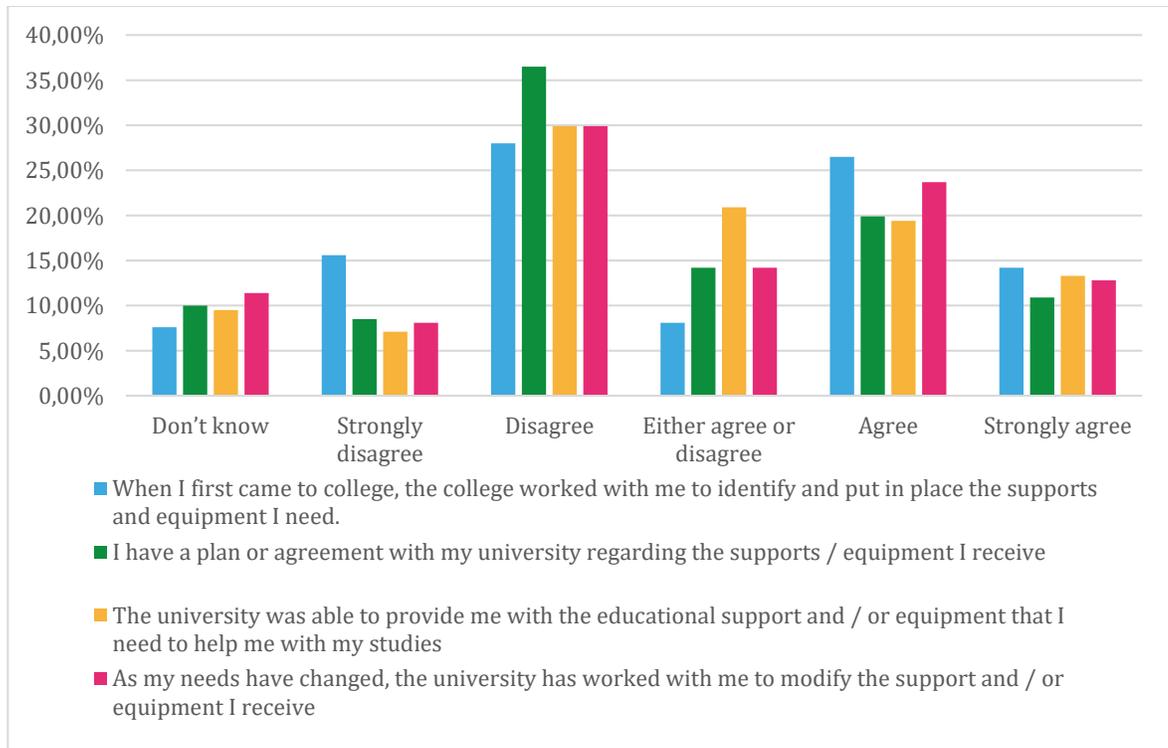
The last part of the questionnaire, addressed to SwD, consisted of 14 Likert-type questions. These questions designed to provide us with a more detailed needs assessment for both SwD and Universities with SwD. A few interesting points can be made according to SwD answers to these questions. To begin with, it seems that a quite large proportion of SwD (n=76, 36%) are unaware regarding their Universities programs/ initiatives for SwD (see Graph 9).



Graph 9: SwD answers on defined programs, information accessibility and educational support needs

A quite similar picture we received concerning SwD views on their University's information accessibility and well-timed design. Once again, 33,2% of SwD (n=70) answered that they are unaware of their Universities information accessibility and quality concerning programs and initiatives for SwD. At the same time, an almost equal proportion (n=55, 26,1%) answered positive to the same question (see Graph 9). It is interesting to see what was SwD first impression concerning their University's provided support to their educational needs. The vast majority of SwD answered that when they first came to college they didn't know where they have to go for discussing their educational support needs (n=74, 35,1%). However, 16,1% (n=34) of SwD did know where they should address to discuss for their educational support needs (see Graph 9).

Then, SwD answered if, when they first came to college the college worked with them to identify and put in place the support, equipment etc SwD needed (see Graph 10). On this question, the number of SwD that answered that they "Strongly Disagree" or "Disagree" it was almost equally to the number of SwD that answered "Agree" or "Strongly Agree" at the same question.



Graph 10: SwD answers on plan, resources, support, modifications

The next question referred to whether SwD had a plan or clear agreement with their University concerning the supports/ equipment they had received. It seems that only 30% (n=65) of SwD had made such an arrangement with their University but 36,5% (n=77) did not (see Graph 10). Then, SwD were asked concerning their University ability to provide them with the needed educational support/ equipment. A total of 78 SwD (37%) answered negatively to this question while 69 SwD (32,7%) positively (see Graph 7). Do SwD believe that their University has managed to follow their changing educational needs during their studies? The 37% of SwD answered that was not the case for their University adaptability to their ongoing educational needs (see Graph 10).

Did the received support and/ or equipment have a positive impact on SwD studies and their college life participation? SwD answers to the next three questions can provide us with a quite clear view concerning these issues.

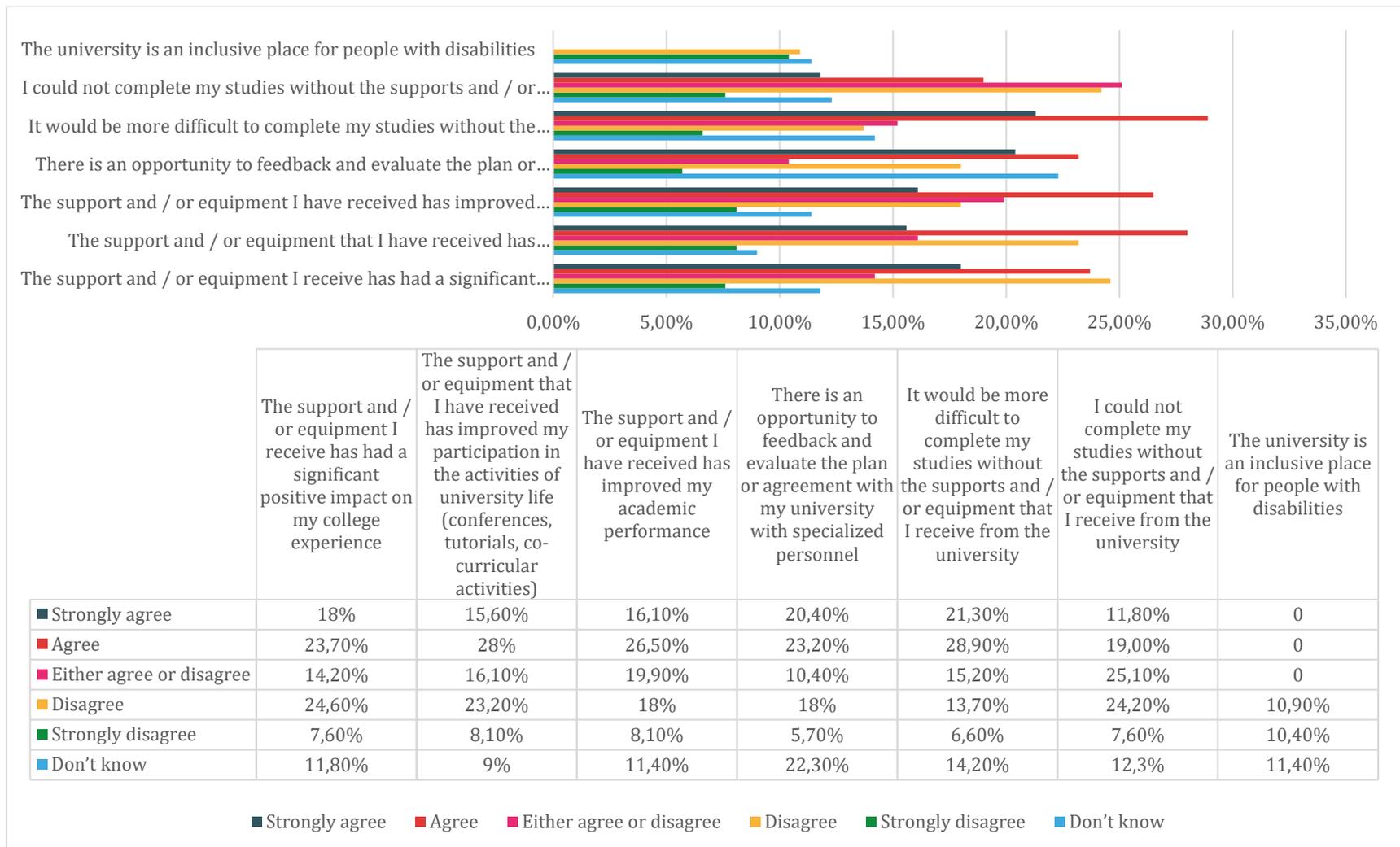
To begin with, it seems that an almost equal proportion of SwD disagreed (n= 52, 24,6%) and agreed (n=50, 23,7%) with the statement “The support and / or equipment I receive has had a significant positive impact on my college experience” (see Graph 11).

A quite similar picture -though slightly better- we received when we asked SwD whether the support and / or equipment, they had received, has improved their participation in the activities of university life (conferences, tutorials, co-curricular activities). A total of 49 SwD (23,2%) answered that they disagree to that statement while almost 60 SwD (28%) answered positively to the same question (see Graph 11).

Do the educational support and/ or equipment received by SwD had a positive impact on their academic performance? (see Graph 11). A total of 55 SwD (17,9%) answered that they Strongly disagree or Disagree that the educational support/ equipment has improved their academic performance. On the other side, 90 SwD (42,6%) answered that the support/ equipment they received had made a positive impact on their academic performance. We have to mention that almost 20% of SwD couldn't provide a clear answer concerning the impact the support and / or equipment have on their academic performance.

Despite any deficits SwD have to face regarding their educational support and/ or equipment, the majority of the participant (43,6%) believe that their University give them the opportunity to feedback and evaluate the plan or agreement with their university (see Graph 11).

Do educational support and/ or equipment make easier for SwD to complete their studies? Even with any existed shortfalls, half of the SwD (n= 106, 50,2%) answered that they agree or strongly agree that it would be more difficult to complete their studies without the educational supports and / or equipment they received (see Graph 11).



Graph 11: SwD answers on support and inclusivity

Then we asked SwD whether they could complete their studies without the supports and / or equipment they received from their university (see Graph 11). A total of 67 SwD (31,8%) answered that they Disagree or Strongly Disagree. On the other hand, 30,8% of SwD believe or strongly believe that they couldn't complete their studies without the educational support and/ or equipment they received from their University.

The last question had to do with SwD general view/ belief of their University as an inclusive place for people with disabilities. The vast majority of SwD seem ambivalent (n=66, 31,3%). However, a quite high proportion of SwD (36%) perceived their University as an inclusive place for people with disabilities (see Graph 11).

3.2. Questionnaire for staff

What follows is a detailed report of the results we reached after analyzing data derived from the questionnaire addressed specifically to academic and no academic staff. At the beginning, participants were asked to answer two questions on the support provided (or not) by their University to the SwD. As it can be seen (see Table 4) the vast majority of academic and no academic staff asked positive on whether their University provides educational support to help SwD participate in university life.

Table 4: Academic and no academic staff's answers concerning their University's educational support provision to SwD.

QUESTIONS	Don't know	Yes	No
Provides the university educational support to help students with disabilities participate in university life?	16,8%	69,8%	13,4%
Provides college support teams for students with disabilities to participate in college life?	21,9%	40,4%	37,7%

The second question referred to a more focused type of SwD support. Specifically, staff was asked whether their University provides college support teams for SwD to participate in college life. Staff's answers on this question figured in a quite different picture. As it can be seen (see Table 4) participants' answers were almost equally distributed to "Yes" (n= 151, 40,4%) and "No" (n=141, 37,7%) options. Furthermore, we should mention that 22% of the participants was unaware of the existence (or not) of college support teams at their University. We then asked academic and no academic staff to what extent does their role involves working or

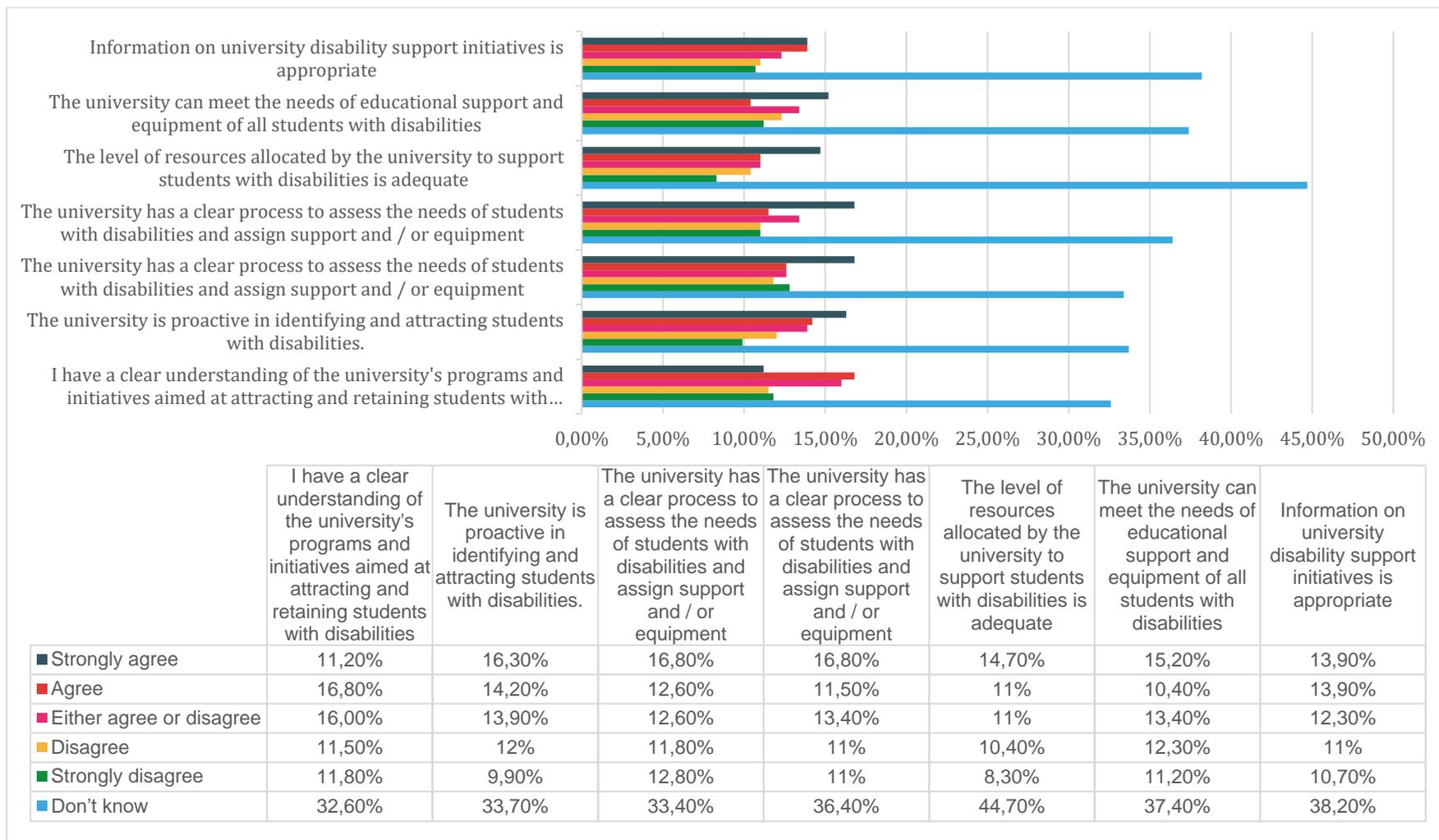
interacting with SwD or managing / administering programs or initiatives related to disability. Answers to this question provide an interesting picture of the staff's graduated involvement with SwD (see Table 5).

Table 5: Academic and no academic staff's answers on their perceived role's involvement with SwD

To what extent does academic and no academic staff's role involves working or interacting with SwD, or managing / administering programs or initiatives related to disability?	n	%
Don't know	26	7,0
All / most of my role	48	12,8
A substantial part of my role	66	17,6
Part of my role	93	24,9
A little part of my role	96	25,7
It's not part of my role	45	12,0

Apart from 26 participants (7,0%) answered that they don't know and 45 participants (12%) who answered that it is not part of their role any involvement with SwD the rest of academic and no-academic staff has to some extent deal and interact with SwD. In fact, a total of 114 participants (30,4%) answered that involvement/ interacting with SwD is all/ most or a substantial part of their role.

Then academic and no academic staff were asked to answer seven questions concerning some more specific aspects of their University's policy and initiatives for SwD. Does academic and no academic staff have a clear understanding of the university's programs and initiatives aimed at attracting and retaining students with disabilities? It seems (see Graph 12) that the majority of the participants (n= 122, 32,6%) was unaware or quite confused concerning their understanding of the university's programs and initiatives aimed at attracting and retaining SwD. However, we must note that 105 participants (28%) answered to this question that they "Agree" or "Fully/ Strongly agree".



Graph 12: University's policy and initiatives for SwD

Then, academic and no academic staff were asked whether they perceived their university as proactive in identifying and attracting SwD. As it can be seen (see Graph 12), 104 participants (30,5%) answered that they “Agree” and “Strongly agree” with the statement “The university is proactive in identifying and attracting students with disabilities”. However, we should mention that 126 participants (33,7%) answered that they are not aware of this issue.

The next question referred to whether staff's university has a clear process to assess the needs of SwD and assign support and / or equipment. The vast majority, that is a total of 125 participants (33,4%), answered “I don't know”. The rest of participants almost equally selected one of the other answer options, with the exception of “Fully/ Strongly agree” option that selected by 63 participants (see Graph 12).

Then, academic and no academic staff were asked to answer whether the process for assessing the needs of students and assigning support and / or equipment works well. The picture we got is quite similar with the one of the aforementioned statement. Specifically, a large proportion (n= 136, 36,4%) answered “I don't know”, 63 participants (16,8%) answered “Fully/ Strongly agree” while the rest answers were quite evenly distributed to the other answer options (see Graph 12).

The last three questions were also relevant to academic and no academics staff's evaluations concerning the quality of their University's support services for SwD. Regarding the adequacy of resources allocated by their university to support SwD (see Graph 9), 167 participants (44,7%) answered “I don't know”, 70 (18,7%), answered that they “Strongly disagree” or “Disagree” that the allocated resources for SwD are adequate, 96 participants (25,7%) found allocated resources adequate or very adequate, while 41 participants (11,0%) answered that they neither agree or disagree.

Does academic and no academic staff believe that their university can meet the needs of educational support and equipment of all SwD? As it can be seen (see Graph 12) only 96 (25,6%) participants answered that they agree or fully/ strongly agree that their university can meet all SwD educational needs.

The last question addressed to academic and no academic staff referred to the appropriateness of information provided by their university concerning disability support initiatives. A total of 143 participants (38,2%) answered “I don't know”, 40 participants (10,7%) answered “Strongly disagree”, 41 (11,0%) answered “Disagree”

and 46 (12,3%) answered “Either agree or disagree”. Finally, the rest 104 participants equally selected that they agree (n= 52, 13,9%) or fully/ strongly agree (n=52, 13,9%).

3.3. Questionnaire for students with and without disabilities and staff

3.3.1 Analyzing the questionnaire

The third questionnaire is addressed to four groups: students with and without disability, academic and no academic staff. This questionnaire is divided in five subscales: environment, administration/ organization, relations, hiring and professional development and student participation. Its aim is to assess the strengths and areas for improvement at each partner country. Based on the reliability analysis all subscales have a Cronbach’s alpha above .70 (see Table 6).

Table 6: Cronbach’s Alpha

Subscales	Cronbach’s α (N. of items)	M	SD
Environment	0,85 (7 items)	3,03	,636
Administration / Organization	0,84 (7 items)	3,08	,598
Relations	0,86 (6 items)	3,08	,568
Hiring and professional development	0,92 (7 items)	3,16	,731
Student participation	0,90 (5 items)	3,08	,597

It can be seen that all the subscales have satisfactory to very satisfactory Cronbach’s α , supporting the high reliability of each subscale. Furthermore, a correlation analysis among all subscales has been conducted that has shown a strong correlation ($p=.000$) among all subscales (see Table 7).

Table 7: Correlations

		ENVIRONMENT	ADMINISTRATION	RELATIONS	DEVELOPMENT	PARTICIPATION
ENVIRONMENT	Pearson Correlation		.695**	.599**	.560**	.534**
ADMINISTRATION	Pearson Correlation	.695**		.664**	.599**	.593**
RELATIONS	Pearson Correlation	.599**	.664**		.629**	.680**
DEVELOPMENT	Pearson Correlation	.560**	.599**	.629**		.536**
PARTICIPATION	Pearson Correlation	.534**	.593**	.680**	.536**	

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the above analysis the questionnaire that has been used is reliable and all items are positive correlated with each other. Taken this into consideration the results from the further analysis is presented next.

What follows is a detailed report of the results we reached after analyzing data from third questionnaire, the questionnaire administrated to students with and without disabilities and staff. Data were analyzed at two phases. Thus, first, we present descriptive statistics for the responses of students with and without disabilities, and staff on the questions that constitute the five subscales (i.e., Environment, Administration/ Organization, Relations, Hiring and Professional Development and Student Participation) of the third questionnaire (see Table 8 to Table 13). Then, we present the inferential statistics for the same dataset.

3.3.2 Descriptive statistics

The descriptive statistics for each subscale shows that all participants tend to be satisfied with all declarations as stated in each subscale. The participants based on their experience and knowledge (see Table 8) are satisfied with the application of

penalties and rewards for student behavior (M=3,20) and how the environment develops and manages effective arrival and departure procedures and plans and plans for safe activities throughout the day (M=3,10). But they are somehow satisfied with the provision a stimulating, welcoming, and supportive environment for students and staff (M=2,93) and environment’s equipped and suitability for the activities carried out (M=2,92).

Table 8: Environment

	Minimum	Maximum	Mean	Std. Deviation
Apply penalties and rewards for student behaviour appropriately and consistently	1	5	3,20	1,025
Develops and manages effective arrival and departure procedures and plans and plans for safe activities throughout the day	1	5	3,10	,934
Use of space is safe and clean	1	5	3,05	,712
Know the records and inform the staff about the special needs of the students	1	5	3,02	1,018
Establishes, maintains, and communicates the code of conduct to students, staff, and families	1	5	3,01	,879
Provides a stimulating, welcoming, and supportive environment for students and staff	1	5	2,93	,680
It is adequately equipped and suitable for the activities carried out	1	5	2,92	,824

At the subscale of administration and organization, the participants based on their experience and knowledge (see Table 9) are generally satisfied with almost all declarations. But they are somehow satisfied with the communication methods between students and administration (M=2,97) and the insurance of materials, and technology (M=2,97).

Table 9: Administration / Organization

	Minimum	Maximum	Mean	Std. Deviation
The university has scheduled meetings with stakeholders	1	5	3,25	1,050
Maintains all required documents as appropriate	1	5	3,15	,783
Develops a plan for community involvement	1	5	3,10	,983

Set clear expectations for attendance and behaviour	1	5	3,06	,679
Has well-defined communication methods between students and academic staff	1	5	3,03	,707
Has well-defined communication methods between students and administration	1	5	2,97	,745
Ensures supplies, materials, and technology are organized, maintained, and accessible	1	5	2,97	,836

Then we analyzed responses on the questions constitute the “Relations” subscale (see Table 10). It was found that for all the examined dimensions of “Relations” subscale, mean exceeded 3,0 (“Satisfactory”). The item concerning the establishment and maintenance of meaningful community partnerships was the one with the highest mean (3,15) while, the item concerning the treatment of students with respect was the one with the lowest mean (3,02).

Table 10: Relations

	Minimum	Maximum	Mean	Std. Deviation
Establish and maintain meaningful community partnerships	1	5	3,15	,860
Is sensitive to the culture and language of the students	1	5	3,14	,792
Encourages responsible decision-making in students	1	5	3,09	,680
They have staff who respect and communicate with each other and are a role model for positive adult interaction.	1	5	3,05	,713
Teach students to interact with each other in positive ways	1	5	3,04	,697
Treat students with respect and listen to what they have to say	1	5	3,02	,678

Concerning the responses on the questions of the fourth subscale, that is “Hiring and Professional Development” subscale, once again students with and without disabilities and staff evaluated the total of examined dimensions as “Satisfactory”. In fact, the mean of each of the seven examined dimensions referred to “Hiring and Professional Development” was slightly above 3,0 (see Table 11).

Table 11: Hiring and professional development

	Minimum	Maximum	Mean	Std. Deviation
Works with staff to achieve and maintain highly qualified credentials and quality status, as required	1	5	3,20	,915
Treats staff like professionals and provides opportunities for advancement or growth	1	5	3,18	,810
Ensures that staff members have competence in academic areas related to their job title when appropriate	1	5	3,18	,830
Assess staff professional development needs and provide appropriate training	1	5	3,16	,913
Provides positive working conditions for staff and timely feedback, support and supervision	1	5	3,15	,905
Train staff to plan appropriate activities that correspond to students' needs	1	5	3,14	,929
Recruit, hire and develop staff that reflect the diversity and culture of the community	1	5	3,11	,920

Finally, we analyzed the students' with and without disabilities and staff's responses on the five questions constitute the last subscale, the one referred to "Student Participation". Once again, the mean score of each question exceeded point 3,0 ("Satisfactory"). The question with the highest mean (3,12) referred to the provision of artistic, sports, and volunteer activities and opportunities. The lowest mean was 3,04 and found for the question concerning opportunities for students to express their ideas, concerns, and opinions and the question concerning the promotion of constant and active participations (Table 12).

Table 12: Student participation

	Minimum	Maximum	Mean	Std. Deviation
Provides students with artistic, sports, volunteer activities and opportunities, among others	1	5	3,12	,768
It offers students training opportunities for teamwork, conflict resolution, leadership, among others.	1	5	3,09	,717
Promotes teamwork and respect for others	1	5	3,09	,650

Offers students opportunities to express their ideas, concerns, and opinions	1	5	3,04	,723
Promotes constant and active participation	1	5	3,04	,691

Overall, we can see that students with and without disabilities and staff evaluated critical aspects of their Universities operation and services as satisfactory. While, this is, of course, a promising conclusion we should note that there is still room for improvement.

The results section closes with the presentation of inferential statistics on data derived from the third questionnaire. We performed an ANOVA test in order to check whether participants' mean scores on the five subscales were significantly different among RD, CUBA and CR, we performed an ANOVA with dependent variable the total mean scores on each of the five subscales and independent variable students' (with and without disabilities) and staff's country [RD (n= 701), CUBA (n= 169) and CR (n= 440)]. The ANOVA test just indicates if there are any significant differences among the three compared groups (i.e., RD, CUBA, CR) but leaves unanswered which specific groups differ or not when compared to each other.

Table 13: ANOVA results/ comparisons among RD, CUBA and CR subscales scores

Subscales	RD (n= 701)		CUBA (n= 169)		CR (n= 440)		F(2,1307)	η^2	p
	M	SD	M	SD	M	SD			
Environment	3,01 ^a	,617	2,68 ^b	,442	3,20 ^c	,668	44,821	,064	***
Administration / Organization	3,06 ^a	,613	2,93 ^b	,423	3,17 ^c	,620	10,327	,015	***
Relations	3,08 ^a	,590	3,00 ^a	,269	3,12 ^a	,613	2,533	,003	***
Hiring and professional development	3,19 ^a	,707	2,92 ^b	,349	3,21 ^a	,852	10,729	,016	***
Student participation	3,08 ^a	,596	2,97 ^b	,267	3,11 ^a	,680	3,393	,005	***

a,b,c: different superscripts indicate statistical significant differences

Thus, to illuminate the significant differences previously detected through ANOVA, we performed Tukey's post-hoc analysis for comparing each mean score with the other two mean scores. As it can be seen (see Table 13), that RD, CUBA and CR

scores were all significantly different concerning two subscales (i.e., “Environment” and “Administration / Organization” subscales). No significant differences were found among RD, CUBA and CR scores concerning “Relations” subscale. We should also note that for “Hiring and professional development” and “Student participation” subscales reported scores were significantly different between CUBA and RD as well CUBA and CR, while there were no significant differences between RD and CR scores on these subscales.

Overall, inferential statistics revealed both differences and similarities among CR, Cuba and RD participants’ mean scores. Participants from CR, Cuba, and RD evaluated the “Relations” subscale as similarly satisfactory. However, the mean scores on the “Environment” and “Administration/ Organization” subscales were significantly different among CR, Cuba and RD. Specifically, concerning both “Environment” and “Administration/ Organization” subscales, participants from CR were significantly more satisfied, compared to participants from RD and participants from Cuba. In fact, participants from Cuba were the least satisfied with “Environment” and “Administration/ Organization”. Participants from RD scored significantly higher than the participants’ from Cuba but still lower than the participants from CR. Concerning the other two subscales, that is “Hiring and professional development” and “Student participation” the picture we take was slightly different. Participants from CR and RD seemed similarly satisfied while participants from Cuba scored on the aforementioned “subscales (i.e., “Hiring and professional development” and “Student participation”) significantly lower compared to their counterparts from CR and RD.

4. RESULTS OF THE QUALITATIVE RESEARCH

4.1 Open-ended questions from the online questionnaires

On the students' online questionnaire there was open-ended question on what kind of support they have received in the last three years and they were asked to give detailed information. Ninety-two students out of 211 (see Graph 2) have responded positively that they have received support and on the table 17 the keywords summarize their answers. The students mentioned psychological support and educational adaptations (such as note taking, more time during exams) more frequently.

“Consultation and individual support by the psychologist in charge, extra time in exams, and digital and physical information to improve in the study”.

We can note here that the assistive technology is the one that has been mentioned less. The educational and curricular adaptations are also mentioned more frequently (n=30) (see Table 14).

“I was given curricular adaptation, so that I have the right to extra time during graded tests. Because of this, a majority of my teachers know about my condition, so it probably changes slightly the way they grade me”.

Ten students mentioned that their university is in general inclusive but they did not give any further information.

Table 14: Support provided the last three years

Support	Frequencies
Psychological Support	31
Educational/ Curricular Adaptations	30
Environmental Adaptations	11
The university is inclusive in general	10
Assistive Technology	6

On the questionnaire for personnel there was an open-ended question concerning their opinion about what the university could do to better to meet the needs of students with disabilities (see Table 15). The staff referred more frequent to the development of a strategic plan and program at the University level (n=63) and linked to that is also the training of all staff (n=62).

“Design a strategy based on the reality of the context and the potential of teachers to prepare actions aimed at all teachers and non-teachers, as well

as for students where they focus their content on care for people with disabilities”

Although training the staff is a top priority (n=62) the curriculum adaptation is not mentioned so frequently (n=13).

“Provide specific training to all teaching and administrative staff on accessibility, usability and user experience issues. The most careful writing standards on accessibility issues (APA, mainly) must be known and demanded at the university. Training on how to produce accessible documents and materials should be provided on a regular basis, in accordance with Law 7600 of the Republic (Equal Opportunities for People with Disabilities) in its Chapter VI on Access to Information and Communication, as well as under the protection of good practices in the matter stipulated in the National Code of Digital Technologies, Chapter I, which has specific guidelines in this regard and whose writing was commissioned by this professor, commissioned by the Ministry of Science, Technologies and Telecommunications”.

It is also interesting that some participants have mentioned the need that all policies and practices need to be disseminated in order to raise awareness.

“I do not know if the University has clear policies to support students with disabilities, or at least it has not communicated them to teachers. Then, the University could define its policies and carry out a communication campaign between teachers and students, and of course between those interested in enrolling for the first time at the University”

Table 15: Opinions of academic and non-academic staff

What the university could do to better to meet the needs of students with disabilities?	Frequencies
Strategic plan and program	63
Training of all staff (academic and no academic)	62
Elimination of infrastructure barriers	50
Student support	32
Assistive technology	31
Raise awareness and disseminate best practices	30
Funding/ Resources	26

Curriculum Adaptation	13
Teacher support	8

In general, the universities need to have an active role:

“Surveys, socialization activities and knowledge on the subject. Develop a specific program for the student community in general and make it known outside. Implement initiatives to reduce exclusion”

4.2 Focus groups

The focus groups (see Annex 2, 2.2) were conducted with students with disability and with staff (academic and no academic).

4.2.1 Focus group of students with disability

Based on the results of the focus group of students with disability, the participants have disclosed their disability when they enrolled at the university mostly to service staff (n=23) and to academic staff (n=12) (see Table 16).

Table 16: Disclosure of disability

To whom did you disclose your disability at this university when you enrolled?	Frequency
Service staff	23
Academic staff	12
Other	5
No communication	5
Classmates	1

Considering the barriers, the participants anticipate facing when entering the university, the most frequent barriers that have been mentioned are social-attitudinal (n=34) and personal barriers (n=22). They are less bothered for bureaucratic barriers (n=3).

Table 17: Barriers before entering the university

Barriers	Frequency
Social-Attitudinal	34
Personal	22
Institutional	15
Architectural	11
Bureaucratic	3

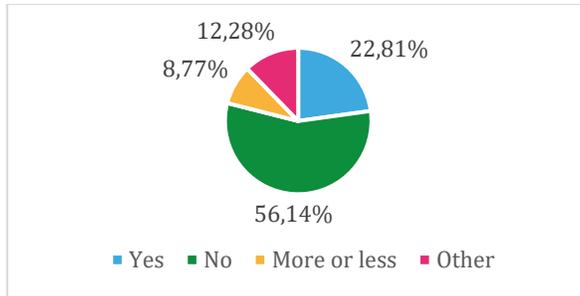
During their study at the university, participants have received different types of support (see Table 18). The most frequently mentioned support refers to education and curriculum (n=41) (e.g. needing more time during exams or guidance on how to study). Furthermore, personal (n=28), institutional (n=28) and social-attitudinal (n=27) support are being mentioned by the participants. Those types of support refer to providing any kind of help the student might need (personal), having accessibility to resources (i.e. applications, speech recognition software) (institutional) and empathy, awareness (social-attitudinal).

Table 18: Types of support

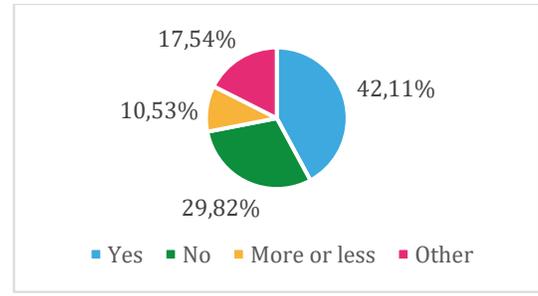
Types of support/ equipment received	Frequency
Educational/ Curricular	41
Personal	28
Institutional	28
Social-Attitudinal	27
Bureaucratic	15
Architectural	2

The students have been asked also how they worked with the university to identify and put in place the supports/ equipment they needed. The students mostly refer to persons or established services (n=25) and also to procedures (n=20). Amongst them 50% think that the organization of the university works well, 20% of the participants think that the organization of the university does not work well and 30% of the participants think that there is need for improvements. Concerning the existence of a plan or agreement regarding the supports/ equipment 56,14% of the participants mentioned that no plan exists and 12,28% of the participants mentioned if needed they would make an agreement (see Graph 13).

Next, participants were asked if there are opportunities to review the plan or agreement with a support staff as their needs change. To this question 42,11% answered positive and 29,82% of the participants answered negative (see Graph 14).



Graph 13: Existence of a plan or agreement



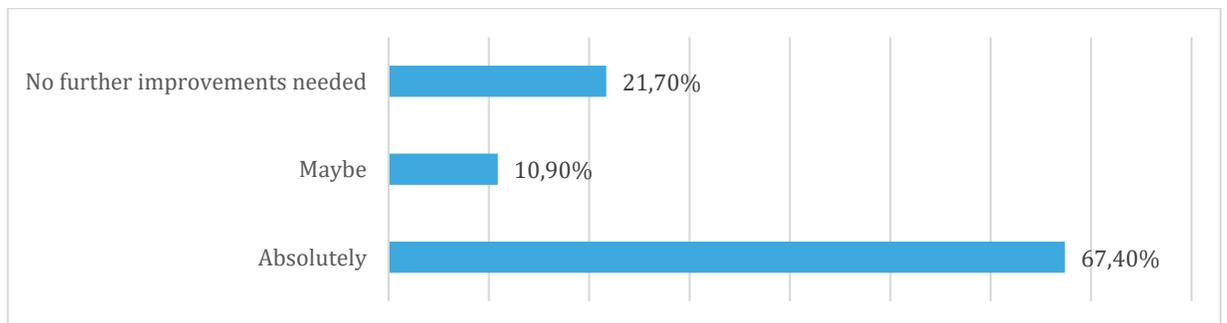
Graph 14: Opportunities for changes on the plan or agreement

During studies the students with disability still face some barriers especially related to resources (e.g. sign language interpretation etc.) provided by the institution (n=20) and of course architectural (n=12) and social-attitudinal (n=11).

Table 19: Barrier during studies

Barriers	Frequency
Institutional	20
Architectural	12
Social-Attitudinal	11
Personal	5
Bureaucratic	0

On the question if the university could do things differently to better support students with disability during their studies (see Graph 15), 67,40% of the participants answered positively, 21,70% answered that no further improvement is needed and 10,9% answered maybe.



Graph 15: Do you think your university could do things differently to better support you in your studies?

Their suggestions are focus more on aspects related to social-attitudinal, educational and accessibility issues, i.e.:

“Designate a person who is personally in charge of attending to the needs of people with disabilities, that is, someone to turn to when there is a problem closely related to our disability”

“Be attentive to the subjects and programs coursed by the student with disability, which are difficult to assimilate due to our disability, for example, in my own career there is the Sign Language subject, which is especially difficult for me since it is impossible for me to observe each one of them. the gestures of this language, the possibility of receiving an optional subject should be considered in these cases”

“Establish flexibility regarding the mandatory use of ICT, because in my case it is cumbersome for me to present a presentation when I am not able to see the slides that I am presenting myself”

“In the same way, it is important that teachers know how to convey the content to all students, for example, more than once I have been left without understanding a film or a presentation due to not being able to see the screens on which they are projected”

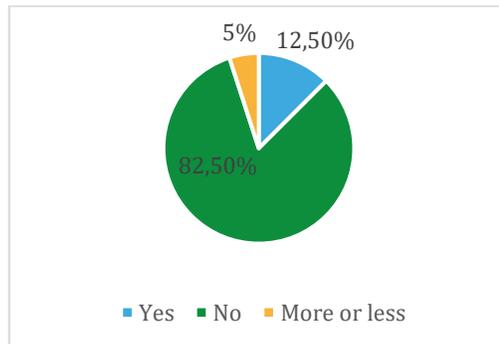
Another question was stated in order to collect information on what has attracted them on choosing this university (see Table 20). The most frequent response (n=25) is related to the quality of studies, i.e. The prestige and qualification of the teachers. This is very important aspect since it shows that the students with disability are not taking so much into consideration the inclusive policies or accessibility issues before entering to the university. This is also notable on the next question regarding their awareness of the university’s programs or initiatives aimed at people with disability, before applying (see Graph 16).

Table 20: What attracted you to this university?

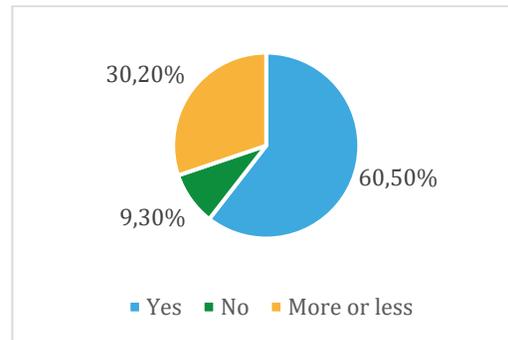
	Frequency
The quality of studies	25
Location	10
Subject	9
Other reasons	7
Policy towards people with disability	6

Facilities (e.g., parking)	1
----------------------------	---

Based on their answers only 12,5% of the participants were aware, before they applied, of the university’s programs or initiatives for supporting students with disability during their studies. Although before entering the university did not know anything about the inclusive policies they think that the university is inclusive (see Graph 17). Most of the participants 60,5% responded positively about the inclusive character of the university.



Graph 16: Were you aware of any of the university’s programs or initiatives aimed at people with disability, before you applied?



Graph 17: Is the university inclusive?

The last question focused on suggested improvements that they would like to see from the university towards future students with disability (see Table 21). The most frequent response is the reduction of the social-attitudinal barriers (n=47) and the reduction of institutional barriers (n=33).

Table 21: What would you like to see your university do to help future students with disability?

	Frequency
Reduction of Social-Attitudinal barriers	47
Reduction of institutional barriers	33
Reduction of architectural barriers	14
Reduction of bureaucratic barriers	6
Provide SwD with needed skills	6

Some of the statements from the students are:

“I would like (my University) to implement the same actions that you have carried out with my case. I am sure that future students entering this center

who have the same disability, they will feel the same human warmth that they currently give me”.

“I think they should have a group of resources and supports to support us and allow us better access to teaching materials”.

“I would like the university to focus on improving scholarships and maintenance of sidewalks and roads as many represent a barrier to students with disability”.

“That they create a design regarding infrastructure, science technologies and information and resources that allow greater satisfaction to all those who have a disability”.

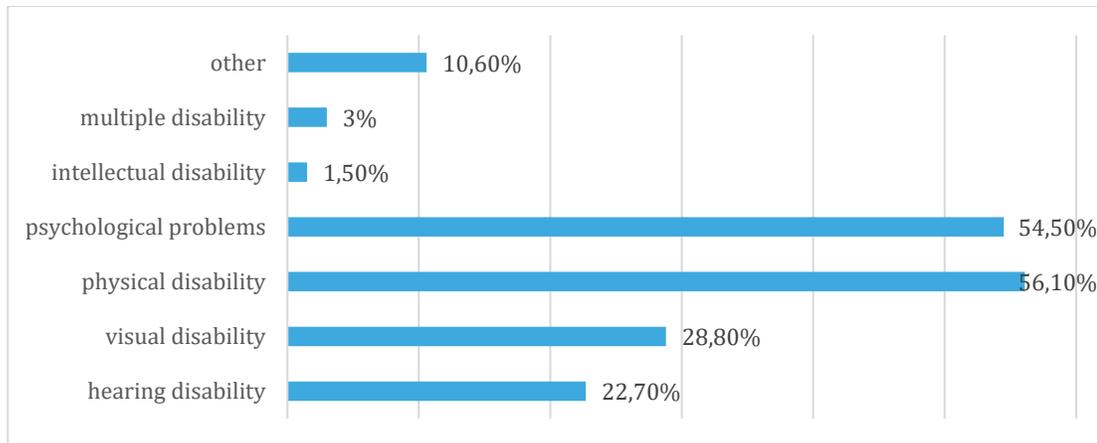
4.2.2 Focus group of staff (academic and no academic)

The first question was referring to the types of supports, equipment and /or resources are provided to students with disability at the university (see Table 22). The most frequent support was the institutional (n=59) (i.e. financial support, material and human resources). The next more frequent type of support was the social-attitudinal (n=39).

Table 22: What type of supports, equipment and/or resources are provided to students with disability at the university?

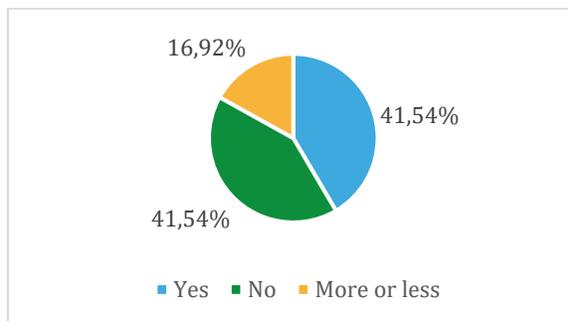
	Frequency
Institutional	59
Social-Attitudinal	39
Personal	23
Architectural	19
Bureaucratic	13

Based on the answers of the staff, students that mostly access the support and equipment are students with physical disability (56,10%) and students with psychological problems (54,50%) (see Graph 18).



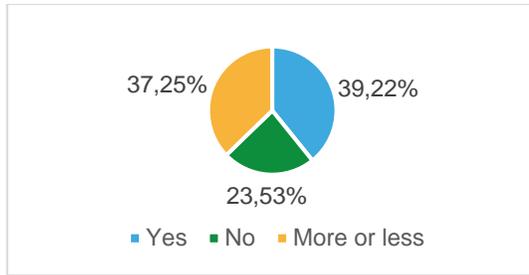
Graph 18: Students with disability that access to support and equipment

On the question if the university has a clear process to assess the needs of students with disability and allocate support and/ or equipment 41,54% of the participants responded positively and the same percentage negatively (see Graph 19).

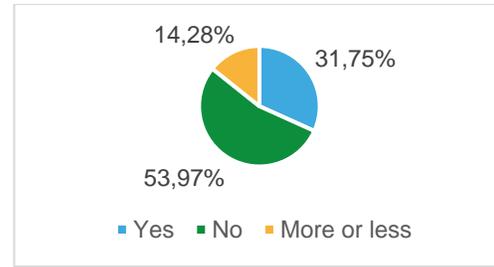


Graph 19: Does the university have a clear process to assess the needs of students with disability and allocate support and/or equipment?

The participants that have responded positively have repowering the following: interviews with the students, educational strategy, agreements and commitments of all parties, restructuring the actions of the individual plan and strategy, etc. Referring to the plan or agreement put in place with the university regarding the supports/ equipment they receive 39,22% responded positively and 23,53% negatively (see Graph 20).

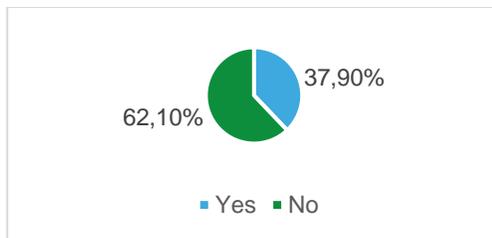


Graph 20: Existence of plan or agreement

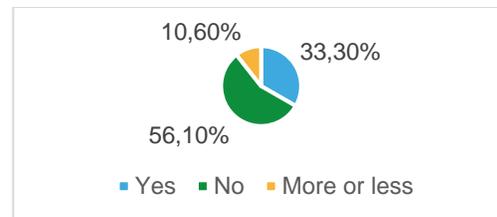


Graph 21: Is this Plan or Agreement reviewed as their needs change?

Furthermore, the participants mentioned 53,97% that the plan or agreement is not reviewed as their needs change (see Graph 21) and 62,1% does not think that the university is able to meet the needs of all students with disability who seek assistance (see Graph 22).



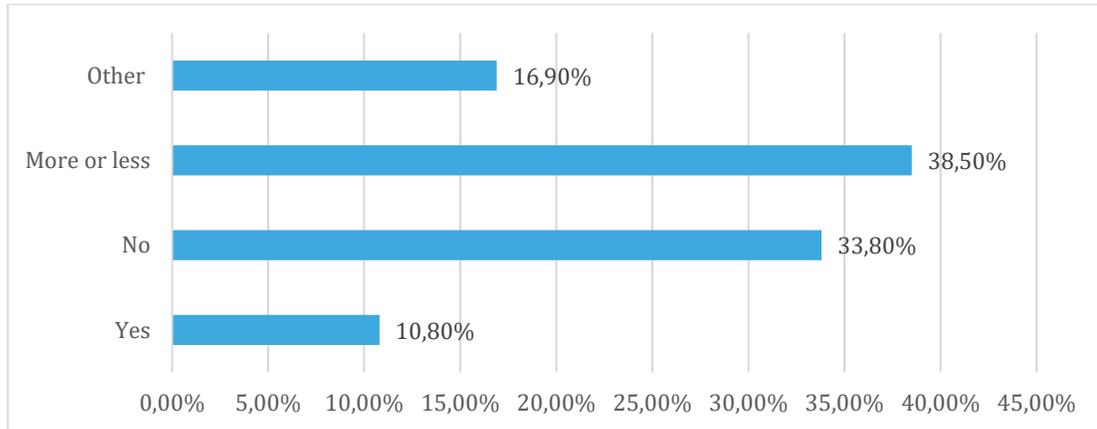
Graph 22: Is the university able to meet the needs of all the students with disability who seek assistance?



Graph 23: Does the university have a well-developed strategy for attracting and retaining students with disability?

Referring to their role in facilitating access to support and equipment for students with disability, participants mentioned their role (a) as the contact person between students and administration or support services, (b) as a guide on how to solve technical problems, (c) as a counselor or person providing psychoeducational support, and (d) as a person facilitating the students on educational and curricular issues.

On the question if the university has a well-developed strategy for attracting and retaining students with disability, most of the participants responded negatively (56,06%) (see Graph 23) and think somehow (38,50%) that across the university there is a high level of awareness about inclusive teaching and learning practices and support for students with disability (see Graph 24).



Graph 24: In your opinion, is there a high level of awareness across the university about inclusive teaching and learning practices and support for students with disability?

More specifically the participants mention the following

“There is awareness, but not a high level of awareness. It is necessary to teach for diversities and in the attitudinal part about how to have an inclusive relationship with students”.

“In general it is considered that the level is not high, because in order to carry out inclusive processes, it is necessary to begin to understand that these Students are not treated with pity, that is not inclusion”.

In order to deepen into university profile, participants were asked to discuss what contribution does the university make to support students with disability. The most frequent response was related to facilitating study and learning (see Table 23).

Table 23: In your opinion, what contribution does the university make to supporting students with disability?

	Frequency
e.g., facilitating study, learning	41
e.g., offering opportunities for transition to work	19
e.g., diminishing stigma	17
e.g., financial support	7
e.g., providing equal participation	6

A very characteristic response related to this topic is the following:

“Although it is established as a policy from the Constitution, although it is in the policies of the Ministry of Higher Education, although the university has it as a projection, because the university is humanistic, inclusive and

universal, in practice, it is appreciated that it is still not enough the culture of inclusion, and that it is not even because people do not want to, it is that they have a concept of a culture of inclusion that is so restricted and very supportive that it does not allow them to change their ways of thinking and doing; and this change can only be achieved by changing the paradigm”.

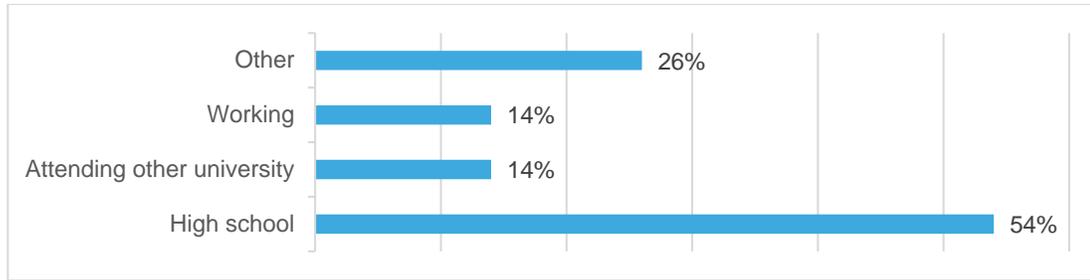
Concerning the strategy that is implemented to attract and retain students with disability 54,3% of the participants referred to general strategy, procedures and prerequisites and the involvement of staff as well as other related services. However, 45,7% of the institutions do not have any strategy in place. As for the improvements 97% think there is a need for improvements at all related issues such as *Architectural, Bureaucratic, Personal, Institutional, and Social-Attitudinal*.

“There is limited access to resources and equipment that enable and allow the inclusion of students with disabilities, this element constitutes a barrier to develop the inclusive process, but the goodwill and efforts made by teachers and staff were not overlooked, so that these students feel comfortable in the institution. But it is agreed that there is a lack of support regardless of material resources and financing, such as the knowledge to develop an accessible culture”.

4.3 Interviews of students with disability

The interviews (see Annex 2, 2.1) are planned for students with disability that have already some support at each university. Some universities provide support to their students and with this interview we will be able to track the differences. The content of the interview focuses on the barriers, the support, the difficulties as well as the attitude of staff and peers.

Based on the results 54% of the participants before entering the University they have attended High School and 26% have attended other school types such as pre-college education or baccalaureate (see Graph 25).



Graph 25: What you did before university?

The participants while comparing their past and present support, the barriers and challenges as well as personal characteristics note that:

“To begin with, the choice of the career itself was taking into account my disability, since I wanted to study Psychology, but my parents warned me that perhaps being a scholarship I could not have all the necessary conditions so I decided on Speech Therapy, a career that I study at the university closest to my home”.

“I always thought that when I finished high school I would make every effort to go to university. I had some difficulties in high school but I received psychological support. At that time, I was preparing and overcoming the difficulties that I think were more mental barriers and that was when I focused on the preparation to go to university. I was very much sure, although I always thought that the process at the University would be easier”.

Concerning the *barriers* (see Table 24), they thought they might face when considering going to university the participants have referred more to issues related social-attitudinal barriers (n=61), such as stereotypes, negative perceptions of disability, stigmatization (see table 16). The next most frequent statement concerning barriers were the personal barriers (n=31), such as new-needed communication skills, reluctant to ask for help or to disclose disability. Also educational/curricular (n=23) (e.g. more time for the exams, guidance on how to study etc.) and institutional barriers (n=21) (e.g. material resources, sign language interpretation etc.) as well as architectural barriers (n=16) (e.g. space, location, offices, ramps etc.) have been mentioned. The students with disability seem not to see any bureaucratic barriers (n=5) (e.g. paperwork, time length procedures, etc.).

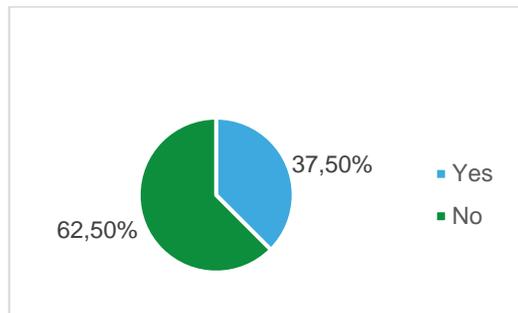
Table 24: Barriers before entering the university

Barriers	Frequency
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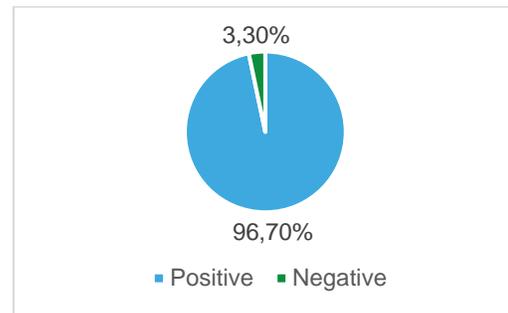
Social-Attitudinal	61
Personal	31
Educational/ Curricular	23
Institutional	21
Architectural	16
Bureaucratic	5

It is important to note that difficulties, such as to get to the study center (transportation), ability to handle the workload, lack of personalized support, adaptation to new city and physical capacity, lack of interpreter, disability hinders academic performance, seem to bother students before entering the university.

More than the half (62,50%) of the participants have reported that there was not transition plan (see Graph 26) on supporting them to the decision entering the university but 96,7% referred to the positive attitude of others' (e.g. family) towards their decision on entering the University (see Graph 27). The positive attitude is reflected by the fact i.e. that the family has covered the costs for the sign language interpreter or they have received scholarship.

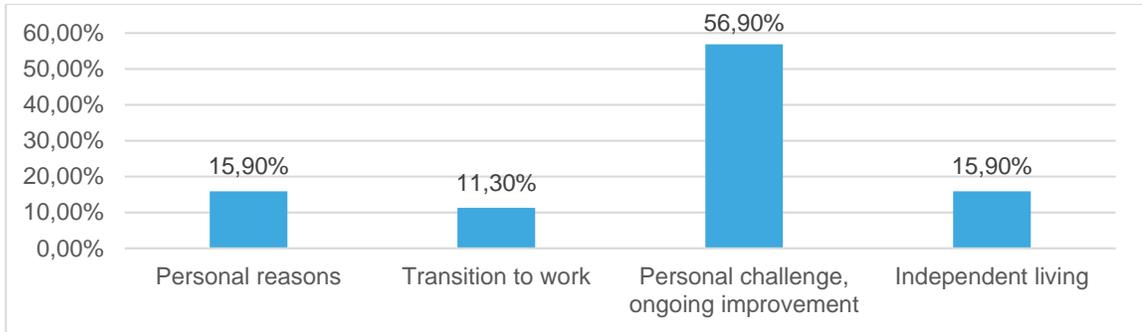


Graph 26: Existence of a transition plan



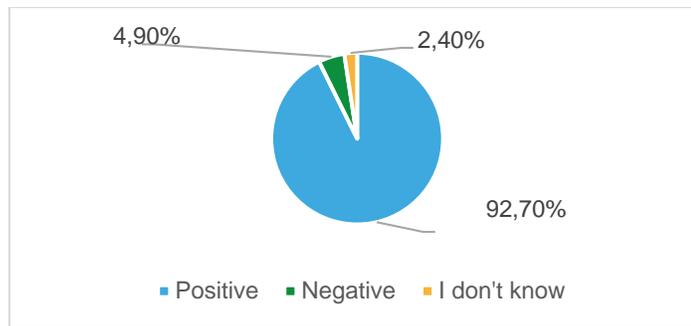
Graph 27: Attitudes of others towards the decision on entering the University

The most frequent reasons for entering the university are personal challenge and ongoing improvement (56,9%) and the least frequent is the transition to work (11,3%) (see Graph 28).



Graph 28: Reasons for entering University

The participants mentioned also the positive reaction (92,7%) of the person who assisted them during the registration (see Graph 29) and the person that was more frequent mentioned, to whom they have disclosed their disability was one of the academic staff or service staff (see Table 25).

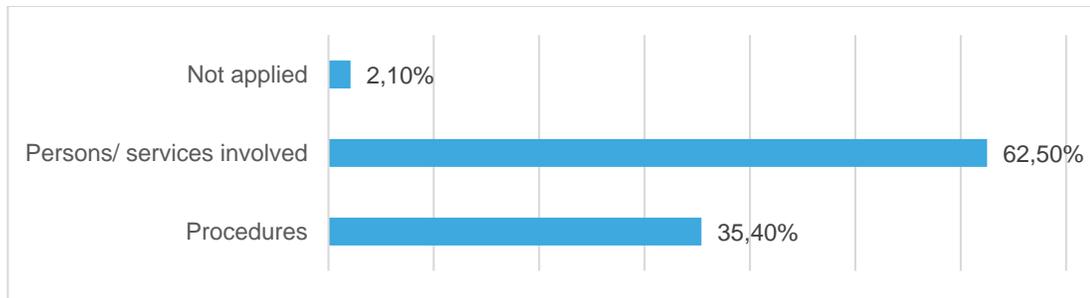


Graph 29: Reaction of the persons providing support during registration

Table 25: Disclosure of disability

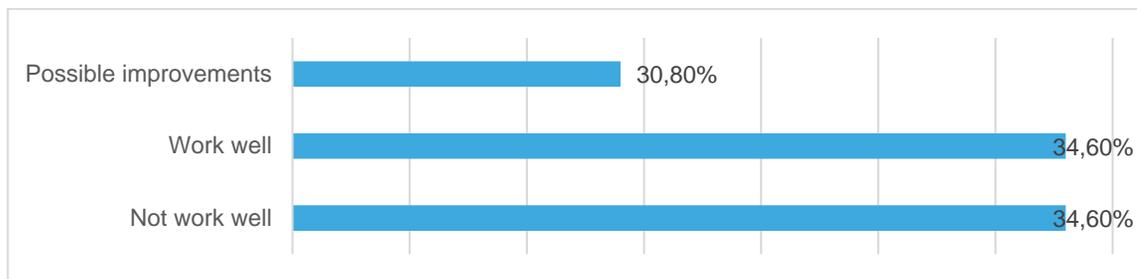
To whom did you disclose your disability at this university?	Frequency
Academic staff	34
Service staff	23
Classmates	12
Other	4
Didn't disclose	2

The opinions of the participants related to the supports and equipment has also provided some interested perspectives (see Graph 30). Most participants (62,5%) have mentioned that in order to identify and put in place the supports and equipment they have worked with persons and services and less based on established procedures (35,4%).



Graph 30: How did you work with the university to identify and put in place the supports/equipment you needed?

On the other hand, concerning the evaluation of the cooperation with the university in order to identify and put in place the supports/ equipment they needed their answers are controversial since 34,7% think it has not functioned and the same percentage that it has worked good and 30,8% thinks it needs improvement (see Graph 31).



Graph 31: Evaluation of the cooperation with the university

Referring to the present the participants were asked to mention the types of support/ equipment received and based on their answers social-attitudinal support is the most received (n=83) and the least support they received is related to architectural issues (n=13) (see Table 26).

Table 26: Types of support/ equipment received

	Frequency
Social-Attitudinal	83
Personal	46
Institutional	43
Bureaucratic	17
Architectural	13

Concerning the future and what he university should do to help students with disability the participants more frequently have referred to work upon overcoming social-attitudinal barriers (n=71) and institutional barriers (n=41) (see Table 27).

Table 27: What would you like to see your university do to help future students with disability?

Types of support/ equipment received	Frequency
Revocation of Social-Attitudinal barriers	71
Revocation of institutional barriers	41
Revocation of architectural barriers	18
Provide SwD with needed skills	12
Revocation of bureaucratic barriers	6

One important factor constantly mentioned during the interviews is related to all levels (a) before entering the university, (b) while studying and (c) what needs to be taken into consideration in the future are the social attitudinal barriers.

BEFORE ENTERING THE UNIVERSITY:

“As we are not equal to others, let's say that we are special and the institutions do not always prepare to receive us, but we cannot stay at home, we must go out to fight, hopefully these projects will help.”

PRESENT EXPERIENCES:

“My classmates are my main support at the university, they are always aware of me, of my needs, but not with pity, but with respect and I would say even with admiration. My disability has never limited our relationship, on the contrary, it has made us worry more about each other and has taught them to see things from another point of view.”

FUTURE ACTIVITIES:

“A greater effort should be made for inclusion without favoritism. That they take into account what the students are, without wanting to show a kind of pity or compassion”.

5. DISCUSSION

The aim of this report was to specify and understand the needs of the students with disabilities and of the academic and non-academic staff who works with students with disabilities. Based on the quantitative and qualitative data of the needs analysis research, on this chapter we focus on discussing from a student-centered perspective those results based on:

- (a) Student life

- Before entering the university (transition from secondary school to the university)
- During their studies at the university
- Preparation for the transition from university to work life

(b) University life

- Policies (i.e. transition plan, any kind of agreements or plans, etc.)
- Organizational issues (i.e. decision making, meetings, info days etc.)
- Types of support and barriers (i.e. social-attitudinal, personal, institutional, architectural, bureaucratic, educational-curricular)

These two aspects of student and university life are linked at the end with some recommendations and measures that Universities need to take into consideration for the designing and planning their future policies and support services.

5.1 Student life

The majority of SwD reported that they did receive support by their University in order to access their studies under conditions of equal opportunities. Attitudes of people, general public or institutional policies as well as specialized services (e.g., psychological, educational) were among the most frequently reported answers by the SwD. However, it was found that the provision of assistive technologies (e.g., Braille printers, screen readers) is an area that Universities should take a more special care in the future.

It is critical to understand why a quite large proportion of SwD didn't receive educational support from their Universities even they needed such support. In many cases, other organizations -outside universities- such as the several disability support organizations covered SwD educational support needs. However, we must point out that many SwD didn't receive educational support due to reasons that should and could be addressed by the Universities. Quite many SwD lack the knowledge that they could have further support during their studies. Moreover, many SwD didn't receive educational support because their universities didn't have the means or the ways to cover SwDs' educational needs.

5.1.1 Before entering the university

SwDs' experiences before entering the university seem to give them a quite clear picture concerning the barriers they could face during their studies, such as:

- “Attitudes of people”,
- lack of educational, psychological, and generally of specialized support and
- limited assistive technologies

Only 12,5% of the participants were aware, before they applied, of the university's programs or initiatives for supporting students with disability during their studies. Students with disability do not chose a university based on their needs of support but based on the quality of studies. In other words, the students with disability are not taking so much into consideration the inclusive policies or accessibility issues before entering to the university. This is also notable on the other question regarding their awareness of the university's programs or initiatives aimed at people with disability.

A very notable remark is connected with the reasons for entering the University. Students with disability refer to personal challenge, ongoing improvement, independent living and other personal reasons, but only a small proportion refers to transition to work.

Based on the above, it is clear that the process of attraction is essential to publicize the opportunities for SwDs. Therefore, it is very important that the accessibility and disability axis is incorporated into the entire institutional strategy of dissemination to secondary and specialized professionals: orientation, psychology, social work, among others.

When there are selection processes to enter the university, it is important that the supports required by the SwD are considered and provided, to equality and equal opportunities. In addition, this allows to have a first approach with SwD and to know in advance the needs of the possible aspirants, to be able to articulate institutional supports when they enter. If this is not the case, a mechanism must be made visible in the registration process to be able to probe the entry of new students with disabilities.

5.1.2 During student life

For many SwD the support or equipment received had improved their academic performance. However, there is still a number of SwD that didn't see any improvement after receiving the support or equipment provided by the university. Once again, there is the need to figure out SwD educational needs more precisely and provide them the support and/or equipment that will do make the difference to their academic performance.

A quite large proportion of SwD believe that their university gives them opportunities to evaluate and provide feedback concerning the plan or agreement they have formed with the university, although it seems to be a lack of plans, agreement as stated by academic and non-academic staff. Perhaps it is not clear to the students the function and the use of a plan or agreement i.e. that has to do more with an official and established document that ensures all relevant roles, functions etc.

Furthermore, individualized support to each student is essential to generate trust, security and a link with other peers and faculty members in order to meet the needs, determine supports, make adjustments, refeed and evaluate. Group support is also vital to generate belonging and not "feel unique" within the university but an equal member of the university system. In this way, working on soft skills individually and in groups allows to enhance socio-emotional development, but also prepares them for the work field.

5.1.3 Transition to work life

The subject of the transition to work life unfortunately seems not to be the aim of the students while planning their future, especially when for them independent life is very important. Moreover, the universities have not adapted any related policies either. This is an area that needs to be taken into consideration both under the perspective of university policies as well as under the perspective of support and education of students with disability on transition.

5.2 Aspects of University life

Universities need to a) establish better communication policies targeting SwD awareness on educational support they could receive during their studies and b) enhance the types of educational support provided to SwD according to their needs.

Even if we can spot a number of shortfalls regarding the support and/or equipment provided to SwD, the absence of this support and/or equipment would have negative impact on SwD and could made the completion of their studies much harder. In fact, for a quite large proportion of SwD the completion of their studies is inevitably attached to the provided support and/or equipment. We see, once again, how critical is for the SwD the provision of the needed support and/or equipment.

Special care should be given to make universities more inclusive for students with disabilities. Many SwD seemed ambivalent to characterize their university as an inclusive place for SwD. However, we should mention that a quite good proportion of SwD did perceive their university as an inclusive place.

Compared to SwD, the academic and non-academic staff stated a more positive view on whether their University provides educational support to help SwD participate in university life.

5.2.1 Policies

A good proportion of SwD answered that university had worked with them in order to clear up and to put place the support SwD need. However, an equally number of SwD wasn't satisfied with this aspect of their university support.

The existence and updating of policies in consultation with the SwDs is essential to guide the work of the institution in terms of equalizing opportunities. It seems, also, that academic and non-academic staff believe that a few policies/initiatives targeted to SwD work well and an analogous proportion believes that critical improvement should be made.

Policies must be materialized in specialized services and programs for this population, as well as in regulations and institutional regulations. In the event that such programs and services do not yet exist, it is necessary to systematize and make visible all the efforts that are being made institutionally that may eventually result in work plans.

It is very important to include at this level the authorities and decision-makers since their needs can be generated institutionally to create strategic alliances in the adjustments that must be made in all dimensions of accessibility.

5.2.2 Organizational issues

An area that seems to need improvement has to do with support and/or equipment provided to SwD. In particular, special care should be given on the behalf of the universities, to the establishment of clear plans and agreements concerning SwD needed support and/or equipment, the provision of the support and/or equipment itself as well as the opportunities for adapting the provided support to the changing needs of SwD.

There must be support committees between the teacher and the specialized professional who accompanies the student himself to (a) survey needs, (b) make consensual decisions, (c) support the needs of the student and the teacher in the adjustment of their course, as well as (d) seek support in other programs and services.

It is necessary to develop institutional information and dissemination strategies to which students can access information on programs and services, initiatives for SwD, or find clarification of queries and doubts in a timely manner.

One point that emerged several times from SwD answers, referred to SwDs lack of awareness concerning what programs, initiative, plans and generally the types of support their university could provide them. In fact, SwD have to deal with this lack of awareness from the very first moment they enter the university. When the vast majority of SwD first came to college, they didn't know where they have to go for discussing their educational support needs. The permeation of information regarding the support provided by universities for their SwD is something that should be improved.

Lack of awareness should be addressed not only on the behalf of SwD. Many members of academic and non-academic staff were unaware or quite confused concerning their understanding of the university's programs and initiatives aimed at attracting and retaining SwD.

5.2.3 Support and barriers

The attitudinal work articulated at different levels (informative, awareness and technical), is fundamental for the elimination of discrimination against SwDs, as well as to favor the strengthening of inclusive university communities.

Institutional barriers were the most frequently reported barrier followed by architectural and social-attitudinal barriers. During their studies SwD can bear and manage any personal barriers they had before entering the university.

The equipment and technical aids must be part of the supports provided to students with disabilities from the university. Pretending that a student should get them or finance them on their own, puts them in a situation of discrimination and disadvantage.

Disability support technologies are a fundamental tool to improve and enhance the meaningful learning of students with disabilities. Under this line, getting acquainted with them, acquiring them, knowing how to use them and even thinking about their development in research projects within the university, definitely contributes to the resolution of the needs of this population, a task to which we are called the universities. Digital literacy is a commitment to students with disabilities to make the transition to university life more fluid, when more and better resources are needed to acquire professional technical knowledge.

Generally, there is a quite positive picture concerning “Administration/Organization”. However, there is still space for improvement e.g., better defined communication methods between students and administration.

5.3 Recommendations –Measures

Generally, on the evaluation of services, students with disabilities express that those services and support are vital for them because they have allowed them not only to enter the university, but also to finish their studies. They also comment that without them they would not have been able to continue, or they would have had to reinvent their way of studying and trying even harder because they require different supports according to their disability situation. Usually the absence of accessibility support is replaced with family support (which is often what happens during school years, until SwD comes to University to study).

Additionally, the investment in mental health and a greater number of specialized personnel are mentioned as opportunities for improvement, as well as the empathy of some teachers to meet and interact with students with disabilities. Also, through the interviews conducted with the students can be confirmed the above described, some examples are:

"I received support living in Student Residences so that it would not be so difficult to mobilize, as well as an electric wheelchair to mobilize on campus

and tours of buildings and classrooms so that psychologists knew how to make changes in laboratories and so on."

A student adds in this regard that without the services you would have to try even harder than you give and it could be very exhausting not only physically, but mentally and psychologically: "(...) at least on my part it wouldn't succeed".

In some cases, students report that they have received levels of individualized aid, although they have not specialized technological support to access learning and educational material and a lot of students agree on the existence of architectural barriers in university facilities.

"I have received a lot of emotional and academic help and when I had to undergo vision surgery, in which I was absent from the classes for quite some time, the group of teachers were great help to be able to continue with my career through guides of study and individualized materials"

"In the realization of my studies I do not count on any type of support, because at the moment the most necessary are the supports technological and I do not own them (...), but I do not lack the support of my teachers, classmates and my family with that and with willingness to do. I also participate in all activities, whether they are face-to-face or virtual and I am obtaining adequate results"

A quite low number of SwD believed that the support and/or equipment they received had a significant positive impact on their whole college experience or had improved their participation in the university life. It seems that there is space for improvement regarding a better match up between SwDs needs during and the provided support and/or equipment.

Some points that need to frame the future actions of the universities towards student-centered support are:

- university must be proactive in identifying and attracting SwD
- staff's university must follow a clear process to assess the needs of SwD and assign support and / or equipment

- the process for assessing the needs of students and assigning support and / or equipment works needs to be officially formulated
- all universities need ensure the adequacy of resources allocated by their university to support SwD
- the university needs to provide appropriate information concerning disability support initiatives
- the university needs to establish a formal communication system through support centers or in cooperation with associations in order to promote the communication among students and staff
- establishment of peer support teams in order to enhance SwD participation in university life
- Group workshops on CV and interview preparation
- Individual and group essays on interview performance

Aim of all universities must be to promote the constant and active participation of SwDs in all activities of university life.

As a staff has mentioned and is here expanded that a student-oriented program has to *change students' and staff's way of thinking and doing; and this change can only be achieved by changing the paradigm.*

Quote by Mahatma Gandhi:

“Be the change that you wish to see in the world.”

6. REFERENCES

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ANNEXES

ANNEX 1 QUANTITATIVE RESEARCH - QUESTIONNAIRES

1.1 Questionnaire for students with disability

1. Name: _____
2. AGE: _____
3. GENDER: _____
4. Area of origin: Rural _____ Urban _____
5. Has a scholarship: Yes No
Specify: Economic?
6. Live in student residences (provided by the university) Yes No
7. Country: _____ University: _____
8. Disability
Physical _____ Mental / Psychosocial _____ Intellectual _____
Visual _____ Auditiv _____
9. How long have you been studying at this University??
10. Are you a full-time student? [Yes/ No]

	yes	no
<p>Has the university provided you with support to access your studies under conditions of equal opportunities? [Educational support may include academic note takers, readers, practical assistants, and sign language interpreter]</p>		
<p>Select the supports received to access your studies under conditions of equal opportunities [Yes/ No]</p> <ul style="list-style-type: none"> • Attitude of people (teachers, colleagues, service personnel, training) • Environment (adaptation of physical and architectural spaces: ramps, elevators, signage, route demarcation, among others) • Specialized support services (psychological, educational, customer service, transportation) • Assistive technologies (Braille lines, screen readers, wheelchairs, cane, among others) • Information and communication (accessible website, staff using sign language, infographics, accessible educational material) • Public or institutional policies (regulations, services, budgets, regulatory framework, administrative management) <p>If yes, what kind of support do you receive (or did you receive in the last three years)? Give detailed information: _____</p>		
<p>In case you have not received educational supports, indicate the reasons:</p> <p><input type="checkbox"/> I don't need any educational support or equipment</p> <p><input type="checkbox"/> I did not know that I could access educational and team support at my university</p> <p><input type="checkbox"/> My university does not provide the educational support or equipment I need</p> <p><input type="checkbox"/> I access the support and / or equipment of other organizations (for example, disability support organizations)</p> <p><input type="checkbox"/> I pay for the support and / or equipment I need</p>		

Other _____

What barriers did you think you would face before entering the University?

- Attitude of people
- Barriers in the environment (physical space, architectural)
- Specialized support services (psychological, educational, customer service, transportation)
- Assistive technologies
- Information and Communication
- Public and institutional policies (regulations, services, budgets, regulatory framework, administrative management)

Are there barriers or challenges that you still face?

- Attitude of people
- Barriers in the environment (physical space, architectural)
- Specialized support services (psychological, educational, customer service, transportation)
- Assistive technologies
- Information and Communication
- Public and institutional policies (regulations, services, budgets, regulatory framework, administrative management)
- Learning (methodology or way of teaching the lessons does not allow me to access my learning process)
- I do not receive the support I need (more time to carry out evaluation activities, enlarged letter, among others ...)
- Materials used for learning are not accessible (books, presentations, readings, etc.)

	Strongly disagree	Disagree	Either agree or disagree	Agree	Fully Agree	Do not know
The university has defined programs and initiatives for students with disabilities						
Information on these programs and initiatives is accessible and timely for students with disabilities						
When I first came to college, I knew where to go to discuss my educational support needs.						
When I first came to college, the college worked with me to identify and put in place the supports and equipment I need.						
I have a plan or agreement with my university regarding the supports / equipment I receive						
The university was able to provide me with the educational support and / or equipment that I need to help me with my studies						

As my needs have changed, the university has worked with me to modify the support and / or equipment I receive						
The support and / or equipment I receive has had a significant positive impact on my college experience						
The support and / or equipment that I have received has improved my participation in the activities of university life (conferences, tutorials, co-curricular activities)						
The support and / or equipment I have received has improved my academic performance						
There is an opportunity to feedback and evaluate the plan or agreement with my university with specialized personnel						
It would be more difficult to complete my studies without the supports and / or equipment that I receive from the university						
I could not complete my studies without the supports and / or equipment that I receive from the university						
The university is an inclusive place for people with disabilities						

1.2 Questionnaire for personnel involved in the management or administration of support programs for students with disabilities

1. At what university do you currently work?
2. What is your role at the university? [select accordingly]
 - 1= Manager / Director - Attention and Support Students
 - 2= University staff for inclusion
 - 3= Student service staff
 - 4= Program manager - general programs for students
 - 5= Program manager - general programs for students with disability
 - 6= Professor / teaching staff
 - 7= Support staff
 - 8= General administrative support
 - 9= Other (especificar)
3. Provides the university educational support to help students with disabilities participate in university life? YES/ NO/ DO NOT KNOW

4. Provides college support teams for students with disabilities to participate in college life.? YES/ NO/ DO NOT KNOW

	All / most of my role	A substantial part of my role	Part of my role	A little part of my role	It's not part of my role	Do not know
--	-----------------------	-------------------------------	-----------------	--------------------------	--------------------------	-------------

	Strongly disagree	Disagree	Either agree or disagree	Agree	Fully Agree	Do not know
To what extent your role involves working or interacting with students with disabilities, or managing / administering programs or initiatives related to disability?						
I have a clear understanding of the university's programs and initiatives aimed at attracting and retaining students with disabilities						
The university is proactive in identifying and attracting students with disabilities						
The university has a clear process to assess the needs of students with disabilities and assign support and / or equipment						
The process for assessing the needs of students and assigning support and / or equipment works well						
The level of resources allocated by the university to support students with disabilities is adequate						
The university can meet the needs of educational support and equipment of all students with disabilities						
Information on university disability support initiatives is appropriate						
What the university could do to better to meet the needs of students with disabilities?						

1.3 Questionnaire for students with and without disabilities and staff (academic and non-academic)

The following information is collected as part of a needs assessment survey. Your answers are important in assessing the strengths and areas for improvement at your college. Please provide your answers according to your experience and knowledge.

Check 1 = not satisfactory; 2 = insufficient; 3 = satisfactory and 4 = exceeds the requirements.

Affirmations	1	2	3	4
Environment: [refers to spaces where people learn and interact, such as classrooms, common spaces]				
Provides a stimulating, welcoming, and supportive environment for students and staff				
Use of space is safe and clean				
It is adequately equipped and suitable for the activities carried out				
Develops and manages effective arrival and departure procedures and plans and plans for safe activities throughout the day				
Know the records and inform the staff about the special needs of the students				
Establishes, maintains, and communicates the code of conduct to students, staff, and families				
Apply penalties and rewards for student behavior appropriately and consistently				
Administration / Organization				
Set clear expectations for attendance and behavior				
Maintains all required documents as appropriate				
Has well-defined communication methods between students and administration				
Has well-defined communication methods between students and academic staff				
Ensures supplies, materials, and technology are organized, maintained, and accessible				
Develops a plan for community involvement				
The university has scheduled meetings with stakeholders				
Relations				
They have staff who respect and communicate with each other and are a role model for positive adult interaction.				
Treat students with respect and listen to what they have to say				
Teach students to interact with each other in positive ways				
Encourages responsible decision-making in students				
Is sensitive to the culture and language of the students				
Establish and maintain meaningful community partnerships				
Hiring and professional development				
Recruit, hire and develop staff that reflect the diversity and culture of the community				
Treats staff like professionals and provides opportunities for advancement or growth				

Ensures that staff members have competence in academic areas related to their job title when appropriate				
Assess staff professional development needs and provide appropriate training				
Provides positive working conditions for staff and timely feedback, support and supervision				
Train staff to plan appropriate activities that correspond to students' needs				
Works with staff to achieve and maintain highly qualified credentials and quality status, as required				
Student participation				
Provides students with artistic, sports, volunteer activities and opportunities, among others				
It offers students training opportunities for teamwork, conflict resolution, leadership, among others.				
Offers students opportunities to express their ideas, concerns, and opinions				
Promotes constant and active participation				
Promotes teamwork and respect for others				

ANNEX 2

QUALITATIVE RESEARCH TOOLS

2.1 Interview with students with disability who have accesses support

1. Can you tell me about yourself – what are you studying, how long you've been at university, what you did before university?
2. Can you describe any barriers you thought you might face when you considered going to university when you were at school?
3. Can you describe what types of support and/or equipment have you receive to help you in your studies?
4. To whom did you disclose your disability at this university?
5. What was the reaction of the person (s) who assisted you during registration?
6. How are you supported at this university?
7. How do you view the support provided to you at this university?
8. Do the supports and/or equipment you receive help you overcome any barriers and challenges you faced?
9. How did you work with the university to identify and put in place the supports/equipment you needed?
10. How do staff members at this university perceive your disability: teachers, security personnel, registration, admissions, university welfare, library, others?
11. What is the attitude of your student peers towards disabilities?
12. What difficulties are you facing during your study at the University especially related to learning?
13. How do the supports and/or equipment help you in your studies? What would the impact be of not being able to have these supports/equipment?
14. What would you like to see your university do to help future students with disability?
15. What else would you like to add that we did not talk about regarding your experiences at this university?

2.2 Focus group with current students with disability

Support and equipment

1. Who did you communicate your disability to at the university when you enrolled?
2. Can you describe any barriers you thought you might face when you considered going to university when you were at school?
3. Can you describe what types of support and/or equipment you have received to help you in your studies?
4. Do the supports and/or equipment you receive help you overcome the barriers you thought you'd face? Do they meet your needs and requirements?
5. How did you work with the university to identify and put in place the supports/equipment you needed? Did this process work well, or could it be improved?

6. Do you have a Plan or Agreement in place with your university regarding the supports/equipment you receive? Are there opportunities to review the Plan/Agreement with a support worker as your needs change?
7. How do the supports and/or equipment help you in your studies? What would the impact be of not being able to have these supports/equipment?
8. Are there any barriers you still face?
9. Do you think your university could do things differently to better support you in your studies?

Access

10. What attracted you to this university?
11. Were you aware of any of the university's programs or initiatives aimed at people with disability, before you applied?
12. Do you think your university is inclusive for people with disability?
13. What would you like to see your university do to help future students with disability?

2.3 Focus group with staff (academic or non-academic) that are already involved in supporting students with disability

1. Can you describe your role in relation supporting students with disability?
2. What type of supports, equipment and/or resources are provided to students with disability at the university?
3. What is the disability profile of students who access support and equipment?
4. Does the university have a clear process to assess the needs of students with disability and allocate support and/or equipment? Can you talk me through it?
5. Do students have a Plan or Agreement in place with the university regarding the supports/equipment they receive? Is it reviewed as their needs change?
6. Is the university able to meet the needs of all the students with disability who seek assistance?
7. What role do you play in facilitating access to support and equipment for students with disability?
8. Does the university have a well-developed strategy for attracting and retaining students with disability?
9. In your opinion, is there a high level of awareness across the university about inclusive teaching and learning practices and support for students with disability?
10. In your opinion, what contribution does the university make to supporting students with disability?
11. What strategy is implemented to attract and retain students with disabilities?
12. How could the university be improved?

ANNEX 3

GUIDE FOR QUALITATIVE ANALYSIS

A. Interview with students with disability who have accesses support

Interviewees' Basic information (Gathered for each student. Final report should include the data for the whole sample of interviewed SwD)
<i>Pseudonym</i>
<i>Gender</i>
<i>Age</i>
<i>Country</i>
<i>Type of disability</i>
<i>Studying Subject</i>
<i>Years of studying</i>
Questions and Possible Answers (Examples)
[Time Before Entering University]
What you did before university; (e.g., High school, attending other university, working)
<i>High school</i>
<i>Attending other university</i>
<i>Working</i>
<i>Other</i>
<i>Also note any valuable comparison between past and present on support, challenges/ barriers, personal characteristics e.g., changes regarding self-esteem, see difficulties as challenges)</i>
Barriers you thought you might face when you considered going to university when you were at school?
Architectural
<i>e.g., space, location, parking, ramps, elevators, bathrooms, corridors, offices</i>
Bureaucratic
<i>e.g., Paperwork, excessive bureaucracy, time lengthy procedures, lack of information</i>
Personal
<i>e.g., New-needed communication skills</i>
<i>e.g., Reluctant to disclose disability</i>
<i>e.g., Reluctant to ask for help</i>
Institutional
<i>e.g., Budgets</i>
<i>e.g., Material resources (e.g., C-Print, applications, Speech recognition software)</i>
<i>e.g., Human resources (e.g., sign language interpretation)</i>

Social-Attitudinal Barriers
<i>e.g., Stereotypes, prejudices and “images” regarding disability</i>
<i>e.g., Negative perceptions of disability</i>
<i>e.g., Stigmatization</i>
<i>e.g., Poor sensitivity and awareness for disability related issues</i>
Educational/ Curriculum
<i>e.g. needing more time during exams</i>
<i>e.g. curriculum adaptations such as accessible material</i>
<i>e.g. guidance on how to read</i>
[Decision Entering University]
Existence of a transition plan
Yes
No
Others’ (e.g., family) attitude toward decision entering University
<i>Positive/Supportive</i>
<i>Negative</i>
Reasons for entering University
<i>e.g., subject</i>
<i>e.g., transition to work</i>
<i>e.g., personal challenge, ongoing improvement</i>
<i>e.g., independent living</i>
What was the reaction of the person (s) who assisted you during registration?
<i>Positive/Supportive</i>
<i>Negative</i>
To whom did you disclose your disability at this university?
<i>Classmates</i>
<i>Academic staff</i>
<i>Service staff</i>
<i>Other</i>
How did you work with the university to identify and put in place the supports/equipment you needed?
<i>Procedures</i>
<i>Persons/ services involved</i>
<i>Not work well</i>
<i>Work well</i>
<i>Possible improvements</i>
[Present-Studying in University]
Types of support/ equipment received
Architectural
<i>e.g., parking, ramps, elevators, bathrooms, corridors, offices</i>
Bureaucratic
<i>e.g., help with paperwork, bureaucracy, reaching information needed</i>
Personal

e.g., new skills
e.g., help seeking/ asking help
Institutional
e.g., Financial support
e.g., Material resources (e.g., C-Print, applications, Speech recognition software)
e.g., Human resources (e.g., sign language interpretation)
Social-Attitudinal
e.g., Diminished stereotypes, prejudices, and “images” regarding disability
e.g., Positive perceptions of disability
e.g., Empathy, sensitivity and awareness from classmates and staff
Evaluation of Support/ Equipment receive
General evaluation/view
Evaluation in relation of helping overcoming faced barriers and challenges (see above)
How do the supports and/or equipment help you in your studies?
What would the impact be of not being able to have these supports/equipment?
Future: Needs and Propositions]
What would you like to see your university do to help future students with disability?
Revocation of architectural barriers
Revocation of bureaucratic barriers
Provide SwD with needed skills
Revocation of institutional barriers
e.g., Financial support
e.g., Material resources (e.g., C-Print, applications, Speech recognition software)
e.g., Human resources (e.g., sign language interpretation)
Revocation of Social-Attitudinal barriers
e.g., Diminished stereotypes, prejudices, and “images” regarding disability
e.g., Positive perceptions of disability
e.g., Empathy, sensitivity and awareness from classmates and staff
e.g., Training of academic and non-academic staff
e.g., Chances for Evaluation/ Provision of feedback
Comments, further information added

B. Focus group with current students with disability

Basic information (Gathered for each student. Final report should include the data for the whole sample of SwD participated in focus group)
Pseudonym
Gender
Age
Country

<i>Type of disability</i>
<i>Studying Subject</i>
<i>Time spend in this University</i>
To whom did you disclose your disability at this university when you enrolled?
<i>Classmates</i>
<i>Academic staff</i>
<i>Service staff</i>
<i>Other</i>
Barriers you thought you might face when you considered going to university when you were at school?
<i>Architectural</i>
<i>e.g., space, location, parking, ramps, elevators, bathrooms, corridors, offices</i>
<i>Bureaucratic</i>
<i>e.g., Paperwork, excessive bureaucracy, time lengthy procedures, lack of information</i>
<i>Personal</i>
<i>e.g., New-needed communication skills</i>
<i>e.g., Reluctant to disclose disability</i>
<i>e.g., Reluctant to ask for help</i>
<i>Institutional</i>
<i>e.g., Budgets</i>
<i>e.g., Material resources (e.g., C-Print, applications, Speech recognition software)</i>
<i>e.g., Human resources (e.g., sign language interpretation)</i>
<i>Social-Attitudinal Barriers</i>
<i>e.g., Stereotypes, prejudices and “images” regarding disability</i>
<i>e.g., Negative perceptions of disability</i>
<i>e.g., Stigmatization</i>
<i>e.g., Poor sensitivity and awareness for disability related issues</i>
Types of support/ equipment received
<i>Architectural</i>
<i>e.g., parking, ramps, elevators, bathrooms, corridors, offices</i>
<i>Bureaucratic</i>
<i>e.g., help with paperwork, bureaucracy, reaching information needed</i>
<i>Personal</i>
<i>e.g., new skills</i>
<i>e.g., help seeking/ asking help</i>
<i>Institutional</i>
<i>e.g., Financial support</i>
<i>e.g., Material resources (e.g., C-Print, applications, Speech recognition software)</i>
<i>e.g., Human resources (e.g., sign language interpretation)</i>
<i>Social-Attitudinal</i>
<i>e.g., Diminished stereotypes, prejudices, and “images” regarding disability</i>
<i>e.g., Positive perceptions of disability</i>
<i>e.g., Empathy, sensitivity and awareness from classmates and staff</i>

Educational/ Curriculum
<i>e.g. needing more time during exams</i>
<i>e.g. curriculum adaptations such as accessible material</i>
<i>e.g. guidance on how to read</i>
Evaluation of Support/ Equipment receive
<i>General evaluation/view</i>
<i>Evaluation in relation of helping overcoming faced barriers and challenges (see above)</i>
<i>How do the supports and/or equipment help you in your studies?</i>
<i>What would the impact be of not being able to have these supports/ equipment?</i>
How did you work with the university to identify and put in place the supports/equipment you needed?
<i>Procedures</i>
<i>Persons/ services involved</i>
<i>Not work well</i>
<i>Work well</i>
<i>Possible improvements</i>
Do you have a Plan or Agreement in place with your university regarding the supports/equipment you receive?
<i>Yes</i>
<i>No</i>
<i>So and so</i>
<i>Other</i>
Are there opportunities to review the Plan/Agreement with a support worker as your needs change?
<i>Yes</i>
<i>No</i>
<i>So and so</i>
<i>Other</i>
Barriers still face
Architectural
<i>e.g., space, location, parking, ramps, elevators, bathrooms, corridors, offices</i>
Bureaucratic
<i>e.g., Paperwork, excessive bureaucracy, time lengthy procedures, lack of information</i>
Personal
<i>e.g., New-needed communication skills</i>
<i>e.g., Reluctant to disclose disability</i>
<i>e.g., Reluctant to ask for help</i>
Institutional
<i>e.g., Budgets</i>
<i>e.g., Material resources (e.g., C-Print, applications, Speech recognition software)</i>
<i>e.g., Human resources (e.g., sign language interpretation)</i>
Social-Attitudinal
<i>e.g., Stereotypes, prejudices and “images” regarding disability</i>

<i>e.g., Negative perceptions of disability</i>
<i>e.g., Stigmatization</i>
<i>e.g., Poor sensitivity and awareness for disability related issues</i>
Do you think your university could do things differently to better support you in your studies?
<i>Absolutely</i>
<i>Maybe</i>
<i>[Wright down any specific proposition based on the known categories i.e., Architectural, Bureaucratic, Personal, Institutional, Social-Attitudinal]</i>
<i>No further improvements needed</i>
What attracted you to this university?
<i>The quality of studies</i>
<i>Subject</i>
<i>Facilities (e.g., parking)</i>
<i>Financial reasons</i>
<i>Location</i>
<i>Policy towards people with disability</i>
<i>Other reasons</i>
Were you aware of any of the university's programs or initiatives aimed at people with disability, before you applied?
<i>Yes</i>
<i>No</i>
<i>So and so</i>
<i>Other</i>
Do you think your university is inclusive for people with disability?
<i>Yes</i>
<i>No</i>
<i>So and so</i>
<i>Other</i>
What would you like to see your university do to help future students with disability?
<i>Revocation of architectural barriers</i>
<i>Revocation of bureaucratic barriers</i>
<i>Provide SwD with needed skills</i>
<i>Revocation of institutional barriers</i>
<i>e.g., Financial support</i>
<i>e.g., Material resources (e.g., C-Print, applications, Speech recognition software)</i>
<i>e.g., Human resources (e.g., sign language interpretation)</i>
<i>Revocation of Social-Attitudinal barriers</i>
<i>e.g., Diminished stereotypes, prejudices, and "images" regarding disability</i>
<i>e.g., Positive perceptions of disability</i>
<i>e.g., Empathy, sensitivity and awareness from classmates and staff</i>
<i>e.g., Training of academic and non-academic staff</i>

e.g., Chances for Evaluation/ Provision of feedback
Comments, further information added

C. Focus group with staff (academic or no academic) that are already involved in supporting students with disability

Basic information (Gathered for each interwee. Final report should include the data for the whole sample of staff)
<i>Pseudonym</i>
<i>Gender</i>
<i>Age</i>
<i>Academic staff</i>
<i>Non-academic staff</i>
Role in relation supporting students with disability
<i>Manager / Director - Attention and Support Students</i>
<i>University staff for inclusion</i>
<i>Student service staff</i>
<i>Program manager - general programs for students</i>
<i>Program manager - general programs for students with disability</i>
<i>Professor / teaching staff</i>
<i>Support staff</i>
<i>General administrative support</i>
<i>Other</i>
What type of supports, equipment and/or resources are provided to students with disability at the university?
Architectural
<i>e.g., parking, ramps, elevators, bathrooms, corridors, offices</i>
Bureaucratic
<i>e.g., help with paperwork, bureaucracy, reaching information needed</i>
Personal
<i>e.g., new skills</i>
<i>e.g., help seeking/ asking help</i>
Institutional
<i>e.g., Financial support</i>
<i>e.g., Material resources (e.g., C-Print, applications, Speech recognition software)</i>
<i>e.g., Human resources (e.g., sign language interpretation)</i>
Social-Attitudinal
<i>e.g., Diminished stereotypes, prejudices, and “images” regarding disability</i>
<i>e.g., Positive perceptions of disability</i>
<i>e.g., Empathy, sensitivity and awareness from classmates and staff</i>
What is the disability profile of students who access support and equipment?

<i>Auditive</i>
<i>Visual</i>
<i>Physical</i>
<i>mental-psychological</i>
<i>Intellectual</i>
<i>Multiple</i>
Does the university have a clear process to assess the needs of students with disability and allocate support and/or equipment? Can you talk me through it?
Yes
No
So and so
If Yes report data refereed to e.g.,:
Do students have a Plan or Agreement in place with the university regarding the supports/equipment they receive?
Yes
No
So and so
Other
Is this Plan or Agreement reviewed as their needs change?
Yes
No
So and so
Other
Is the university able to meet the needs of all the students with disability who seek assistance?
Yes at 100%
No
What role do you play in facilitating access to support and equipment for students with disability?
e.g. guidance how to purchase them
e.g. guidance how to use them
e.g. guidance how to solve any technical issues
Does the university have a well-developed strategy for attracting and retaining students with disability?
Yes
No
So and so
Other
In your opinion, is there a high level of awareness across the university about inclusive teaching and learning practices and support for students with disability?
Yes
No

So and so
Other
<i>[Additionally, write down any comments for possible improvement]</i>
In your opinion, what contribution does the university make to supporting students with disability?
<i>e.g., facilitating study, learning</i>
<i>e.g., providing equal participation</i>
<i>e.g., diminishing stigma</i>
<i>e.g., offering opportunities for transition to work</i>
<i>e.g., financial support</i>
Other
What strategy is implemented to attract and retain students with disabilities?
General Vision/ Strategy Procedures, Prerequisites Services involved Staff involved SwD positive response rate
How could the university be improved?
<i>None further improvements needed</i>
<i>Further improvements needed</i> <i>[Wright down any specific proposition for improvement based on the known categories i.e., Architectural, Bureaucratic, Personal, Institutional, Social-Attitudinal]</i>
Comments, further information added

ANNEX 4

GUIDELINES FOR ONLINE FOCUS GROUP AND INTERVIEWS

A. Preparing the sessions

When preparing Online Focus Groups, the researchers need to adjust the traditional, in-person procedure regarding:

1. **The confidentiality agreements,**
2. **The maximum number of participants per group,**
3. **The duration of each session,**
4. **The online tools,**
5. **The discussion guide,**
6. **The use of stimuli during the sessions,**
7. **The skills of the moderator, and finally,**
8. **The tests of the technology before the sessions.**

More specifically:

1) The **confidentiality agreement** can be sent via e-mail to each participant so as to be signed, scanned and send back in time. Alternatively, the moderator can read the agreement before the beginning of the session, ask each participant to agree by voice, and record the answer: *"Do you agree to...? YES, NO"*.

2) The **maximum number per group** should be limited to 5–7 participants, so as to ensure that all participants will have the opportunity to state their opinion, remain engaged, and at the same time, reduce the strain on the moderator.

More effort might be needed on behalf of the researchers so as to ensure that the right profiles and sample (mainstream vs extremes) will be chosen. Alternatively, they could consider running additional online focus groups to include all the necessary recruitment profiles. In some cases, running a focus group remotely makes it possible to recruit participants across the entire country, as they do not have to come to one specific research location.

3) **The duration of each session** should be kept between 60–90 minutes, instead of the more common time of 2 hours for the in-person groups. It has to be stated that there

is not a strict rule about the duration of an online session, nevertheless, it should be defined with the aim of keeping the participants focused the whole time.

4) The researcher should find (and get accustomed with) the appropriate online tools.

Video-conferencing tools

The Video-conferencing tools that the researcher will choose should allow face to face interaction with all participants, video recording and streaming. Ideally participants can access the session by clicking on a link without the need to install any software. There are a few options available on the market: Zoom, GoToMeeting, Microsoft Teams, WebEx, Google Hangouts.

It's sometimes useful to break out groups into sub groups (e.g. Zoom) or private spaces, and this is a common feature of many video conferencing tools. They do require careful management though. For instance, it's always worth keeping a phone number handy if any participants struggle to reenter the main session.

Some participants might want to keep their anonymity and privacy. In this case the moderator can allow the use of an avatar (e.g. <https://www.liebermanresearch.com/sensor/>). Moreover, they can permit the participants not to share their screens and/or to use a generic photo instead.

Collaboration tools

There are interesting collaborative tools to support online focus groups, such a Whimsical, Miro and Mural. These tools should not be considered as an alternative to the videoconferencing tools, but as a means to do some brief exercises with the participants during the session. They replace in a certain way the whiteboard or the flipchart used in the traditional sessions.

Collective brainstorm activities can be made by using these tools, in which the participants write down ideas on virtual post-it notes, plotting post-it notes in a matrix or map to prioritize items, or simply keeping track of inspiration and solutions that come up during the session in a visual way. The moderator sends the participants a link to access this visual workspace where they can collaborate simultaneously or just observe while the moderator is using it, e.g., so as to write notes on the virtual whiteboard, plot post-it's on a map, etc.

The collaboration online tools generally work well and can add real dynamism to the session. Where sub group exercises are happening during the session, an additional pair of eyes to observe and facilitate can also really help.

Survey tools

Besides the collaborative tools, it is also possible to ask participants to individually respond to a few questions by completing an online survey (e.g., in Survey monkey, Google forms, etc.) or to participate to online polls (e.g. in zoom). These tools are used so as to keep people engaged at key points and share the results in real-time to the group as input for discussion.

5) The researchers should **adapt the discussion guide** for online use. More specifically, the moderator,

- In order to keep the time slot, should narrow down the discussion guide to 3-5 key topics.
- Should include enough time for introductions and for participants to become comfortable in the session to ensure individuals engage with one another.
- Should decide over the details of the online procedure. For example,
 - *Will they ask the participants to have a note-pad with them so they can hold up short answers to questions?*
 - *Will they share their screen?*
 - *Will they ask the participants to share their screens?*
 - *Will they use online collaborative tools?*
 - *Will they share stimuli before the session?*
 - *How will they share information and/or stimuli with the participants?*

All of these options are viable, but the researcher should decide beforehand, familiarize with any new technology and instruct the participants as appropriate before the session.

6) The way in which photo, video and audio **stimuli** can be delivered to participants is considered to be one of the greatest benefits of an online focus group, over the traditional format. Indeed, rather than showing photos, video or audio clips on the presentation, these can be delivered direct to participants' computers. This means that participants will be able to watch or listen to these stimuli at their own pace, or even

re-watch the stimuli at their own leisure. By passing this control to participants, it ensures that they are engaged with the source material. Not only does this create more discussion, but also it allows participants to analyze the material in their own time and come to more relevant (and insightful) conclusions than in traditional focus group settings.

7) Regarding the researchers involved, all the usual abilities and **skills** for moderating groups are still needed. Nevertheless, and above all, during the online focus groups, the moderator should be familiar with the technology being used, in case any participants are experiencing trouble, for example, their audio doesn't work during the session.

At the same time, it is useful to always plan for a note taker so as to ensure that the moderator could focus on the group, and keep eyes on the monitor. It is more difficult to follow the discussion if not watching all the time.

8) The researcher should include a trial rehearsal with the participants ahead of the session so as to test the technology and online tools that are going to be used. They should ensure that the participants would be able to use the selected online tools by sending them a test link to try before the session. Some platforms provide a test link. Alternatively, use different links for each group so that they can test out the link using the same meeting ID as the one for the research to reduce any confusion.

Participants should test the link on the platform and on the device they will participate within the exact location to make sure there are no issues including security issues which might stop them from downloading some plug-ins. This should be done well before the session time in case troubleshooting is required.

B. After the preparation

→ Conducting the focus groups

All the usual skills for conducting a group session apply to the online focus groups as well, but the researcher might also consider:

- Asking participants to sign in 10–15 minutes before the session so as to chat with each participant and ensure cameras, mics etc., are working.
- Preparing cards with the name and key facts of each participant, so as to keep track and direct questions appropriately.

- Arranging the cards on the desk in such a way so as to mirror the arrangement on the screen (if possible, some platforms rearrange depending on who is talking).
- Taking, if necessary, some issues “off-line” in discussion with participants at the end of the session.

→ Collecting the data

The collecting of data will be mostly the same as for the in-person focus groups. Nevertheless, with the use of online collaboration tools, the content is saved electronically, and there is no need to collect pieces of paper.

→ Report and present results

Not different from any reporting.

Keep Calm and Carry On running Focus Groups!

Overall, if the research team is well prepared, the challenge of conducting an online focus group can be overcome easily and the results are very rewarding. This technique is now increasingly being adopted across the globe, so it's time to give it a try, if you haven't done it yet.

Resources

- <https://blog.flexmr.net/best-practices-online-focus-groups>
- <https://www.sutherlandlabs.com/blog/global-tips-for-conducting-remote-focus-groups-during-covid-19/>
- <https://uxalliance.medium.com/conducting-remote-online-focus-groups-in-times-of-covid-19-ee1c66644fdb>
- <https://www.questionpro.com/blog/online-focus-group/>
- <https://www.torresburriel.com/weblog/2020/04/17/focus-groups-en-remoto-en-tiempos-del-covid-19/>

Online webinars

- <https://www.questionpro.com/webinar/research-webinar-online-focus-groups.html>
- <https://www.youtube.com/watch?v=rPBnE12UQUc>