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The challenges of social recognition and information for students with functional disabilities

Functional disabilities

Functional disabilities mainly concern students with hearing, vision and mobility impairments.

According to the World Health Org., visual function has four stages: normal vision, moderate or severe visual impairments and blindness. These stages of **visual impairment** have consequences on certain abilities such as: reading and writing; daily life activities; communication; assessing space and moving around; pursuing an activity that requires prolonged visual attention.

The International Bureau of Audiophonology classification defines four degrees of **hearing impairment** according to the average hearing loss: *Mild hearing loss* (difficulty in perceiving soft speech); *Moderate hearing loss* (the perceived spoken message is incomplete); Severe hearing loss (leads to significant difficulties in perceiving sounds and thus accessing understanding); *Profound hearing loss* (use of lip-reading is essential).

Mobility impairment covers all disorders that can lead to partial or total impairment of motor skills, particularly of the upper and/or lower limbs (difficulties in moving around, performing certain gestures).

Introduction

Our subgroup is focused on functional disabilities, excluding specific learning disabilities. It mainly concerns students with hearing, vision and mobility impairments.

The central concept called functional disabilities implies that it is linked to people's characteristic features. The support is sometimes based on all kinds of disabilities (e.g. Universidad Nacional de Educación a Distancia, UNED) or in other cases, the university has to provide equal opportunities for students with functional disabilities (e.g. Anadolu University).

There is still a European directive and law, that is equal rights and opportunities. So, what we mean is that some universities do not distinguish specific actions according to disabilities while others promote equality for those students with a functional disability.

In France, the number of disabled students pursuing higher education in public institutions under the supervision of the Ministry of Higher Education and Research rose to 16,000 in 2013 (5,000 in 2004). Ninety per cent of these students were enrolled at university and received support or monitoring as such. The general trend towards longer study periods and the diversification and greater awareness of support schemes explain this increase.

More than half of them (54.2%) get human assistance, more than three quarters (77.9%) have their exams adapted and two out of three disabled students are offered specific monitoring by a disability advisor within their institution.

Students with functional disabilities, excluding specific learning disabilities, represented about 40% of students with disabilities in the 2011-2012 academic year (visual impairment: 8.9%, hearing impairment: 6.2%, mobility impairments: 24.8%).

The challenges:

The challenges are first and foremost the detection of the people concerned by these functional disabilities, the accessibility issues, the diffusion of information and the adaptations of the right materials for them. What is reasonable in making adjustments and who decides on what is a reasonable adjustment to make?

References

Buele Maldonado, M., Paute Paucar, S., Rios, L. (2020). Accessibility Technical Report - results of application of accessible tools evaluation instruments. READSPEAKER AND ALLY. Law Degree. UTPL, Loja-Ecuador.

Baird, D. E., & Fisher, M. (2005). Neomillennial user experience design strategies: Utilizing social networking media to support "always on" learning styles. Journal of Educational Technology Systems, 34(1), pp. 5-32.

Bühler, C., & Fisseler, B. (2007). Accessible e-learning and educational technology-extending learning opportunities for people with disabilities. Conference ICL, pp. 26-28, Villach, Austria.

https://telearn.archives-ouvertes.fr/file/index/docid/257138/filename/242_Final_Paper.pdf

Carneiro, L., Rebelo, F., Filgueiras, E., & Noriega, P. (2015). Usability and user experience of technical aids for people with disabilities? A preliminary study with a wheelchair. Procedia Manufacturing, 3, pp. 6068-6074.

Cho, J. D. (2021). A study of multi-sensory experience and color recognition in visual arts appreciation of people with visual impairment. Electronics, 10(4), pp. 470-507.

Institutional framework:

Legal rules (national-ministerial ones)

In France, since 2005, the Ministry of Higher Education has been supporting institutions in developing a disability strategy. It takes students' entire studies into account, from informing high school students about higher education to post-graduation career guidance including schooling, exams, university life, internships and stays abroad.

In Ecuador, the *Organic Law on disabilities* (2012) referred in Art.27 to the fact that the state should ensure that disabled people could get access to complete school education, including higher education.

In *Regulations to the Organic Law on disabilities* (2017), Art.1 specifies that a person with a disability is someone who, as a consequence of one or more physical, mental, intellectual or sensory impairments, has permanently restricted biological, psychological and associative capacity to exercise one or more essential activities of daily life, in a proportion equivalent to 30% of disability. This percentage is duly qualified by the national health authority. Article 11 mentions the scholarships or financial aid that the Organic Law on Higher Education provides. Other aspects such as the mandatory accessibility of web content and the sign language interpretation service are to be taken into account in the educational field.

In Finland, equality in education is the basis of the educational system. All kinds of discrimination, including discrimination on the grounds of disability, is forbidden. Nowadays, there is a national focus on students from under-represented groups and on supporting their equal academic careers.

According to legislation, some accommodations or individual arrangements when needed must be available but formal medical certificates are usually needed to consider those options. A publication entitled "*Towards more accessible higher education and higher education institutions*" (2021) is available only in Finnish with the abstract in English. The Ministry of Higher Education supports the development of tools to help produce accessible digital teaching materials.

Institutional Rules

In some countries, the rules for taking disability into account are not the same from one university to another.

A university without strategy plans for students with disabilities, can offer special programs for people who have special needs. In Spain, UNED offers special programs for older people (that is people over 25). Students with disabilities can get the same special adjustments throughout their studies.

In other cases, a specific decision regarding students with disabilities is made by the institution's governance.

Edyburn, D. L. (2001). Models, theories, and frameworks: Contributions to understanding special education technology. Special Education Technology Practice, 4(2), pp. 16-24. Models, theories and frameworks. Feliz-Murias, T., Carmen Ricoy, M.C., Feliz, S. (2018). Inclusiveness of students with disabilities at UNED. Experiences and challenges. The Online, Open and Flexible Higher Education Conference, EADTU Conference Proceedings, pp. 173-183. Feliz-Murias, T., Pereira Calvo, A., Andreu Bueno, A., & Simón Fernández, I. (2019). Inclusiveness, and accessibility: adjustments, and services. Ubachs, G. & Joosten-Adriaanse, F. (Ed.). Blended and online education within European university networks. The Online, Open and Flexible Higher Education Conference, EADTU Conference Proceedings, pp. 253-258. Henry, S. L., Abou-Zahra, S., & Brewer, J. (2014, April). The role of accessibility in a universal web. In Proceedings of the 11th Web for all Conference. MIT Open Access Articles. https://dl.acm.org/doi/10.1145/2596695.2596719	In Finland, at the University of Jyväskylä (JYU), the Vice-rector took a decision on December 2nd 2019 about Accessibility of education (Accessibility of education at the university of Jyväskylä). The decision consisted of principles to follow (e.g. responsibilities, arrangements concerning students' admission and individual arrangements during their studies). It also gave guidelines for social, physical and digital services. A service can be provided for the welfare of students. In Ecuador, for example, the Private Technical University of Loja (UTPL) through the University Welfare Unit, will guarantee attention, monitoring and advice for the access. It will also guarantee integration, continuity in studies, promotion of university inclusion and equity and comprehensive development of people who are part of priority groups. These policies suggested in the "Instructivo de admisión y fortalecimiento para estudios de grado y posgrado" (UTPL, 2019) reveal aspects that are more detailed in specific regulations such as admission and upgrading. Scholarships and financial aid are also detailed in the regulations. Furthermore, it is pointed out that according to the needs, accessible educational resources will be designed and implemented (Art. 11). As for the facilities to the Headquarters and the Support Centers, these policies specify the physical spaces with architectural criteria of universal accessibility (Art. 13). They stipulate that the university community will be permanently informed of the equal rights and obligations of each of its members (Art. 15). The Open Education System of Anadolu University (Turkey), dedicated to equal opportunity aims to open a wide range of programs based on this principle and to offer learning environments that effectively promote these programs. To ensure quality education for disabled people, the policy is based on the following principles: - Equal opportunity and diversity of students, human resources and the faculty; - Affordable tuition fees; - Equal access to opportunities which are offered; - Equal access to environments where curriculums, assessments, support services and resources are available. In France, the May 2012 "university/ disability" charter and the 22nd July 2013 Fioraso Law asked each higher education establishment to draw up a master plan for disabled students. The master plan is composed of the following axes: - The first one concerns students, their reception, their support and their professional integration; - The second one includes the management of human resources through the adaptation of workstations, teleworking, the issue of recruitment, partnership; - The third one deals with real estate and improving accessibility; - The fourth one is about training and research.

KILINÇ, H., OKUR, M. R., YILDIZ, G. (2021), Examination of User Experiences and Needs for the Web Page and Learning Environment Used by Students with Special Needs in Open and Distance Learning: The Case of Anadolu University. Sakarya University journal of education 2021-08-30.

https://dergipark.org.tr/en/download/article-file/1742955

Lee, M., Han, S. H., Kim, H. K., & Bang, H. (2015). Identifying user experience elements for people with disabilities. Proceedings of the 8th International Conference on Advances in Computer-Human Interactions, Pohang, Korea. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.681.7575&rep=rep1&type=pdf

Mills, G. E., & Gay, L. R. (2016). Educational research competencies for analysis and applications. (11th Edition). Pearson.

https://www.pearson.com/uk/educators/higher-education-educators/program/Mills-Educational-Research-Competencies-for-Analysis-and-Applications-Global-Edition-11th-Edition/PGM1089497.html

Accessibility for these students

Accessibility or Compensation?

Compensation is the response to the person's specific individual needs (adjustment of the curriculum, tools for reading...). Accessibility refers to general measures independent of the presence of the person (Accessibility of buildings, of information, of knowledge, of sites, lifts, installation of remote magnifying screens...). We will not make the formal distinction in our comments.

Accessibility is a legal principle. The principle of accessible education is to ensure that all practices and functions of the university comply with the stipulations and the spirit of the EU's directives on the accessibility of the websites and mobile applications of public sector bodies (2016/2102) and the *Non-Discrimination Act* (1325/2014).

A student has the right to expect that the university staff aims to provide a learning environment that is socially, psychologically and physically as accessible as possible.

Moreover, communication and materials related to students' admission, teaching and studying as well as administrative rules and regulations at the university of Jyväskylä (JYU), must be accessible. According to Finnish legislation asking about students' disabilities or registering them are not allowed. It is always the student's own responsibility to inform the staff about their special educational needs or disabilities. As staff members, they can only inform students about their rights and the support services that they can be offered.

Accessibility for the students concerned is therefore facilitated by the administrations in the interests of equal opportunities. These universities like the UTPL in Ecuador have a humanistic vocation. The UTPL does not only conform to the regulations given by state agencies. But, thanks to its vocation as a humanistic and inclusive university, it aims at the accessibility of all its students and has regulated its policies on the inclusion of students with functional disabilities (523 students from April to August 2021).

However, students must register themselves to obtain the status of disabled students. In France, once enrolled, they must follow a clearly established procedure. The Ministry of Higher Education encourages each university to follow a procedure which generally is:

- Interview with the Student Life & Disability Office;
- Appointment with a doctor from the Student Health Centre;
- Accommodation granted by the Plural Disability Commission of the institution;
- Communication of accommodation to components for implementation;
- Follow-up with the component and in particular with the disability referents;
- Adjustment in tuition fees to encourage students to have their disability recognised.

Rosa, J. R. D. S., & Valentim, N. M. C. (2020, October). Accessibility, usability and user experience design for visually impaired people: a systematic mapping study. In Proceedings of the 19th Brazilian Symposium on Human Factors in Computing Systems, pp. 1-10.

https://dl.acm.org/doi/abs/10.1145/3424953.3426626

Santos, O. C., Couchet, J., & Boticario, J. G. (2009, July). Personalized e-learning and e-mentoring through user modelling and dynamic recommendations for the inclusion of disabled at work and education. In Ninth IEEE International Conference on Advanced Learning Technologies, pp. 514-518, IEEE. Madrid, Spain.

https://ieeexplore.ieee.org/document/5194291

The challenges for these students

Despite the efforts of the actors and institutions, the students concerned are faced with three challenges:

- *The fear of declaring oneself "disabled".* Beyond the procedures and the rather favourable accessibility to students with functional disorders, the challenge is the detection of these students. More precisely, it is the question of the real and immediate identification as students with functional disorders. Through a record of the French Conference of University Presidents (*La parole aux acteurs du Handicap*, 2014), students reveal the difficulties they encounter, namely the fear of declaring their disability or simply talking about it or even of showing their disability... For these students with functional disorders, perhaps 20-25%, might not wish to register themselves as such. Organizational responses and adaptations are then made later in the year or even afterwards when difficulties arise in the curriculum.

Furthermore, trying to focus too much on the different forms of disabilities may accentuate fears. Thus, the concept of functional disabilities may seem restrictive. According to Tiberio Feliz (UNED) it might exclude a large group of people. Everyone who has a certain need requires to be supported by the university.

Beyond the actions carried, the **problem of the student's declaration** is a societal one.

- *Social and academic inclusion*. Technical tools are necessary but not sufficient. Human mediation has a crucial role to play. In Spain, there is a big gap in the access to university. Students with disability don't have access or don't imagine that they can get access to university like regular students. Students with disability have to be promoted and empowered. There are mainly psychological or social issues which are family-related ones. Sometimes, a person with disabilities can't have access to some studies or trainings because teachers think they can't achieve or develop all the competences.

- ***Lack of information and training of teachers.*** According to these students' statements (*La parole aux acteurs du Handicap*, 2014), even if they wanted to identify themselves as functionally disabled students, some of them still suffer from a lack of information at the university. They explain that, very early in their approach, the upstream orientation towards the specialized actors, the search for the right people to contact and the suitable locations to find are very practical issues they are confronted with for a good insertion in a system that is nevertheless more adapted.

In France, students consulted by the Conseil National du Handicap and the Mornay Group, criticize the unawareness of teachers about disability. According to disabled students, it is difficult to detect whether their disinterested attitude results from the application of the principle of equality: compensation would be enough not to consider them as disabled students or whether "the teaching staff, which is the reflection of society, is neither more indulgent nor more trained for disability".

Financial and human support

Enrolment can be usually "free" (UNED) otherwise it involves payment of fees at the same rates as for regular students. Higher education in Finland is free of charge. If financial support is needed it is provided by other institutions, not by universities. In Ecuador, scholarships are awarded to all students according to their degree of disability and financial means. In Anadolu University's Open Education System, there is no registration fee for students with a disability of 40% or more.

The human support for students with disabilities (and for other students as well) can be based on the cooperation of several partners. In Finland, the JYU administrative "Student and academic services" work with the JYU faculties and JYU independent institutions. Any student (all of them, not only those with disabilities) has a lot of well-being support services available under the "Student life" concept. In Ecuador, the UTPL provides appropriate assistance to achieve the objectives of their higher education in any of the 23 undergraduate degrees and 10 graduate ones they currently offer. In Anadolu University's Open Education System, with the slogan Barrier-Free, Open Education Workshops have been held every year since 2017. Annual meetings are held by the Open Education Disability Support Unit with students, families and representatives of relevant NGOs. It organizes national and international barrier-free art, short film, composition, story and essay competitions. In addition, by participating in various student societies within the Open Education System, students can work on their fields of interest and participate in activities.

Implementation of quotas

A quota in education means that everyone cannot undertake particular studies, but only a small percentage of students.

The access to the Katholieke Universiteit Leuven (Belgium) is open to people who have a secondary education certificate. The university authorities do not work with quotas, except when someone wants to study medicine, then they take an entrance examination. Students with a disability can ask for special treatments for courses and for their exams as well; then a tailor-made solution will be made for them. In many cases, for blind people for instance, it includes very important adjustments such as courses translated in braille…

In Ecuador, the UTPL has a quota policy but it is not limited to a strict adherence to it as all the students who are deemed fit to pursue higher education are admitted. The UTPL provides adaptations in accordance with the RRA (*Reglamento de Régimen Académico*) for non-significant curriculars, considers special quotas to promote inclusion and guarantees equal opportunities for admission to a university career in accordance with current regulations (2019).

For Anadolu University's Open Education System, there are no quota or criteria for the registration of students with disabilities.

References-Guides

«Les étudiants en situation de handicap», Centre de ressources – INSHEA, pp. 1-45.

https://inshea.fr/sites/default/files/Bibliographie-%C3%A9tudiants en situation de handicap 2019.pdf

Association pour faciliter l'insertion professionnelle des jeunes diplômés (Afij handicap). (2012). *Guide des droits et des aides pour réussir son insertion professionnelle: spécial «Étudiants et les jeunes diplômés en situation de handicap»*. Paris: Afij handicap.

http://cache.media.education.gouv.fr/file/juin2016/94/5/afij_guide_aides_etudiants_handicapes_nov_2011_613945.pdf

Conférence des présidents d'université (CPU). (2012). *Guide de l'accompagnement de l'étudiant handicapé à l'université*. CPU, Crédit coopératif.

https://cache.media.enseignementsup-recherche.gouv.fr/file/Lutte_contre_les_discriminations/90/2/121671_guide-handicap-2012_275902.pdf

Fraisse, A., et Gangloff-Ziegler, C., Conférence des présidents d'université (CPU). (2014). *La parole aux acteurs du handicap à l'université*. Paris.

http://www.cpu.fr/wp-content/uploads/2014/11/handicape-web2.pdf

Examples of good practices

The **Adaptations for students** with functional disabilities may concern student life, coursework or examinations.

In France, the *Summary of the FIED member universities practices* gives an overview of what is being done about technical and pedagogical adaptations.

Technical adaptations can be:

- Lifts, access ramps;
- Parking access badges;
- Information desks at wheelchair level;
- Loan of small electric motorized vehicles;
- Ergonomic cushions;
- Dedicated rest rooms.

Some universities help students by providing them with suitable materials:

- Digital pens;
- Magnifying glasses;
- Large letter keyboards;
- Line Magnifiers;
- Supply of a voice recognition software (e.g. Dragon).

Some universities adapt the right materials for their platform especially for deaf and blind students:

- Audio and braille materials besides paper materials;
- Audiobooks instead of textbooks specially for maths or statistic;
- Subtitles are added to videos, thus ensuring that they can be seen by students with partial or total hearing loss;
- Use tools which provide the LMS with accessible versions of the files/resources that are uploaded within a course, automatically creating alternative versions (enhanced pdf, audio, electronic braille, ePub, HTML) allowing the students of a course to choose the type of file that best suits their needs.

The use of human resources:

- A buddy system can be implemented: a disabled student can be guided by another peer who can help him in certain situations;
- Administrative officers can act in multiple provinces and with local universities to support the disabled students.

Examinations can be adapted:

- Additional time during the exam session and/or when returning written tasks;
- Adaptation of tests; use of adapted equipment (Braille displays; foreign language keyboards, etc.);
- Individual exam-arrangements with e.g. the permission to type instead of handwriting;
- Impunity for spelling or grammatical errors;

Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche. (2014). *Guide pratique 2014: le handicap, tous concernés*. http://cache.media.education.gouv.fr/file/Handicapes/65/5/handicap_2014_-MESR_Guide_Handicap_HD_SSHIR_365655.pdf Sciences Po. (2018). *Guide de l'étudiant en situation de handicap*. Paris. http://www.sciencespo.fr/sites/default/files/sciences-po_guide_etudiant_handicap_web_accessible_FR.pdf	- Composition in a private room with a school life assistant; - Support of personal assistant; - Assistance of a sign language interpreter or a secretary who reads scripts; - Allow access to various personal aids or (computer) programs; - Use of a laptop computer that has been emptied; - Transmission of subjects in an adapted format (A3 format, line spacing, bold font, etc.); - Authorization to take a break for tests lasting more than an hour and a half; - Taking examinations in a different location or in a dedicated room. Actions can be put in place for teachers to ensure inclusion **in teaching practices**. At the beginning of their studies, students must be informed about the possibility to have some individual arrangements and to get a document about the recommendations for individual arrangements. These individual arrangements could be: - Alternative study materials; - Alternative study modes; - Getting lecture materials/slides in advance; - Possibility to record lectures if recordings are not otherwise available; - Extended loan period for course book loans. **Support for teachers based on pedagogical guides** To assist teachers, the Université de Poitiers (FIED-France) develops a *pedagogical and on-line exam guide*. UTPL developed a *Manual of pedagogical guidelines* (UTPL, 2020) for inclusive practices in order to respond to the educational needs of different groups of students with special needs. It orients the curricular adaptations of first and second grades, known as non-significant. In terms of methodology, it suggests using specific methods and resources, adapting the organization of the classroom and the level of complexity of the class. Other suggested areas are directed to the evaluation of learning with the adaptation of techniques and instruments or the evaluation criteria. **The use of an accessible website** Various services for disabled students enrolled in the Open Education System of Anadolu University are offered on the Accessible OEF website (http://engelsizaof.anadolu.edu.tr/). Students with disabilities are helped on this website with many issues, especially the registration process, add-delete courses, the use of the e-campus system, exams and graduation. There is a sign language translation application on the barrier-free OEF site. Moreover, face-to-face student support services are offered in all OEF offices. Furthermore, all services and career support activities offered during the education process (from student support services to e-learning environments and materials, from exam organization to social and cultural activities) are planned through data management according to the specific needs

of the students, by obtaining detailed health information from the students in the electronic environment upon entering the system.

Professional integration is one of the goals of universities.

The Université de Lille (FIED-France) develops:

- Awareness and support actions for professional integration;
- Sponsorship actions by professionals;
- Network of disability referents within the University.

Possible solutions and approaches

Under the impetus of new regulations, the constant effort of universities and staff to facilitate accessibility and adapt distance learning to these audiences has spread widely through an active and prolific ecosystem (rectorates, associations, teachers, students, public or private companies). The approaches are formalized, specific staff members welcome and monitor these students and particular materials are available for them.

In this respect, the good practices of universities are **technical** (lifts, access ramps; parking access badges; information desks at wheelchair level; loan of small electric motorized vehicles; ergonomic cushions; dedicated rest rooms; suitable materials), **pedagogical** (additional time in the exam, adaptation of tests; use of adapted equipment, e.g. braille displays; individual exam-arrangements) and **human** (implementation of a buddy system; administrative officers acting in multiple provinces).

These good practices are the result of numerous actions to raise awareness among university actors, round tables, and informal exchanges in connection with rectorates, companies and associations. Nevertheless, problems of social recognition are still present.

The problem of the student's declaration is a societal one. It can only be solved through awareness-raising actions among the youngest schoolchildren, high school and university students, teachers, and institutional leaders. Likewise, bearing in mind the lack of information, the lack of training of teachers and the need to raise awareness among other people, awareness-raising and information activities should be encouraged such as:

- **Involving disabled students with other students by conveying positive values**, exchanging information on professional, sports and community projects and attitudes towards disabled people;

- **Proposing a program of awareness-raising activities for students through conferences**, sporting events for disabled people, and the participation of "disabled-minded" companies;

- **Making teachers aware of disabilities** (better understanding of visible or invisible disabilities, how to adapt their behavior and communication according to disabilities?);

- **Implementing agreements with associations, education**

authorities and high schools (transfer of information to high school students, etc.);

- **Disseminating feedback more widely from former students and good practice guides on the universities' internet platforms** (personalized procedures and contacts for registration, present the approach when welcoming disabled people, communicate on the accessibility of rooms, digital accessibility, teaching schedules, etc.).

Conclusion

Is digitalization a solution to inclusion for these students? Digitalization is one aspect of the solution. From the acquired experience and implemented good practices and in reference to the feedback of the students enrolled in Open and Distance modality, we consider that technology and the digitalization of contents help the integration of the student. This has been observed with greater emphasis in the time of the pandemic when some face-to-face activities have been substituted with virtual ones.

Though digitalization is one solution among others it can be a new obstacle as well. Thus, it is very important that online education and all digital services should be accessible for all.

According to students, digital solutions, for example subtitles and captions in videos, different text to speech programs and of course, the possibility to follow the lecture without travelling to campus help them a lot. There are a lot of other good examples as well.

Accessibility remains a real challenge for all people involved. The legal framework, through the European directive, organic laws and even the constitution, recognizes the right to equal opportunities for all. At the institutional level, in European universities, access to training for example, is widely developed and facilitated through adapted teaching and courses. Access to examinations has been greatly improved by mobilized staff, which our article particularly highlights through good practices.

The major challenge is the detection of the students concerned and more specifically their real and immediate identification, e.g. the acceptance of the identity of disabled student as such. Too many students do not wish to identify themselves socially as disabled students. The challenge is no longer legal or institutional but societal and the answers cannot be only "technical".