



Needs Analysis Report

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Contents

Introduction	3
About the Project	3
About the Work Package	5
Methodology	7
Models of Disability	9
Needs Analysis	10
Partner 1: Universidad Viña del Mar, Chile	11
Partner 2: Universidad de Magallanes, Chile	20
Partner 3: Instituto Tecnológico de Estudios Superiores de Monterrey (Campus	
Monterrey), Mexico	28
Partner 4: Universidad de Colima, Mexico	36
Partner 5: Universidad Nacional de Rosario, Argentina	45
Partner 6: Universidad Nacional del Litoral, Argentina	56
Conclusion	63
References	66
Appendix A: Baseline Survey Questions	68
Appendix B: Focus Group Schedules	71
Staff focus group questions	71
Student focus group questions	73
Parent focus group questions	74



Introduction

This Needs Analysis Report is the first output of the Erasmus + funded MUSE Project. It has been undertaken by research staff at Coventry University (UK), in collaboration with staff at the following institutions:

- Universidad Viña del Mar (Chile)
- Universidad de Magallanes (Chile)
- Instituto Tecnológico de Estudios Superiores de Monterrey (Mexico)
- Universidad de Colima (Mexico)
- Universidad de Rosario (Argentina)
- Universidad del Litoral (Argentina)
- University of Alicante (Spain)
- Bologna University (Italy)
- Four Elements (Greece)

The main objective of this report is to identify and share the needs required in order to improve access and learning conditions and develop employment opportunities for HEIs' disabled students in Chile, Mexico, and Argentina. These needs have been identified through surveys and focus groups with staff, students and parents at each of the Chilean, Mexican and Argentinian institutions. Focus groups were undertaken by researchers at each of the institutions and data were analysed by research staff at Coventry University. The data was collected between February and May 2016, and the report has been reviewed, discussed and approved by staff at each participating institution.

About the Project

The overall objective of the MUSE project is to improve access and learning conditions, and to develop employment opportunities for HEIs' disabled students in Chile, Mexico and Argentina via modern inclusion practices and networking.

The specific objectives are: first, to create a modern inclusive framework through the creation of Disabled Students Support Centres and long-term strategies for the access



and retention of disabled students in the HE system; and second, to establish a Regional Network to increase inter-institutional relations and sharing of best practice while responding to society's demand for equity.

MUSE will help to improve the inequality situation faced by disabled students by accomplishing the objectives though concrete tangible outputs:

- Increased inter-institutional cooperation and sharing of good practice via the needs analysis and transfer of know-how: creation of one good practice manual, implementation of two site visits, and accessibility and needs analysis reports for each of the six partner organisations.
- 2. Enhancement of managerial and administrative staff capacities in dealing with and implementing inclusive education practices: delivery of six comprehensive training sessions, and four 'training for trainers' workshops with 18 administrative staff working or directly involved in the Support Centres. We envisage subsequent training by these for 1080 trainees (at least two workshops in each partner institution with minimum 30 participants per workshop).
- 3. Creation of institutional support structures and assistive technology to enable access to HE and foster the consolidation of a social integration culture within universities: development of support centres, strategic plans and assistive technology support for all six partner institutions.
- 4. Development of a Latin American Network for the Inclusion of Disabled Students in Higher Education: set up a MUSE LA Network; hold one international conference and one final MUSE conference with 220 attendants each; create a regional Charter on minimum standards and guidelines; hold three roundtables in six countries with 20 stakeholders participating in each (360 stakeholders), and 18 national roundtables with 20 participants, total 360 participants.



- 5. Increase external relations cooperation to improve access and employment for disabled students: organise 30 high school information days with 70 high school participants each (2100 high school students informed in total); arrange 60 meetings with enterprises, develop the inclusion of disability within the Social Responsibility Strategy, and successfully place 18 disabled students in internships.
- 6. Increase public awareness and understanding on inclusive education within higher education institutions: create a project website; internal dissemination; external dissemination involving media; host three open days in each country, with a total of 900 participants.

About the Work Package

Coventry University leads on Work Package 1 (WP1).

The project activities are all interlinked and have been arranged in a logical sequence, so that each activity produces an output that forms the basis for the next steps and activities. The project strongly supports and believes in the motto "Nothing About Us Without Us" used by disabled peoples' organisations throughout the years as part of the global movement to achieve equal opportunities, with the full inclusion of affected persons in the processes. The action will invite disabled students to have full participation in the project at all its stages.

WP1: Needs Analysis and Transfer of Know How

This work package lays the foundation of all actions in the project, the aim being to overcome the lack of information and generation of specific knowledge related to disabled students in LA HEIs. Activity 1.1 is to carry out the "Methodological Development and Implementation" of the in-depth research methodology to assess the accessibility situation



and practices within each partner institution and will include a focus group exercise with disabled students in order to understand their specific needs and requirements.

Deliverables

- Analysis methodology developed and implemented, verified by all partners.
- Site visit to two EU partners by LA partners.
- Good Practice Guide.
- Needs Analysis Report.

Results

- Report on needs analysis for each of the six LA partner institutions.
- At least six focus groups with disabled students organised (30 disabled students).

Outcomes

- Raised awareness about disabled students' access to university premises and education provision.
- Incorporation of quantitative (questionnaires) and qualitative (focus groups) data collection methodologies for real analysis of disabled students' conditions.



Methodology

The methodology for this project is based upon the appreciative inquiry methodology used in the successful Tempus-funded SWING Project. In appreciative inquiry, attention is paid to "what works", and exploring positive potential (Clouder & King 2015). Five principles of appreciative inquiry have been identified by Bushe (2013). These are:

- Constructionist principle argues that people co-construct the organisations they inhabit
- Simultaneity principle argues that discussing systems and change are essential processes in achieving change; systems move in the direction of the questions that are most actively discussed
- 3. Poetic principle argues that words chosen for inquiry invoke sentiments and understandings, and in doing so can provoke change
- Anticipatory principle argues that what is done today is guided by visions of the future
- **5. Positive principle** argues that sustainable change requires positive affect.

As a methodology, then, appreciative inquiry focuses upon the positive practices which need to be nurtured, and the attitudes and language of those who seek change. Thus an appreciative inquiry methodology means that all of the project partners, students, staff, and parents are experts in their own institutions and contexts. Clouder and King (2015) identify three key factors which are essential to successful appreciative inquiry studies:

1. Involving the right people who fully understand and live the experience is crucial. This includes the research team which should have a positive attitude, unconditional positive regard, empathy and reflective capability. Participants and researchers need a commitment to the principle of co-created change; this includes people of influence, such as managers in HE, policy makers, or funders.





- 2. Rigorous attention to detail including keeping a good focus, careful framing of questions, and delicate management of data collection methods are required to maintain the focus on 'what works'.
- 3. Well developed analytical capability is crucial. Adept analysis of all viewpoints and a high degree of reflexivity even scepticism on the part of the research team are needed to promote the trustworthiness of findings (Clouder and King 2015:189).



Models of Disability

Disability is a blanket term with multiple interpretations. The Medical Model of disability sees the disabled person's impairment or health condition as 'the problem'. The focus is therefore on 'fixing' or 'curing' the individual (The Alliance for Inclusive Education). The International Classification of Functioning, Disability and Health (ICF) framework views disability and function as the outcome of the interaction between health and contextual factors (WHO 2002). This reflects the social model of disability that attributes disability to the physical and social barriers within society (Marks 1999). It has been critiqued as homogenising disabilities that can vary between cases and in intensity over time (Shakespeare 2006).

The Social Model standpoint adopts the belief that people with disabilities are a heterogeneous group with many different impairment diagnoses, but who all face overlapping experiences of disablement or exclusion (Goodley and Lawthom 2006:2); disability is socially constructed (Shakespeare, Lezzoni, and Groce 2009). The UK Equality Act (HMSO 2010:4) adopts a medical definition of disability as "a physical or mental impairment that has a substantial and long term adverse effect on a person's ability to carry out normal day to day activities".



Needs Analysis

A needs analysis was conducted for each of the partner institutions in order to define the needs of the students and the universities regarding disabled students' integration and learning conditions, with a particular focus on assistive technology and employability support.

We chose to use two key methods in this needs analysis. Firstly, project partners participated in a baseline needs analysis survey (see Appendix A). Secondly, project partners invited the following groups to participate in semi-structured focus groups (see Appendix B):

- 1. Students who were registered as having disabilities
- 2. Staff who were involved in supporting students with disabilities (both teaching and administrative staff)
- 3. Parents of students who were registered as having disabilities.

However, these methods and approaches were adapted for each institutional context where necessary. For example, students at one institution expressed discomfort at having their parents invited to participate in a focus group; for this reason, this method was not applied at that institution. This has also meant that the amount of data from each institution has varied. Some institutions chose to provide full transcripts, whereas others preferred to summarise their findings from the focus groups and share these with the team responsible for the needs analysis work package. It is important to note that the focus groups were undertaken in local languages for Chile, Argentina and Mexico. Data were translated either by project partners, or by those responsible for managing the needs analysis work package. This has meant that there were a large number of researchers from all partners working with this data, bringing a wide variety of perspectives to the needs analysis. Coventry University were responsible for co-ordinating these analytical approaches and ensuring consistency with the overall methodological approach.





Partner 1: Universidad Viña del Mar, Chile

Number of students: 8,000

Number of campuses: 3

The Universidad Viña del Mar (UVM) is an accredited, private university with 26 years of experience providing quality education to its Chilean and international students alike. With over thirty majors in nine schools, its mission is to provide students with access to quality education in a critical, diverse, and integrated global network of universities, with professional competence and integrity, and to provide them with institutional development in the region and country. UVM encourages its more than 7,000 students to continually challenge themselves through learning, and to grow as participants in the global society.

UVM is a university proud to have a strong relationship with the community, which is reflected in its many community outreach programmes that seek to help support the integral development of the Valparaíso Region, as well as to provide students with the opportunity to gain hands-on experience while giving back to the community in the NGO and NPO fields. Throughout the year UVM students work with one of the many organisations they have partnerships with in the region. Examples of this are found in their ongoing collaboration with Techo, through helping with their intervention in the communities found in the Valparaíso slums, and their work with Foundation Descúbreme ("Discover Me") that trains and helps to insert young adults with Down Syndrome into the workforce.

Finally, in 2014, UVM was awarded a grant from the Chilean Ministry of Education to implement a project that seeks to generate and validate a model of Outreach and Social Inclusion and Innovation Management (IIS) in vulnerable neighborhoods and groups through research and joint involvement of strategic partners to help contribute to Valparaíso's innovative social development.





In 2016, UVM reported that it had 13 registered students with disabilities; these were either blindness/visual impairments or physical/motor impairments.

The information presented about UVM is taken from the following sources:

- The baseline survey completed by all participating institutions (see Appendix A)
- Staff focus group (2 academics)
- Student focus group (5 students)
- Parent interview (1 mother).

Defining Disability

UVM does not have its own definition of disability, although the university is currently working on a disability policy. UVM uses the definition found in Chilean legislation (Article 5 of Law No. 20,422, Equal Opportunities and Social Inclusion). This law defines "disability" as

any person who having one or more mental (either mental or intellectual cause) or sensory, physical impairments temporarily or permanently in interaction with various barriers present in the environment. They can feel disabled or restricted their full and effective participation in society on an equal basis with others.

Students who took part in the focus group reported that they had not had to complete any tests or evaluations of their disabilities or needs.



Funding and Scholarships

There appears to be some additional funding available for students with disabilities at UVM, although it is not clear how this is allocated. For example, the mother who was interviewed reported that her child had had the opportunity to travel to Colombia on a university scholarship, which was very good for the student's independence. She described it as a "life changing and unforgettable experience", and also said that it had given her reassurance about her child's ability to cope alone.

Student Support Services

Internal support for students comes from the Directorate of Student Affairs (Dirección de Asuntos Estudiantiles - DAE) and the Directorate-General for the Improvement of Learning (Dirección General de Mejora de los Aprendizajes - DGMA). There are no formal university-run support clubs for disabled students, and students reported that there are very few student-run groups, although both students and staff reported that some health-related degree courses have student groups who play sport together.

A student in the focus group particularly mentioned the support he had received from the DAE, including financial assistance when a hearing aid had to be replaced or repaired, and the offer of a computer when his hearing aid broke.

The mother who was interviewed had only had contact with the university on one occasion, when her child had a health issue. She had been in touch with the department head, who was very supportive.

Staff said that generally the university was supportive when issues arise, and the new projects are exciting and should lead to further inclusivity. However, there are no specialists within the university and support is on a voluntary basis.

Students reported a lot of support from teaching and administrative staff: this included one student arranging to change room allocations to ensure that all classes take place on the ground floor, and taking exams in an alternative format such as oral or via a computer.





A student who has problems using their hands had found alternative means, often with the help of peers. Teaching staff were supportive of any needs that they had, such as sitting down rather than standing for a long time. One student had transferred from a different university and the DAE had set up a meeting to allow him to meet with security and nursing staff in order to learn about him and what to do in the event of an accident. They did not mention any barriers to achieving what they wanted to achieve.

Internal support programmes

UVM opened its Office of Diversity and Inclusion in March 2016. The inclusion of disabled students has not yet been fully established within UVM, but it is part of the 2016-2020 Strategic Development Plan. Current good practices are often isolated within different departments, but include projects called "I want work", "Inclusive sport", "Outreach and intersectoral management to improve the levels of inclusion and social innovation with disadvantaged populations in the region", and "Inclusive camps". Additionally, since 2012, UVM has provided a resources room for students with visual impairments.

UVM runs CRIIS (Regional Centre for Inclusion and Social Innovation), which works with other organisations to provide academic training, the transfer of knowledge and technology and the execution of projects and will raise awareness in the areas of cooperation, development, inclusion, and social innovation.

External support programmes

The university is also involved in international programmes to improve accessibility. In terms of external organisations, the university has connections with the Inclusive Higher Education Network (RESI-Red de Educación Superior Inclusiva) and the National Service of Disability (Senadis: Servicio Nacional de Discapacidad).





University Facilities

Based upon survey and focus group responses, the physical access and facilities provided by UVM appear to vary, but there is room for improvement.

- **Elevators**: There are not always elevators available to access the necessary teaching floors. Students reported that it can often take more than a week for an elevator to be repaired. In addition the elevator does not reach one of the floors on which teaching takes place (in Miraflores campus).
- Stairlift: One stairlift, for taking a wheelchair up stairs, was mentioned by students, but they did not use it.
- Bathrooms: Bathrooms on various campuses are not always easily accessible
- Parking: Separate parking is provided, but it can be difficult to move from the car to the buildings due to the area being muddy.

A related issue arose in the interview with the mother of a student with disabilities; that of transportation. Her daughter has early classes and cannot enter the class if she is late, and buses are often full. This is a particular issue for students with physical disabilities because the area has a lot of hills. This was supported by discussion in the student focus group, who said that they were unable to use the force necessary to push their way onto the overcrowded buses.

There are resources within UVM for inclusive sports.

Assistive Technology

UVM has 817 computers available for student use. The assistive technology provided is:

- 1 multifunctional printer
- 1 smart TV
- 1 computer





- 1 screen
- 1 talking calculator
- 1 set of headphones
- 1 hard drive
- 1 laser
- 1 digital camera
- 1 flash drive
- 1 digital recorder
- 1 webcam
- 1 mouse wrist rest
- 1 sound system
- 1 handheld electronic magnifier
- 1 large screen
- 1 easel
- 3 magnifying glasses
- 1 keyboard with braille system

The library can provide students with tablet computers and Kindle e-readers. The LMS is Moodle, which has accessibility capabilities; however, it is not yet fully accessible to students with disabilities. The inclusion programme and IT staff are currently working on increasing the access to Moodle.

The parent interviewed said that her child has her own computer, tablet and phone, and uses photocopiers, and that there have been no major problems with accessing resources.

Over the years projects within UVM have provided funding to buy technology but it has mostly been in response to individual student needs. The staff only knew of one case where a student had been provided with a computer.

With regard to staff awareness of technology and accessible material for students with disabilities, a limited number of teachers know about what is available or how to use it.





Voluntary workshops and seminars have been run by Occupational Therapy on, for example, using reading software for blind or visually impaired students. Staff also reported that there are a number of resources for assisting blind or visually impaired students; however, some resources which are currently available are rarely used.

The students who took part in the focus group did not mention being provided with a computer or other assistive technology, although they mentioned using the online classroom and e-books. One of the students had only recently discovered that tablets were available for loan from the university library.

Learning and Teaching for Students with Disabilities

Staff who took part in the focus group reported that they had few experiences of teaching students with disabilities, because of the low number of those students within UVM. However, they mentioned talking to students with disabilities about their requirements. There is awareness within the teaching staff that more information and understanding is required in order to improve inclusion within Universidad Viña del Mar.

A student mentioned the provision of oral exams rather than written tests, which was useful, but it made her more nervous. She would like to find a way to use a tablet or computer instead.

The students did not feel that teaching staff were required to know anything about their disabilities, but that where accommodations need to be made, staff should be aware and be able to help and make changes.

Socialisation at University for Students with Disabilities

The parent who was interviewed reported that her daughter has good support from her classmates and is happy within her course.





The students in the focus group also said that they feel very involved in their student community; they reported good friendships, support, and that their peers are aware of their disabilities and, while they treat them as equals, they know to ask when something is wrong.

All of the students who took part in the focus group lived at home with family.

One student had concerns about the impact of full integration of students with disabilities into mainstream education. He believed that students without disabilities would find it difficult, based on work they had done with special needs schools, and also that there would need to be significant adaptation to teaching styles.

Employability

The Office of Professional Community provides online job boards, courses and employment and job market seminars for all students, but no special support is provided for those with disabilities.

The Foundation Descubreme ("Discover Me") project took place from 2012-2014; young men with Down Syndrome were trained to work in different health-related areas. 14 were trained and six were hired by the university; this was done in order to improve diversity of staff, and they are treated with respect and no differently to any other member of staff.



Needs Analysis

This Needs Analysis Report is designed to focus upon assistive technology and employability needs for students with disabilities at UVM.

UVM seeks to improve inclusivity and support for disabled students, and to improve the organisational infrastructure. The university currently has relatively few students with disabilities and its current provision in terms of support and assistive technology is quite limited, but there is a clear intention to improve that provision.

Staff and students from the focus groups at UVM, as well as the MUSE Needs Analysis and Good Practice Research Team, have identified the following needs.

Hardware and software needs:

More technical support for assistive technology

Training needs:

- Training for staff about the technology that is available and how it works
- Training for students on working alongside people with disabilities
- Training for staff about how to teach people with disabilities, and the adaptations necessary

Wider institutional needs:

• Establishment of a team of professional, full-time employees to be established in order to manage the needs of students with disabilities.





Partner 2: Universidad de Magallanes, Chile

Number of students: 4,000+

Number of campuses: 3

Universidad de Magallanes is an accredited higher education institution located in the Magallanes Region. It started with only 26 students, and currently has more than 4,000 students. Universidad de Magallanes (UMAG) offers around 31 degrees distributed across the Schools of Engineering, Sciences, Economic and Juridical Sciences, Education and Social Sciences and School of Health Sciences. It also offers several PhDs and Postgraduate Degrees. UMAG developed several international collaborations with other national and international institutions with the aim of exchanging knowledge, experience and good practices. UMAG also implemented several activities with the main purpose of exchanging students and researchers in order to strengthen their capacities. The institution also established links with the community and the public and private institutions of the region in order to preserve and strength the cultural, economic and social heritage of the Magallanes region.

In 2016 there were approximately 13 students (9 men and 4 women) known to have disabilities at UMAG. These were distributed as follows:

- Physical/motor disabilities 6
- Asperger Syndrome 4
- Visual impairments 3

The information presented about UMAG is taken from the following sources:

- The baseline survey delivered to all participating institutions (see Appendix A)
- Student focus group (7 students)
- Staff focus group (6 academics)
- Parent focus group (1 mother and 1 grandmother).





Defining Disability

UMAG uses the concept of disability based on the definition provided by the World Health Organization. Thus, UMAG defines the concept of disability as:

... a generic, comprehensive concept which relates to a particular physical, sensory, mental, intellectual, psychiatric or multi-deficit condition that limits activities and restricts participation, identifying usually a negative relationship between those presenting one or more deficiencies and contextual factors that surround us. It is the social environment that generates disability.

Students with disabilities declare their need for assistance at registration. An earlier orientation programme does not exist. In order to access benefits from the university, students must be registered in the national record of disability and present the corresponding certificate.

After registering on a course and identifying the needs of the students or teachers, assistance will be provided. However, this provision of support in a formal and organised way has only existed since 2015; prior to that this service was delivered by a professional in the Department of Occupational Therapy.

Based upon the interview with the mother and grandmother, it appears that some students have meetings with directors of student matters in preparation for their attendance at UMAG.

Funding and Scholarships

UMAG has been providing scholarships for students with disabilities since 2001. These cover full or partial payment of the costs of their academic career. Whilst five out of the





seven students participating in the focus group had had access to a scholarship at one point, three of these five students had later lost the scholarship. These scholarships demand a minimum standard in the subjects taken in order to maintain the support.

Student Support Services

The following departments had responsibility for supporting students with disabilities:

- **Student Matters department:** The department of student matters evaluates students and determines whether or not they can receive the scholarship of disability. In addition, this office organises support from medical, dental, social services, and mental health services.
- Occupational Therapy department: This is an academic department that supports the Occupational Therapy course. From 2003, the teachers and students of this department have assisted the Department of Student Matters to support the needs of students with disabilities. In addition, the Occupation Therapy department has an integral connection to communities, the National Service of Disability, the Communal Network of People with Disabilites, the Illustrious Municipality of Puntas Arenas and other institutions focused upon inclusive education.
- Programme of support to students with disabilities: Commencing in 2015, this
 is an interdisciplinary programme which aims to promote the incorporation of
 students with disabilities into all areas of the university and of student life, seeking
 to encourage equality and equity for all.

External support networks

UMAG has close connections with the National Service of the Disabled (SENADIS), and students participating in the focus groups received assistive technologies such as wheelchairs and computers through SENADIS, as well as travel support for attending university.





University Facilities

Based upon survey and focus group responses, the facilities provided by UMAG appear to vary depending upon the locations in which students were studying.

- Wheelchair and elevator access: Whilst there are wheelchair ramps and elevators in some places, this does not appear to be consistent across the campus. Staff described regularly changing their assigned rooms in order to ensure that students were able to access their classroom, as the elevators were unreliable. The mother of one student also said that she needed to attend university with her daughter, since certain areas of the university had stones on the ground, which meant that a wheelchair user could not access those areas without help. The same student did not attend trips away with her classmates, as she was unable to do so without help from her mother or friends.
- Bathrooms: Both staff and students stated that the bathrooms at the university
 were not accessible for students with disabilities, particularly those using
 wheelchairs.
- Lighting: Poor lighting in some rooms appeared to cause problems for students
 with visual impairments. If projector lights were poor, or rooms did not have
 curtains, then students were not always able to view learning material on the
 projector screen.



Assistive Technology

UMAG uses the Moodle Learning Management System. However, it is not accessible to people with disabilities; it does not facilitate changing text size or the use of screen reading software.

UMAG provides approximately 400 desktop computers for student use, distributed across various laboratories and the library. Of these, five are accessible to students with disabilities. In addition, there are more than ten digital blackboards which are available for student use.

The following accessibility tools and software are available to students on-campus:

- Large keyboards
- Screen magnifiers
- Digitisation software.

In addition, in the library there is a special room for people who have a visual impairment. The room was initially created by the parents of a student with a visual disability and was subsequently funded by a SENADIS project, which allowed the purchase of computers with JAWS and OPEN BOOK software, as well as a scanner and printer.

The institution also provided tablets and laptops to students who have limited financial resources; the majority of students with disabilities belong to this group. There is no clear criterion for selection of students to be provided with these items. No additional software is included with laptops or tablets provided to students with disabilities.

Based upon the student focus groups, it appears that the provision of laptop computers to students does not include technical support; two students reported needing to pay for repairs. One student also noted that they were required to return the computer during vacations.



In the focus group, students also mentioned using the following tools which they provided themselves:

- Mobile telephones/cellphones: These were used for recording and replaying lectures.
- Digital magnifying glasses: These were used to help students with visual impairments read information more easily; however they could not always be used in the university, due to poor lighting. In the staff focus group, one participant commented that students' uses of digital magnifying glasses could inconvenience other students. It was not clear why this might have been the case.

Learning and Teaching for Students with Disabilities

As with the university facilities, it appeared that support from staff for students with disabilities was mixed, depending upon the attitude of the teacher as well as their topic of study.

Two students stated that they received equal levels of support from all of their teachers, which might include emotional support as well as learning material provided in advance or in different formats or text sizes. Four students, however, experienced different levels of support from teachers. Staff focus group participants also commented that they were not always told in advance when students with disabilities would be joining their class, and therefore could not prepare for supporting those students or could not change the room location. One staff member and three students also suggested that additional time should be provided in examinations and assessments for students with disabilities.

Socialisation at University for Students with Disabilities

Students and parents in the focus groups all discussed the importance of learning collaboratively and making friends at the institution. Some students stated that they often





studied alone, but this appeared to be as a result of individual learning preferences rather than exclusion from other student groups. Five students also commented that they felt more included in the institution and social groups than in previous years, and that they received support from friends and other students when needed.

Employability

There is some employability support for all students (CV writing and interview training), but no special support is provided for those with disabilities.

Needs Analysis

This Needs Analysis Report is designed to focus upon assistive technology and employability needs for students with disabilities at UMAG.

Staff and students from the focus groups at UMAG, as well as the MUSE Needs Analysis and Good Practice Research Team, have identified the following needs.

Hardware and software needs:

- Braille printer
- Better quality laptops
- Enabling Moodle accessibility for disabled students

Training needs:

- Disability awareness
- Communication of individual student learning needs





- Technical support for students with disabilities
- Transparency in how scholarships are assigned, and how/why they might be lost
- Employability, careers, and further study
- Specific support for students with Asperger Syndrome

Wider institutional needs:

No wider needs were identified.



Partner 3: Instituto Tecnológico de Estudios Superiores de Monterrey (Campus Monterrey), Mexico

Number of students: 91,000

Number of campuses: 31

Instituto Tecnológico de Estudios Superiores de Monterrey (ITESM) is one of the largest private, non-sectarian and coeducational multi-campus universities in Latin America with over 90,000 students at high school, undergraduate, and postgraduate levels. At December 2015, ITESM had nearly 91,000 students, of whom 29% are high school students, 61% are college students, and 10% are postgraduates.

The EGADE Business School, which is involved in the MUSE project, is part of ITESM, and has developed several initiatives in order to integrate all members of the community, including the creation of a department called SUSTENTUS, responsible for promoting social integration. EGADE Business School also has an extended network of private and public organisations, working towards the inclusion of all groups into the education system, and has experience in organising activities such as diplomas, networks, associations and training.

MUSE represents a special opportunity for ITESM since it is currently designing a new framework for inclusion, and has recently created both the Inclusion and Equality committees. New procedures and legislation are currently being developed. The university has realised that a better framework is necessary to incorporate students with different types of capabilities. The university is nationally recognised for its social orientation.

The information provided in this needs analysis report relates exclusively to the Monterrey campus of ITESM.





ITESM stated that it reportedly has 10 students with disabilities in Campus Monterrey. Of the students with disabilities, the majority have a mobility disability, and two are partially sighted.

The information presented about ITESM is taken from the following sources:

- The baseline survey completed by all participating institutions (see Appendix A)
- Staff focus group (9 staff members)
- Student interviews (3 students).

Defining Disability

ITESM does not currently have its own definition of disability; instead it adopts the United Nations definition, summarised as:

... an evolving concept. Disability is a condition that affects the level of life of an individual or group. The term is used to define a physical or mental disability, such as sensory, cognitive or intellectual disabilities, mental illness or various types of chronic diseases.

The staff focus group stated that there is no census of students with disabilities, and that the university is not aware of them unless they contact the department of student services. Although high schools have a record, this is not passed on to the university. In addition, one staff member said that as part of a class project, programme directors were approached for information about current students with disabilities, and they did not know.



When asked about how they define disability, staff members said:

- Limitation on performance
- It is society that makes barriers
- Some people do not consider something to be a disability if (because) it is not visible.

Funding and Scholarships

Current there are no scholarships which are specifically for students with disabilities. However, ITESM has several scholarship and scholarship-credit programmes which are available to all students of ITESM. These scholarships seek to broaden the opportunities of young people who have an excellent academic record and high levels of enthusiasm, but lack the financial resources to fully cover tuition expenses. The scholarships are offered by each campus, and are only available to students from Mexico. There are currently three types of scholarships for undergraduates, although their availability and the financial details may vary from one campus to another.

The Excellence Scholarship

This scholarship aims to attract the highest graduating high school students to professional degree students at ITESM, and emphasises the academic situation of students, regardless of their financial circumstances. This scholarship covers 90% of tuition expenses.



Academic Scholarship/Loan

This scheme targets academic high achievers who cannot afford to cover all of their tuition expenses. Upon graduation, the student repays the percentage which corresponds to the loan so that another student may be benefit from it.

Sports Scholarship-Credit

ITESM grants a limited number of scholarships to students who distinguish themselves by their academic and athletic performance in order to assist them to continue with their professional studies. This scheme is similar to the scholarship/loan, in that students must repay the percentage corresponding to the loan so that another student may benefit.

Student Support Services

Examples of good practice within ITESM were the services provided by the Campus Accesible office (in Campus Monterrey): changing classrooms so that they are accessible for students, a key for use of the elevator, accessible bathrooms, wheelchairs, and advice and mentoring for both staff and students.

The staff focus group suggested that support within ITESM tends to be reactive, rather than active; no assistance is available until it is requested. They also said that some people do not know how to deal with or handle a situation involving a student with disabilities, due to a lack of knowledge.

Staff in the ITESM focus group suggested that there was a significant lack of support for teachers in terms of working with students with disabilities.



Internal services

Within ITESM, a support group called Abriendo Caminos (Open Roads/Paths) has been developed as the result of an academic project called Inclusive University (Universidad Incluyente). Its mission is: "To make aware to all people who are part of our institution (ITESM) of the reality that people living with permanent or temporary disabilities and create a culture of inclusion". ITESM runs a three month course in Mexican Sign Language, available to students and staff of ITESM as well as to people outside the university. There is also an inclusion forum which is run every October.

There is an accessibility office in Campus Monterrey, but there is no general university-wide office for inclusion. The Campus Monterrey office (Campus Accesible) has two members of staff. The staff who took part in the focus group agreed that it was necessary to have a university-wide centre which collates and shares information about students with disabilities; they noted that some parts of ITESM provide support, such as sign language interpreters and software for students with visual impairments, but that this is not widely promoted.

External partnerships

ITESM has relationships with several organisations, including NGOs and government departments. It supports the Diplomado +Talento from Movimento Congruencia, which is a diploma in the design of projects for the social and employment inclusion of people with disabilities.

The institution also works in partnership with external organisations:

 Internal Inclusion Committee (Comité de Inclusion): made up of teachers and community partners with the aim to provide space and opportunities for people with disabilities; the committee seeks to raise awareness and inclusion within the university and among the general public





 Human Resources department works with NGOs and government to take part in inclusion events and to find employment candidates with disabilities.

University Facilities

Campus Monterrey is physically accessible to people with disabilities (though it is not clear whether this is equally true across all campuses).

Assistive Technology

The only assistive technologies available to students in Campus Monterrey are screen readers; there was no indication of how many computers have this technology.

The university's LMS (Blackboard) is compatible with screen readers such as JAWS and Windows-Eyes. The digital library is supported within Blackboard.

Many of the videos used for teaching/training have subtitles.

Learning and Teaching for Students with Disabilities

Staff in the ITESM focus group suggested that some colleagues were unable or unwilling to change, due to a lack of awareness of how people with disabilities live on a day-to-day basis. Issues such as a lack of access are not always understood. They further stated that including more students with disabilities would improve the institution for everyone, and that it "humanizes the organisation".

Socialisation at University for Students with Disabilities

There do not appear to be any particular student social groups available for students with disabilities in Campus Monterrey of ITESM.





Employability

ITESM has a careers centre, which provides employability support and skills advice and training to all students.

ITESM has formed the Committee for Labor Inclusion for people of different capacities. Its objective is to create favourable conditions for the full participation of people with disabilities, such as Accesible Campus, ProFISICO, and collaboration with diverse organisations. Its objective is also to promote more autonomy and independence for those with a disability in equal conditions, to contribute to a cultural change to facilitate full inclusion, creating a culture of respect, collaboration and non-discrimination.

Needs Analysis

This Needs Analysis Report is designed to focus upon *assistive technology* and *employability* needs for students with disabilities at Campus Monterrey of the Instituto Tecnológico y de Estudios Superiores de Monterrey.

ITESM is in the process of creating a comprehensive inclusion strategy across the entire institution, for education and employment, and with links to the wider community. The Instituto also seeks to improve awareness and accessibility, and to increase the number of Diplomado +Talento courses in order to encourage wider employment of people (with any level of education) with disabilities. There is also a desire to collect better information and statistics on their students with disabilities in order to facilitate further improvements. Staff in the focus group made it very clear that there is a desire within both teaching and non-teaching staff, and among students, to improve knowledge and understanding within ITESM, and to make improvements to the university's levels of support and inclusivity.

The number of students with disabilities in ITESM seems to be very low; the institution's stated intention of collecting better data might change this figure. While awareness and support for inclusion, particularly when it comes to graduate employment, appears to be a priority, there seems to be a lack of assistive technology available.





Staff and students from the focus groups and interviews at ITESM, as well as the MUSE Needs Analysis and Good Practice Research Team, have identified the following needs.

Hardware and software:

No hardware/software needs were reported

Training needs:

- Staff and students disability awareness training
- Training on administrative aspects of supporting students with disabilities
- Training for mentors, particularly for students with mental health problems
- For students with disabilities information about support and technology available

Wider institutional needs:

- Statistics and monitoring of students with disabilities
- Creation of a unit devoted to the support of students with disabilities
- Research into the level of inclusivity within ITESM: staff reported that over 60% of students had said that they did not feel that ITESM was inclusive.



Partner 4: Universidad de Colima, Mexico

Number of students: 26,000

Number of campuses: 5

Universidad de Colima (UCOL) is a non-profit Mexican public university based in Colima, which borders the Pacific Ocean. It was created in 1940 and granted independence from the state educational system in 1962. UCOL has 40 undergraduate programmes, and offers a selective admissions policy based upon entrance examinations and students' past academic record. However, the admissions rate is between 80-90%, which highlights the accessibility of the institution.

UCOL is a member of a number of different organisations: The National Association of Universities and Higher-Education Institutions (ANUIES), the Mexican Association for International Education (AMPEI); the Consortium for North American Higher Education Collaboration (CONAHEC); the Inter-American University Organization (OUI); the International Association of Universities (IAU); University Mobility in Asia and the Pacific (UMAP); the Union of Universities of Latin America and the Caribbean (UDUAL); the Higher Education Common Space (ECOES); the Ibero-American University Association for Graduate Studies (AUIP).

As of May 2016, 114 students at UCOL reported having disabilities. The types of disabilities reported by the 114 students were:

- Blindness or some degree of visual impairment (74)
- Motor disabilities (26)
- Deafness or some degree of hearing impairment (9)
- Unknown (5).





The information presented about UCOL is taken from the following sources:

- The baseline survey completed by all participating institutions (see Appendix A)
- A summary of the staff, student, and parent focus groups
- Student focus group transcript (5 participants)
- Staff focus group transcript (4 participants)
- Parent focus group transcript (3 participants)

Defining Disability

UCOL has its own definition of disability, which it defines as:

... a condition that affects to varying degrees an individual's abilities, including sensory, intellectual, motor, and emotional skills.

Students, staff and parents were all asked about their definitions of disability when participating in the focus groups. In the staff focus group, disability was defined as an obstacle or limitation. Although the participants pointed out that the attitudes of those in society can emphasise disability or cause difficulties for those with disabilities, there was a general agreement that that physical characteristics might result in limitations which were considered disabling. However, staff also agreed that these limitations could be surpassed with cooperation and support from those around them.

For the students, definitions of disability appeared to exist on a continuum from physical limitation to societal construction. Two broadly different definitions of disability were offered. Four out of five students suggested that disability was socially constructed, in which there were assumptions made about their capability to undertake particular actions due to their physical abilities. One student, for example, re-termed 'disability' as 'different abilities', arguing that students with disabilities were able to do everything that their abled





fellow students could, but did so in a different way. The other four participants suggested that whilst there might be some element of physical limitation, societal attitudes could be more disabling. However, these could also be mediated through willingness to introduce assistive technology such as the ramps that were in the university, for example. The fifth student defined disability as a partial or total absence of one of the senses or faculties of the body, which limited them in some activities.

The parents of students with disabilities did not offer particular definitions of disability. Instead, they discussed how their children approached their disabilities and coped with societal limitations, as well as the family's attitude and actions in seeking social equality for their children.

It does not appear that any formal needs assessment is undertaken with students with disabilities. Of the five students participating in the focus group, four stated that they had not undertaken a needs assessment with a staff member at UCOL. The fifth student stated that they had discussed this with their counsellor at the university.

Funding and Scholarships

It is not clear whether UCOL has specific funding programmes or scholarships available for students with disabilities.

However, there did seem to be a process by which students could appeal for funds to support their studies. For example, one student in the focus group had been unable to get access to a digitised copy of an essential book for their studies. UCOL provided course credits as an incentive to another student, who then scanned the text to enable the student to use the book. In the case of one other student, the institution was sponsoring her attendance at a conference for blind Latino Americans in Uruguay.



Student Support Services

UCOL appears to have a number of departments which have responsibility for supporting students with disabilities.

- Department for the Provision of Care (Direction de Prevision Asistencial): This
 department supports both staff and students with disabilities.
- Center of Development of the University Family: This department supports all students, and also has a disability programme in place.

One staff member in the focus group appeared to have responsibility for looking for support for students beyond the institution, for example national disability support schemes.

In the case of one student, it appeared that she, her parents, and the institution met regularly to address any problems that may have occurred. The three participants in the parents' focus group also suggested that they had a strong relationship with the institution, and worked together to meet the students' needs. One parent in the focus group mentioned that a meeting was held between the principal, personal staff, teachers, students, psychologists, and social workers to address the needs of a student with a disability. However, it is not clear to what extent the student himself was involved in that process; he did not mention this meeting in the student focus group.

University programmes and committees

The PROUDIS programme (University Programme for Disability) is a university programme which promotes sensitisation towards and integration of students with disabilities in the institution. This was not mentioned by students or parents in the focus groups, although the staff participating in the focus groups appeared to be familiar with the programme. For example, on one occasion the PROUDIS programme arranged a workshop for students entitled "Put Yourself in My Shoes". During this workshop, students were encouraged to consider themselves from the position of those with disabilities, for





example by wearing a blindfold and attempting to navigate a room, or by using a wheelchair or crutches. This was used as a prompt for discussion about increased integration into the institution.

There appears to be a Committee for the Care of the Disabled, in which both staff and students with disabilities were represented. This was mentioned in both the baseline survey and the parent focus group. However, the role of this committee may be unclear or its scope may be limited, as one staff member in the focus group expressed a need for further forums and committees to examine disabled students' needs.

University Facilities

UCOL is generally physically accessible for those with disabilities, including accessible parking, public transport, and general areas such as public bathrooms, cafeterias, libraries, auditoriums, laboratories, and hallways. However, it is unclear whether this is the case across all campuses, as staff in the focus group appeared to believe that this access was inconsistent. Some facilities were discussed in particular detail:

- Ramps: It appears that ramp provision at UCOL is sufficient for the students' needs
 in the focus group. Although one student mentioned that one ramp was particularly
 steep and thus difficult to use, students seemed generally happy with this provision.
 One parent in the focus group, however, mentioned that their son regularly fell at
 the ramp at the entrance to the school. Students also discussed the need for
 handrails on ramps.
- Parking: Whilst disabled parking bays were available, staff in the focus group appeared to believe that these were regularly used by both staff and students who did not have disabilities. This issue, they believed, was the result of a lack of respect for the needs of students and staff with disabilities.



Assistive Technology

UCOL has ten disabled-access computers across the campuses, with the following accessibility tools and software available:

- Braille assistive technologies (keyboards, embossers, translators, printers and scanners)
- Large keyboards
- Joysticks
- Screen readers
- Screen magnifiers
- Speech-to-text input software
- Digital audio recorders.

Staff in the focus groups mentioned that while the JAWS software is available on some university computers, it is not available across all campuses and is unavailable in the university libraries. Additionally, three students were unable to use this technology due to the nature of their disabilities and thus, according to the staff focus group, did not receive any support. Similarly, one staff member discussed a need for equipped acoustic classrooms for students with hearing impairments, in order to enable them to hear the teacher easily. The parents' focus group revealed that families often purchased additional assistive technology, when they were able to.

One parent in the focus group said that their son felt unable to use his computer in some lecture situations because of the nature of his disability. Whilst there were some occasions when he was able to walk and write easily, there were other occasions when he was not. Because his use of assistive technology was infrequent and variable, some staff members seemed to feel that it was unnecessary and therefore he did not need to use assistive technology in their class.

UCOL does not have a Learning Management System.





Learning and Teaching for Students with Disabilities

When students were asked to comment on aspects of the institution which were particularly supportive, they focused upon the attitudes of individual teachers and students rather than institutional programmes, as will be discussed in the following sections.

Based upon the parent and student focus group responses, it would appear that many UCOL staff are willing to make alterations to their pedagogical practice in order to better support students with disabilities. One student was able to undertake examinations orally, whilst another could hand in typed and printed rather than handwritten work. Another student with difficulties in writing was able to adapt their assessments to their own needs. While there were instances in which one visually impaired student was expected to undertake an examination without a Braille or otherwise accessible exam paper, it also appears that those issues were swiftly addressed and resolved.

However, participants in the parents' focus group suggested that there might be occasions when more understanding is needed from staff. For example, students might be asked to complete homework from a particular book in a short period of time (two or three days). If that book was not digitally available or could not be scanned easily, then the student was not able to complete the homework.

Staff in the focus group discussed the importance of training staff in how to support students with disabilities: for example, facing a student with a hearing impairment whilst talking to them. This was considered to be important not only for teaching staff but also for those in non-teaching roles, such as library workers. Additionally, staff appeared to feel that teachers were not always aware of the assistive technologies available to them and to students with disabilities.





Socialisation at University for Students with Disabilities

There do not appear to be any particular support groups for students with disabilities at UCOL – or, if there are, the students participating in the focus groups did not make use of them. However, the focus group participants spent significant amounts of time discussing the support they received from their friends and fellow students which was a highlight of their experience at the university. Some of this support was shown by friends carrying books to classes for them. One student described a method by which they and their friends had adapted practices to allow them to participate fully in classes.

This did vary across the focus group. One student had disclosed her disability to her closest friends, and felt supported by them, but was uncomfortable disclosing her disability to teachers or any other students; this had consequences for the levels of support that she received from staff and students.

There appear to be both sports (mostly swimming) and study groups specifically for students with disabilities.

Employability

UCOL does not currently provide employability support to any of its students. This was mentioned in the staff focus group, with one staff member expressing a belief that they needed to work with local businesses and explore how students with disabilities might enter the workplace.

Needs Analysis

This Needs Analysis Report is designed to focus upon assistive technology and employability needs for students with disabilities at UCOL.



Throughout the staff, student, and parent focus groups, there was a sense that changing or improving the attitudes of those at the institution are more important to improving student experience than providing increased assistive technology.

Staff, students and parents from the focus groups at UCOL, as well as the MUSE Needs Analysis and Good Practice Research Team, have identified the following needs.

Hardware and software needs:

Digitising of books

Training needs:

- Identification of the population of students with disabilities across UCOL
- Training for teachers and support staff in how to work with students with disabilities
- Communication of individual student learning needs
- Employability, careers, and further study

Wider institutional needs:

No wider needs were identified.



Partner 5: Universidad Nacional de Rosario, Argentina

Number of students: 77,421

Number of campuses: 4

Universidad Nacional de Rosario (UNR) was established in 1968 by Law 17.987 and is a public university located in the city of Rosarío in the Santa Fe province of Argentina. The university has a vibrant and diverse academic community formed by 10,000 employees: 7,000 teachers, 2,500 non-teaching staff (and 400 authorities), and 77,000 students. From its beginnings UNR has had an active relationship with Rosario society, accomplishing projects which contributed to a sustained growth, according to the region's demands. Its present structure consists of 12 colleges, three high schools and one interdisciplinary academy. It has 12 faculties, spread over four campuses and four buildings. The UNR academic offering is the following: 124 postgraduate courses, 63 college degrees, 15 technical degrees, 53 intermediate level college degrees, 16 degrees for articulation with the non university higher education system and 32 post degrees (non-university post-secondary degrees).

In the academic year to 2015, 118 students were registered as having disabilities and assisted by the UNR. This number reflects the national figures based on the information provided by the Ministry for Education. However, during the same year 1,033 UNR students reported having a difficulty of some sort; these were recorded as part of a form which included questions about disabilities and difficulties with studying.

The types of disabilities reported by the 118 registered students were:

- 36 hearing impairments
- 28 motor impairments
- 38 visual impairments
- 16 other.





The information presented about UNR is taken from the following sources:

- The baseline survey completed by all participating institutions (see Appendix A)
- Staff interviews (11 academics)
- Student focus group (8 students).

Defining Disability

UNR uses the definition of disability which is used within Argentinian law. This definition is provided by the United Nations Convention on the Rights of Persons with Disabilities. UNR quotes specifically the following sections:

Recognizing that disability is an evolving concept and that disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others ... Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.

Funding and Scholarships

Scholarships are offered via the Secretariat of University Extension. These are open all through the year, and can provide students with computers or with funding for subsistence. The funding for students comes from the University's budget, whereas the



computers are funded by the National Ministry of Education. The scholarships are awarded based upon the needs of the students, and are decided after a personal interview with student welfare.

Student Support Services

UNR has a University Commission on Disability, and has both central and faculty-based Areas of Integration and Inclusion for Persons with Disabilities.

During the student focus group, the Student Secretariat and Teaching Service (Secretaría Estudiantil y Servicio de Pedagogía de la Facultad) was mentioned several times as a source of information and assistance for students with disabilities.

All of the students involved in the focus groups commented on the work done by and the support received from staff within the university, both those who are directly involved with supporting students with disabilities and the teaching staff. These relationships and support were mentioned as highlights of their time at university. The teaching staff also mentioned the work of the staff who work with students with disabilities, in the office of the Secretary of Extension.

Volunteer support

A significant initiative within the Faculty of Political Science and International Relations in UNR is Leéte Algo (Read Something), an audio repository for students with visual impairments. Volunteers from the teaching and non-teaching staff, and students, read a variety of texts which are recorded as mp3 files. Both the students and staff mentioned this as a useful and important resource, together with the digitisation of learning materials, library support, and accessible mentoring.



However, many of these resources are provided due to the work of volunteers, and there was significant concern among the students about the use of unpaid staff to deliver support for people with disabilities. As one student noted, the number of people willing to help is greater than those who do, and of course it is not possible for every text to be recorded or digitised. Although volunteer work can be a solution for the transfer of materials into accessible formats, the students felt that it is insufficient in a university as large as UNR, and that an institutional policy should be created so that staff can be dedicated to the task of digitisation, allowing faster access to texts and learning materials.

Furthermore, using volunteers to create accessible materials means that the university appears to be providing this support when in fact it is not; students with disabilities are entitled to access to university education and to be on an equal footing with others, and a policy would ensure that there were fixed resources available. The students were careful to point out that they appreciated the volunteer work and that they thought it was very important, but that work on providing accessible materials should be paid for by the university and not perceived to be charity or social assistance.

University Commission on Disability

The University Commission on Disability (CUD) is an advisory committee which includes members from all faculties and from the middle schools. The CUD is part of a network with other commissions in Argentina and throughout Latin America (Latinoamerican and Caribbean Interuniversity Network in Disability and Human Rights (Red Interuniversitaria Latinoamericana y del Caribe sobre Discapacidad y Derechos Humanos). In addition it has been involved in the creation of an elective cross-subject module on disability, entitled Disability and Human Rights, which has led to the development of a database of teachers with experience of working with students with disabilities. This database ensures that students are allocated to classes run by teachers with appropriate experience, and also means that those teachers can be consulted about specific cases, support tools, or successful teaching methods.





Although this database is not available to organisations or individuals outside Universidad Nacional de Rosario, the university can provide contact with these teachers to external agencies.

The Disability and Human Rights course has been successful and should continue to run several times a year.

Members of staff have worked for external institutions and organisations on the theme of disabilities: among others, they have worked with the National Library of Argentina to produce accessible materials, and with the Braille school for adults.

CONADIS

UNR is involved in a project from the National Committee on Disability (CONADIS – Comisión Nacional Asesora para la Integración de las Personas con Discapacidad), which is the reference organisation in the field of disability at the national level. This assists the university in adapting buildings and providing technology for students who are hearing impaired.

University Facilities

Based upon the survey and interview/focus group responses, UNR provides some physical access for those with disabilities, although this is not guaranteed for all buildings across the university. Students and staff reported a number of problems with physical accessibility:

Wheelchair access: Both students and staff reported that there are not enough
access ramps at the university. One student noted that there is a wheelchair lift
which can only be accessed via steps. One building, completed in 2012/13, has a
door which cannot fit a wheelchair, which was discovered when a guest lecturer
visited.





- Access to elevators: Students reported that elevators cannot always be used.
- Bathrooms: A staff member reported that there is a general lack of accessible bathrooms across the university. However, last year a project, partly focusing on the provision of accessible bathrooms, won the 'participatory budget' of the faculty: the staff member involved felt that this success showed that there has been a transformation in the culture of the faculty community.
- Parking: Two staff members reported that there is insufficient parking across the university.
- Signage: Signage inside and at the entrances to faculty buildings is being improved as part of the participatory budget award mentioned above.
- **Space within the building**: Some problems were reported with passing through hallways, where the display of posters/notices can mean that students congregate in groups and block the corridors.

One of the staff members reported that the university swimming pool is accessible to people with disabilities, with personal assistance from lifeguards, ramps, and an accessible dressing room (although they were unsure of whether students were aware of this provision). Another staff member suggested that much of the focus in terms of accessibility is on blind or visually impaired people, due to the fact that they are in the majority.

Assistive Technology

Of the 500 computers for student use within UNR, 78 are accessible to students with disabilities. Software provided on these accessible computers includes: JAWS, NVDA, Headmouse and Audacity. For students with hearing impairments cameras are included, and those with visual impairments are provided with headphones.



Assistive tools and software available to students on campus are:

- Screen readers and magnifiers (12 one in each Faculty)
- Speech-to-text input software (12 one in each Faculty)
- Digital audio recorders (one, which was obtained for a student via specific funding).

UNR also provides some tablet computers to students as part of the computer scholarship fund mentioned above.

In the focus group, students mentioned using their own mobile phones for recording lectures, and for scanning texts to allow enlargement or the use of an integral screen reader.

As part of the scholarship system within UNR, students can apply for a notebook computer to assist them with their studies. The computers come with two versions of screen reader software – JAWS and NVDA. The students in possession of these computers agreed that, of the two, JAWS is more pleasant to listen to, and easier to use; however, NVDA is free software and can be installed on university computers.

UNR uses Moodle as a LMS, which is accessible for disabled students.

Learning and Teaching for Students with Disabilities

UNR adapts its examination provision for students with disabilities, for example by lengthening the amount of time available to students with hearing impairments. It also provides an accessible reading service and accessibility tutorials for teaching staff (with expert staff, who teach the integration of students with disabilities).

Most of the students who took part in the focus groups mentioned recording their classes, using both audio and video, but this was not always useful: one student said that she had been recommended to use recordings, but that doing so required her to find someone else



to listen to and transcribe the classes for her. Another student, similarly, said that she had found that using the audio recording took too long and that she had started using her notebook (computer) to take notes instead.

There was some discussion among the students about the use of assistive technology such as recording devices: although there were reports of some staff being reluctant to allow recording, the majority of experiences were very positive, with staff offering to record and being generally helpful. Some more practical issues were mentioned by the students, such as the fact that filming requires staff to face forward at all times (as does lip reading).

Staff who were interviewed discussed the impact on their teaching style. Several mentioned that having students with disabilities challenged them to think of new and different teaching strategies; for example, adjusting graphics or slideshow design to meet accessibility needs while keeping the interest of the rest of the group. Several staff mentioned having discussions with students about their specific needs and adjusting communication methods or examination rules accordingly. One teacher talked about simplifying classroom tasks in order to create a level playing field, but the general sense from the staff was that having students with disabilities required them to work at a higher level in order to support those students, who are often working harder in order to do better.

Overall, there was a sense from all of the interviews that, although there are always new challenges and issues to deal with, there is support from the university and adjustments can usually be made to help the students to succeed in their university career.

One staff member, who reported having disabilities herself, discussed the issue of positive discrimination, and stated that she believes that it is very important not to give students with disabilities too much assistance, because when a student graduates and enters the world of work, they will have to prove their abilities without being given a lot of help. Students must be encouraged and allowed to work at their best.



Socialisation at University for Students with Disabilities

Within UNR there is a Facebook group for students with disabilities, organised by students. In addition, the university organises at least one meeting per year for disabled students to meet with the staff who support them, in order to improve the exchange of information and understanding.

All of the students reported positive and supportive relationships with their peers; several mentioned participating in study groups, members of which assist them by, for example, reading out notes or transcribing recordings. There were no reports of discrimination or of negative behaviour from fellow students. When the students spoke of their positive interactions with staff within the university (see Student Support Services above), they also mentioned the value of their relationships with other students, both with disabilities and without: the importance of connections with people who are in similar situations, as well as a sense of inclusion within the general student cohort.

Employability

The employability support from UNR is in the form of internships; although these are not currently available to students with disabilities, negotiations are in progress to implement Inclusive Internships.

Needs Analysis

This Needs Analysis Report is designed to focus upon assistive technology and employability needs for students with disabilities at UNR.

Emphasis is placed on the importance of the implementation of the "Chair: Disability, diversity and plurality" as a cross-training proposal for all students of Universidad Nacional de Rosario. A true formulation of a university policy of integration and inclusion in relation



to disability, transcending the declaration of principles and reflecting with its execution a modification of structural bases at the university level and which can serve as a model to other educational institutions and social organisations, is considered necessary (translated from the survey; original written in Spanish).

Natalia Pieroni, Co-ordinator of the Integration and Inclusion of Persons with Disabilities, provided the following statement (translated from Spanish):

"In recent years there have been important changes in society itself regarding the inclusion of people with disabilities; these have also been observed at the university level and in the actions of the Secretariat of University Policy at the Ministry of Education, which has generated a radical change with regard to equal opportunities for students with disabilities in the public national universities. But within the UNR there is much to be done, fundamentally, regarding the work linked to the debate, awareness, knowledge, and the approach to people with disabilities within the university community, including the four faculties."

Staff and students from UNR, as well as the MUSE Needs Analysis and Good Practice Research Team, have identified the following needs.

Hardware and software needs:

- Quicker response to requests for computers through scholarship funds
- Additional investment in assistive technology and equipment throughout the university
- Additional access to digitised and/or recorded study materials



Training needs:

- For teaching staff how to teach for all students, e.g. facing forward to allow lip reading
- Training for teaching staff on the Leéte Algo project
- Disability awareness training for all staff (teaching and non-teaching) and students
- Training for teachers on all of the facilities and support available in the university
- Training to assist staff in supporting students with disabilities towards employment

Wider Institutional Needs:

- Employment or training or additional personnel to support students with disabilities, particularly with regard to providing accessible study materials.
- For students with disabilities information at university entry about facilities offered, processes and contacts for complaints, information, etc.



Partner 6: Universidad Nacional del Litoral, Argentina

Number of students: 48,000

Number of campuses: 4

Universidad Nacional del Litoral (UNL) was founded in 1919 following the events that triggered the University Reform, and provides education to all citizens, combining a democratic form of government and an agile and modern management, constantly adapting to the demands of the context. After 90 years, UNL continues to hold the reformist principles that gave it birth, projecting their teaching, research and scientific and cultural promotion from Santa Fe to the entire coastal region of Argentina. It offers studies in the fields of Chemical Engineering, Law and Social Sciences, Architecture, Design and Planning, Agriculture and Veterinary, Economics, Humanities, Biochemistry and Biological Sciences.

Based on a survey conducted for the year August 2014 to August 2015, 92 students at UNL reported having disabilities. These reported disabilities were:

- Blindness or visual impairments (14)
- Deaf or hearing impairments (14)
- Intellectual and mental disorders (4)
- Dyslexia (3)
- Unknown (57)

The information presented about UNL is taken from the following sources:

- The baseline survey completed by all participating institutions (see Appendix A)
- A summary of the student focus group
- A summary of the staff focus group





Defining Disability

UNL presented its own definition of disability, which drew upon the United Nations' Convention on the Rights of Persons with Disabilities: "we understand it as an "evolving concept that results from the interaction between people [...]". UNL states:

The Social Model proposes an evolving relationship between people with [their] peculiarities [and] characteristics, and their relationship with the environment and socially constructed barriers; being in this sense that our university is in the process of transition to a redefinition of both research and training related to the subject in different areas, such as meetings of students and active participation of the same. It is from here that we position ourselves towards the concept of accessibility for all, looking mainstreaming in the complexity of the institutional task, considering the diversity of situations that arise every day in the academic, athletic, recreational and working life of the university community [as] a whole to exercise their rights and citizenship.

It is not known if any formal needs analysis is undertaken with students with disabilities.

UNL's future goals with regard to provision for disabled students include the incorporation of more adapted sports and the graduation of more disabled people. Furthermore, the institution seeks to take into account the evolution of the concept of disability; to stop seeing barriers for disabled people and to see them as adaptable individuals. "As an institution we feel that we should think of a UNL accessible to everyone, and that's the way we intend to address incorporating lines of work to respond to this practice".



Funding and Scholarships

It does not appear that UNL provides any additional funding or scholarships for students with disabilities.

Student Support Services

The following department has responsibility for supporting students with disabilities:

 UNL Accessible department: This department provides a range of support to students with disabilities, including a University Welfare Secretary, and a sports, recreation and cultural space within the university to provide the opportunity for blind students to participate in sports. Students participating in the focus group stated that most of their support was received from the UNL Accessible department.

In terms of external organisations, UNL has agreements with NGOs (non-governmental organisations) and OG (governmental organisations), and various institutions within the community and the municipal and provincial governments, to work together in order to carry out objectives and actions.

Tutoring programme

Across the institution, advanced students provide one-to-one or group tuition for students struggling with particular topics. This programme is available for all students, including those with disabilities.

University Facilities

There is limited information available regarding the university facilities available for students with regard to disability and physical access.





Assistive Technology

UNL does not provide disabled students with computers.

Some students with disabilities purchase their own laptop computers, whilst others are provided by the National Scholarship Programme. Based upon the results of the student focus group, all participants had access to either a desktop or laptop computer.

In the focus group, students also mentioned using the following tools that they provided themselves:

- Mobile telephones/cellphones: These were used for recording and replaying lectures, use of social networks for communicating with fellow students, tutors, support centres, and sign language interpreters. For students with visual impairments, these devices were fitted with screen reading software or students used the pre-loaded software on the device.
- **Digital recorders:** These were also used for recording and replaying lectures.

UNL uses the Moodle Learning Management System. Whilst this is accessible to a high number of students, not all display settings can be customised to support students with disabilities, such as those with visual impairments who use a screenreader. There are changes currently being made to the UNL Moodle system to improve its accessibility.

The following accessibility tools and software are available to students on-campus:

- Screen readers
- Braille translators
- Braille printers
- Braille scanners
- Digital audio recorders.





Accessible learning materials are provided in an appropriate form to blind and partially sighted students (see below).

Sign language interpreters are also available in classes for students with hearing impairments. This facility was considered particularly important by the students participating in the focus group.

Learning and Teaching for Students with Disabilities

A current practice within UNL is the provision of accessible learning materials for blind and partially sighted students: material is scanned, corrected, and made available to the students in the format desired (CD, USB drive, Braille printout).

Other examples of good practice within UNL include the presence of sign language interpreters where deaf students are studying and for mentoring and other events, a magnetic ring in the auditorium to assist those wearing hearing aids, and the provision of a talking scanner in the library.

Staff and student participants in the focus groups discussed the importance of lecturer attitudes towards students with disabilities and the impact that those attitudes can have on the student experience. The staff focus group, for example, focused upon how teachers could adapt their practices to support students with different ways of learning. Staff in this focus group, however, also expressed concern at the suggestion that all students were willing or able to use assistive technology; there was, they argued, a preconception that assistive technology is always welcome to students which is it not necessarily the case.



Socialisation at University for Students with Disabilities

Student participants in the focus groups discussed the importance of feeling integrated into university life. Whilst these students appeared to feel involved, and took advantage of social media as a communication and networking tool, they also suggested a need for further support when navigating the campus, for example guided tours by other students. The students also requested information on events run at the campus, for example on the university website, suggesting that there was enthusiasm to become further involved in activities at UNL.

Employability

UNL is seeking to improve its provision of employability support to disabled students. However, it currently provides work experience placements within the university for students with disabilities, which are paid for by the Ministry of Labour.

Needs Analysis

This Needs Analysis Report is designed to focus upon assistive technology and employability needs for students with disabilities at UNL.

Staff and students from the focus groups at UNL, as well as the MUSE Needs Analysis and Good Practice Research Team, have identified the following needs.

Hardware and software needs:

Improved accessibility for the Moodle Learning Management System





Training needs:

 Training for staff in adapting teaching practices to the needs of students with disabilities

Wider institutional needs:

- Tour guides for campus, particularly by former or current students
- Touch screens/tablets available in all faculties
- Information about university events, available in accessible formats
- For the university website to be made more accessible and more intuitive.



Conclusion

The findings of this needs analysis have revealed that attitudes towards individuals with disabilities played a major role in students' experiences of higher education at their individual institutions. With few exceptions, students discussed the importance of adopting a social model to disability rather than a medical model. There were also occasions in which staff and students appeared to adopt different models of disability, leading to conflict in the classroom. Work Package 2 of the MUSE Project will explore this potential conflict in more detail and identify training needs across each institution.

In this conclusion, we summarise the needs identified across all institutions and highlight those of particular reference to assistive technology and employability.

- Employability support. There is a range of employability support across the six institutions. However, there is limited provision specifically for students with disabilities. Institutions should work with students, local employers and national charities and organisations (where possible) to enhance employability prospects for student with disabilities.
- 2. Communication about support. The findings from this needs analysis revealed that there are procedures in place to support students with disabilities across all institutions. However, staff and students at the individual institutions were not always aware of this support. It is essential that departments with responsibility for students with disabilities communicate their work to all staff and students. Students should be advised of the support available before they begin at the university, so that they can contact them prior to registration if needed.
- 3. Disclosure. Some institutions gathered data on the number of students with disabilities and the kind of disabilities. Others did not collect in-depth data. What seemed to be important was advising staff in advance if they were to have a student with a disability in their classroom so that they could prepare. The student's name does not necessarily have to be disclosed.



- 4. Disability awareness. Training of all staff (academic, professional, administrative) and all students (with or without disabilities) on diversity and disabilities was essential. Both staff and students should be prepared for how to work with a student with a disability in terms of collaboration, assessments, examinations, and other aspects of life at the university.
- 5. Peer-to-peer support. Where possible, the institution should support peer support for students with disabilities. This might involve supporting the setting up of student groups or other social activites.
- 6. Digitisation. At present, digitisation of resources for students with disabilities is often undertaken on a voluntary basis by friends, parents, and staff in the university. Additional institutional support for the digitisation process was needed at all institutions. However, this support should be appropriate; for example, institutions should consult students on the necessary formats. Both staff and students should be consulted to ensure that all required materials are available in a timely manner. Ongoing consultation is needed for digitisation, to ensure that funding is committed appropriately.
- 7. Learning Management Systems. Not all institutions had learning management systems, such as Moodle or Blackboard. While the use of an LMS means that students with disabilities can access class notes afterwards, the level of accessibility of the LMS seemed to vary. All institutions should review their LMS to ensure its appropriateness for their student groups and that it meets accepted international accessibility standards.
- 8. Hardware and software provision. There was a range of assistive technology provided across the institutions, including hardware loaned or given to students with disabilities (e.g. laptops and recorders). Institutions should continually review their assistive technology provision to ensure that it meets the needs of the students. Open source software should also be considered, where possible, to reduce costs.



- 9. Technical support. Whilst assistive technology was provided at most institutions, either by the institution or by the student and family, there was often little technology support provided. Institutions should ensure that there is appropriate technology support in case of breakdown or other technical problems.
- 10. Scholarships and additional funding. Some institutions provided scholarships or financial support for students with disabilities, which is extremely beneficial to these students; however, it was not always clear how this funding was allocated. Students were not always aware that these resources were available, and did not always understand the requirements for obtaining and retaining the funding. There is a need for greater communication and transparency in this area.

These recommendations are focused upon employability and assistive technology, in line with the focus of the MUSE Project. What is most important, however, is to continually review the provision for students with disabilities, and consult students with disabilities on their needs within the institution. Additionally, students in all focus groups spoke about the importance of peer support from students with and without disabilities. Institutions should therefore encourage student collaboration and socialisation across the student cohort to ensure the best student experience.



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Appendix A: Baseline Survey Questions

Your institution

- 1. What is the name of your institution?
- 2. How many students attend your institution?
- 3. How many campuses does your institution have?
- Does your institution have physical accessibility for disabled students or staff? (for example lifts, wheelchair ramps)
- **5.** Does your institution have any connection with projects or organisations which support staff or students with disabilities?
- **6.** What is your institution's definition of disability?

Students with Disabilities

- 7. Number of disabled students.
- 8. Please list the different types of disabilities across the student population, with numbers (if available).
- If your institution has any support clubs for disabled students, please list them below.

Support for Disabled Students

- **10.** Please list any departments or offices with the responsibility for supporting disabled students (for example, Student Services).
- **11.** Please list any staff members who have specific responsibility for supporting disabled students.
- **12.** Please give details of any staff members who do not have direct responsibility for supporting disabled students, but who are actively involved with them, or would like to support them.





Technology and Assistive Technology

- **13.** How many computers (for student use) are there in your institution?
- **14.** How many of those computers are accessible to students with disabilities for example have large keyboards, screen readers?
- **15.** Please use the list below to show the accessibility tools which are available to your students.
- **16.** Do you provide additional assistive technology or tools for students? (For example, tablet computers or iPads, or mobile phones)
- 17. Who provides support and maintenance for the assistive technology at your institution?
- 18. Do you have Braille printers, and if so where are they located?
- 19. Which LMS (Learning Management System) does your institution use?
- 20. Is your LMS accessible for disabled students? (for example, can the font size be changed, can it be used with a screenreader, is the design suitable for students with dyslexia?)
- **21.** Do all of the computers for student use have access to the Internet?

Employability and Careers

- **22.** What kind of employability support do you provide to your students? Please give details below.
- **23.** Is this also available to disabled students? Please provide details of the support given to students with disabilities.

Current Practice and Future Goals

- **24.**We would like to collect reflections on current practice from anyone who works with or who has responsibility for disabled students. We would like as many examples of these as possible please copy them into the box below.
- **25.** Please tell us about any future goals which you are working towards, with regard to your provision for disabled students. Please also tell us of any goals which you wish to work towards.





Current Practice

- **26.** Please identify at least one specific service or element which you provide for your disabled students which is an example of good practice.
- **27.** Please identify an area of practice in your institution which you think could be improved.



Appendix B: Focus Group Schedules

Questions in **bold** are the main questions that you should be asking. Questions in *italics* are additional questions which you should think about before the focus group and consider asking in the focus group, depending upon staff responses to the bolded question and your institutional context.

Staff focus group questions

- 1. How much do you know about the support which is available for students with disabilities in your institution?
 - Do you know what assistive technology is available in your institution to help students with disabilities?
 - What support groups and clubs are available for students with disabilities in your institution?
 - Do you think that there should be more assistive technology and support made available for students?
- 2. How much involvement do you have with disabled students in your university?
 - Do you teach students with disabilities? How many? What kinds of disability?
 - Do you have any other involvement with disabled students (providing support, serving on committees, etc)?
 - Do you believe that students with disabilities bring any unique skills or qualities to higher education and employment?



- 3. What kinds of technology (e.g. tablets/mobile phones, computers, recorders, virtual learning environments, online journals) do students use when you are teaching them?
 - Is this technology provided by the institution or do the students provide it themselves?
 - Do your students use university-provided technology?
 - Does the use of this technology affect how you teach (for example is it noisy or distracting)?
 - Do your students use university-provided technology outside of the classroom?
- 4. Do you feel supported in dealing with students with disabilities?
 - Do you believe that you know enough about the needs of students with different disabilities?
 - Do you need more information about the support which is available in the university for students with disabilities (technology, support groups, specialist staff members)?
 - Do you think that the university should provide more training to you about how to support students with disabilities?
- 5. Is there anything that is particularly good about how your institution supports students with disabilities?
- 6. Is there anything that needs improving about how your institution supports students with disabilities?
- 7. Is there anything that we haven't discussed that you want to discuss?



Student focus group questions

- 1. What kinds of technology (e.g. tablets/mobile phones, computers, recorders, virtual learning environments, online journals) do you use to help you when you are studying at the university?
 - o Is this technology provided by the institution or technology you bring in yourselves?
 - O How and where do you use it? For example, in a lecture or when studying in the library?
 - o Is there any technology provided by the institution that you definitely don't use?
 - Are you able to use any of these resources at home?

2. What kind of support, if any, do you think you get as a student with a disability?

- How supported do you feel by your lecturers? Is there any difference between support from different lecturers?
- Do you have any kind of technical support for the assistive technology that you use as a student, if you use any?
- Where do you go in case of any problems?
- Has anyone ever done a needs assessment with you? This means that they look at your particular needs and work with you to figure out how the university can support you.

3. How involved in university life do you feel, as a student with a disability?

- o Do you live in halls of residence with other students, or at home?
- Are you a member of any student groups whether they're specifically for students with disabilities, or not?
- Are there any support groups for students with disabilities that you attend?
- Are these formal (created and supported by the institution) or informal, studentorganised groups?



- 4. Is there anything that is particularly good about your experience as a student with a disability?
- 5. Is there anything that needs improving about your experience as a student with a disability?
- 6. Is there anything that we haven't discussed that you want to discuss?

Parent focus group questions

- 1. What kinds of technology is available to your son or daughter to support them when studying at home?
 - o Technology that has been purchased by you or your son or daughter
 - o Technology that the institution provides for your son or daughter to use at home
- 2. How much contact do you have with the institution, as a parent of a student with a disability?
 - For example: lecturers, administrators, technical support staff, parents of other students with disabilities
- 3. Is there anything that you think is particularly good about the institution's support of your son or daughter as a student with a disability?
- 4. Is there anything that you think needs improving about the institution's support of your son or daughter as a student with a disability?
- 5. Is there anything that we haven't discussed that you want to discuss?



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