InclUDE

The use of accessibility tools in higher education

Acknowledgements

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Co-funded by the
Erasmus+ Programme
of the European Union

Project No: 2020-1-UK01-KA226-HE-094428

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Introduction

This report has been written in the framework of the Inclusive University Digital Education (InclUDE) project, which aims to promote the realisation of accessible and inclusive higher education opportunities for students with special educational needs. Funded by the Erasmus+ Programme of the European Union, the project is a collaboration between the University of Wolverhampton (UK), Universität Klagenfurt (Austria), Université Rennes II (France) and European Association of Service providers for Persons with Disabilities (Belgium).

An inclusive education is defined as a learning environment in which all barriers that could limit the participation and achievement of any learner are removed.[1] Inclusive education systems must embrace diversity, as well as recognise and accept the unique characteristics and talents of all students (and staff members). Disability is one of the main causes of exclusion; however, there are also other social, institutional, physical, and attitudinal barriers to inclusive education. [2]

Higher Education Institutions form a key component of the education system and so must also be inclusive environments, which can meet the special education needs of all learners. Higher Education refers to the educational level following the completion of secondary education, for the acquisition of an academic or professional degree, including universities and other institutions that provide qualifications for higher learning degrees.

A key component to realising inclusive education systems is ensuring the full accessibility of the learning environment. Accessibility is the extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of user needs, characteristics and capabilities to achieve identified goals in the identified contexts of use.[3] A problem with accessibility can occur when a product, system, service, environment or facility is not compliant with minimum requirements or inaccessibility is perceived by end users.[4]

A determined effort is being made in Europe and across the globe to create inclusive and accessible places of learning in universities and higher education. However, creating such learning environments which are open and welcoming to all is not without its challenges. While some higher education institutions are already on the path towards becoming more inclusive, many more require additional support to realise this ambition.

The COVID 19 pandemic was one such challenge that threatened the inclusivity and accessibility of higher education. In an effort to reduce the spread of the virus, higher education institutions (HEI) in almost all European countries were required to stop in-person teaching and move entirely to remote teaching and learning. As a result, higher education lecturers were forced to quickly transfer their teaching online. Since this initial move to remote teaching, HEI have been forced to provide forms of online learning for varying periods of time or provide online teaching in combination with instructor-led classroom activities.

The move to fully online classes and the subsequent increase of 'blended teaching,' has highlighted the inaccessibility of many digital teaching and learning methodologies. In 2020, the abruptness of the closure of societies and the pressing need to transfer teaching materials and methodologies

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[1] Source: http://www.iiep.unesco.org/en/inclusive-education
[2] Source: http://www.iiep.unesco.org/en/inclusive-education
[3] Source: ISO/IEC 30071-1:2019 (en)
[4] Source: ENTELIS project taxonomy and glossary: https://www.entelis.net/en/entelis_glossary

from classroom-based to online within a short timescale led higher education lecturers to focus on online teaching which suits the majority of their students. In many cases, lecturers are willing to apply accessibility features or tools, but lack knowledge of what is available and how to apply it.

Since 2020, the demand for more inclusive and accessible online teaching has grown. The right request to make 'reasonable accommodations' is now a common practice in many education systems, as a method of including disadvantaged learners in mainstream education systems. Despite its use, it is recognised that when students have to request accommodations in advance, they are already being penalised or excluded to an extent, as students who do not require those same accommodations can simply turn up to any lecture without notice and be able to participate fully. To build a truly inclusive higher education system lecturers need to incorporate as many accessibility features as possible, without waiting for student requests. As a result, HEI are being required to provide the support and resources which enable their educators to deliver accessible online teaching.

A number of accessibility tools are available to providers and end users, including learners and their families, to support the full accessibility of online learning environments. Accessibility tools are software or equipment that can be used by individuals, including persons with disabilities, to be able to more easily use/access another product, system, service or digital environment.

This report, and the study on which it was based, will provide a state of play on the level of awareness lecturers, higher education professionals and university students have of accessibility tools for online learning. The report will also provide recommendations on how to encourage the use of online accessibility tools in higher education institutions. The results of this study will be used by the partners of the InclUDE project to support the development of their online Web Repository of existing digital access tools as well as their guidelines for lecturers on inclusive and accessible online teaching.

In the first part of this report, the parameters under which this study was conducted will be explained. The second part of this report will provide an overview of the current use of accessibility tools in higher education, including the use of accessibility features in mainstream technology and software as well as specialist tools. The third part of this report will assess the impact COVID-19 has had on the use of digital tools in higher education before part four looks at the future use of accessibility tools, needs and challenges to the use of these tools. Finally, the report will conclude with some key recommendations for stakeholders for the achievement of more inclusive and accessible higher education organisations.

Parameters of the study

The data of this report was collected via a survey of higher education professionals, lecturers, students and social service providers. This survey was written and approved by the InclUDE project partners. The survey was made available online in English, French and German. Respondents answered the survey (which can be found in Annex 1) between October and November 2021.

A total of 170 respondents completed the survey. 36 of these respondents were higher education professionals, 29 were lecturers, 98 were students. One policy maker completed the survey as well as 6 respondents who were working in a role that was not listed in the survey.

Stakeholder Type	Number of respondents
Higher Education Professional or Administrative staff	36
Lecturer	29
Student	98
Policy Maker	1
Other	6
Total	170

Table 1: Breakdown of survey respondents by stakeholder type

Respondent Location	Number of respondents
Austria	91
Belgium	3
France	52
United Kingdom	16
Other	8
Total	170

Table 2: Breakdown of survey respondents by location of work

For the purposes of this report accessibility tools are defined as software or equipment that can be used by individuals, including persons with disabilities, to be able to more easily use/access another product, system, service or digital environment.

Use of accessibility tools in higher education

The use of accessibility tools is not a new phenomenon, and they are increasingly used in everyday life as part of mainstream digital solutions to everyday problems. Many HEI have already incorporated some digital tools into teaching methods and the first section of this report aims to assess how many higher education professionals and students use such tools.

Of the 170 survey responses, 40% of respondents agreed to using tools that were available online to improve accessibility, whereas 60% reported not using any such tools. Of those who did not use accessibility tools, there is a difference in reasoning. 31% of respondents (52 respondents) suggested that they did not have enough knowledge of how to use these tools, while the remaining

respondents stated that they did not need to use accessibility tools because their students did not need them.
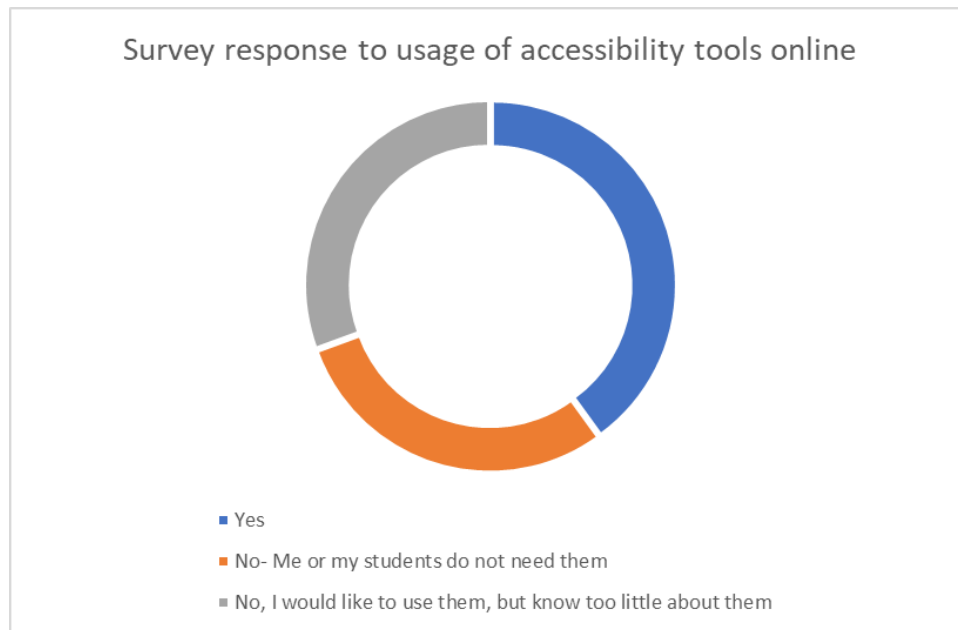
Figure 1 Survey response to the usage of accessibility tools while teaching online.

The respondents who indicated that they did use digital accessibility tools were questioned on their level of comfort while utilising such tools. Of those surveyed, the majority were comfortable or completely comfortable (65%) with using accessibility tools. However, 24 out of 68 respondents noted being uncomfortable or neutral about their use of such tools.

Figure 2: Survey response to the level of comfort while using the accessibility tools online

Survey response to accessibility needs fulfilled by available digital tools

Figure 3: Survey response to accessibility needs fulfilled by available digital tools

When asked which accessibility needs were being fulfilled by the available digital tools, 39 respondents reported that they were not using these tools to fulfil a specific accessibility need. This could suggest that many lecturers are already using digital tools to increase the general accessibility of their teaching without the request for specific accommodations. Of those who were using digital tools for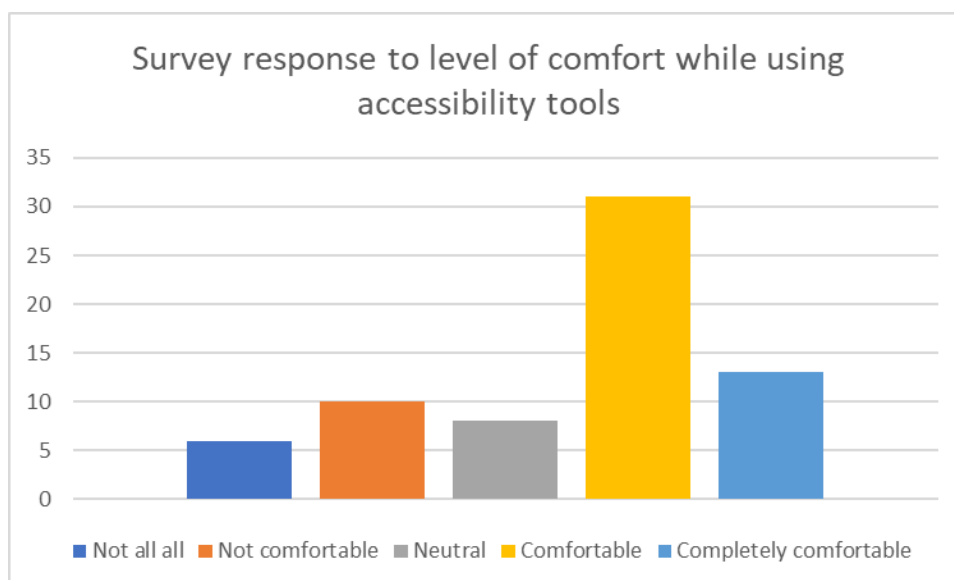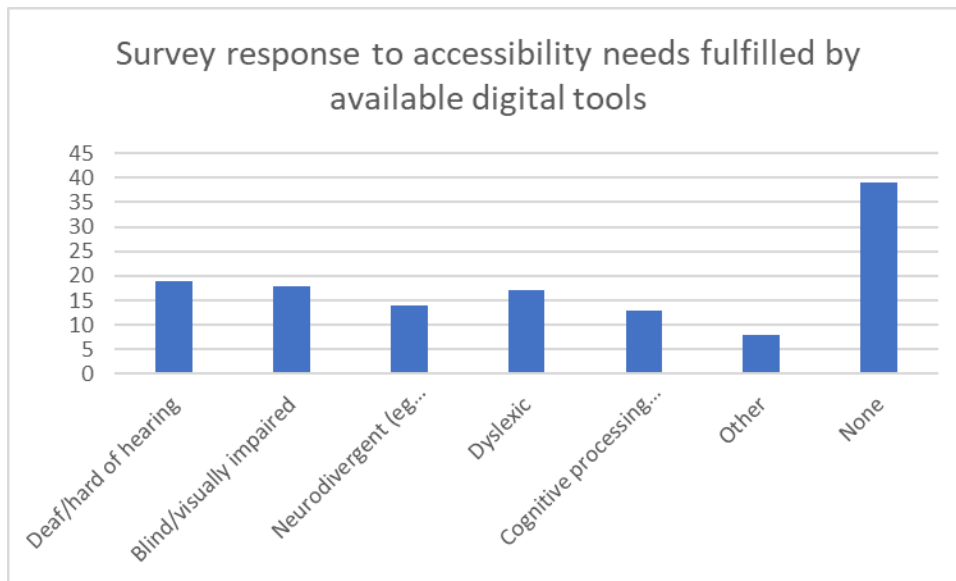 a specific accessibility need, tools for those who were deaf and hard of hearing (19 responses), blind and visually impaired (18 responses) or for those who have dyslexia (17 responses) were most common.

Use of accessibility features in mainstream technology and software

As already acknowledged, some accessibility solutions are already integrated within mainstream technology and software used in everyday life. When asked whether they used accessibility tools provided by Zoom, Microsoft and Adobe, the majority of the survey participants (102) said no as opposed to 68 respondents who do.

Across all three platforms, in totality, 37% of the respondents knew about the accessibility feature via personal use, i.e., outside of the workplace. 30% of respondents were aware of the tools via formal or informal training at work.
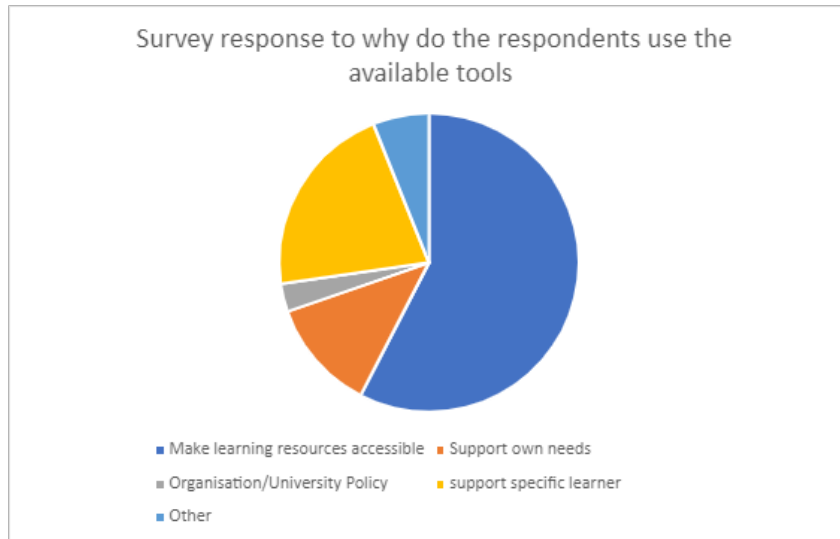
Figure 4: Survey response to why the respondents use accessibility tools that are available

57% of the respondents utilised these tools for making learning materials generally more accessible for their students. The second prominent reason was to support specific needs of specific learners with 27% of respondents choosing this option. The least popular option was legal guidelines or university policy that suggests that the respondents must incorporate accessibility into their work, only 1 respondent chose this option.

Figure 5: Survey response to the advantage of using these accessibility tools

40% of the respondents suggested that the accessibility tools were advantageous because they could support other people by using these tools, this was the most chosen option. A second dominant response was that these tools also helped to provide support to the respondents themselves with 21% of the respondents selecting this option.

Use of specific accessibility tools

In order to understand the extent of usage of accessibility tools, the survey also looked at accessibility tools used on platforms other than Adobe, Zoom and Microsoft. Respondents suggested 18 digital tools that they used, many of those tools will be made available in InclUDE's online repository. Among these Canva was the most common one.

When it came to identifying how the respondents learnt to use these tools, the response was scattered across all options including personal use, formal or informal work training, personal use or social media or other online recommendations.

Respondents mostly felt it was important to use these tools so that their learning materials can be generally accessible. The second highly chosen option was when there was a student present in their classroom that needed specific assistance.

Most of the respondents felt that these tools made their work/studies a lot easier. They also felt that their work was more accessible to other individuals. Therefore, they used the accessibility tools that are available.

Impact of COVID-19 on use of accessibility tools:

The pandemic impacted higher education with university education going completely digital wherever possible for a larger period of 2020. According to the report, *The impact of COVID-19 on higher education:*

A review of emerging evidence taken out by the Publications Office of the EU, 220 million students in higher education, around the world were impacted by closure of universities due to the pandemic.[5]

During the pandemic the majority of the respondents (168) shared information on best practices for online teaching with others. 42% of respondents shared this information with staff within their organisation, with 26% also sharing them with people from outside their respective organisations. Largely, it can be concluded that lecturers within HEI made a big effort to adapt to digital teaching methodologies and help others to do the same.

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[5] European Commission, Directorate-General for Education, Youth, Sport and Culture, Farnell, T., Skledar Matijević, A., Šćukanec Schmidt, N., *The impact of COVID-19 on higher education : a review of emerging evidence : executive summary*, Publications Office, 2021, https://data.europa.eu/doi/10.2766/916313
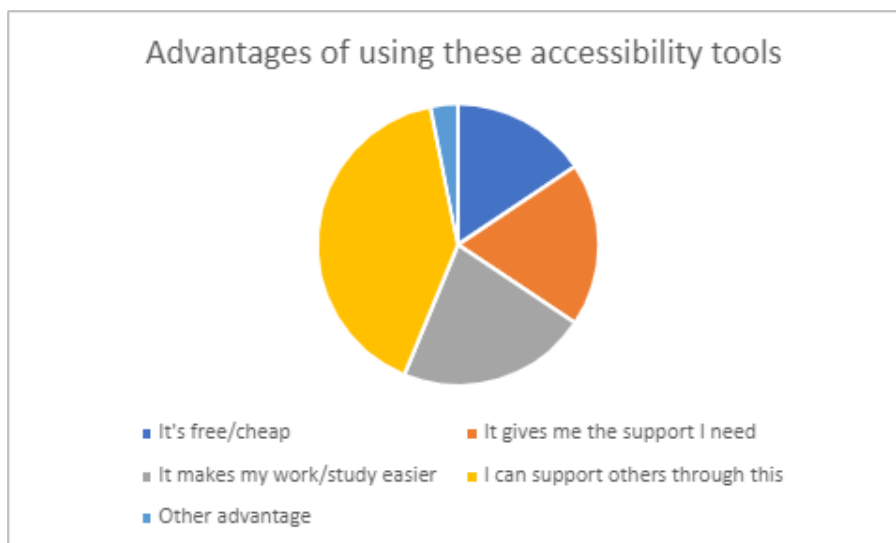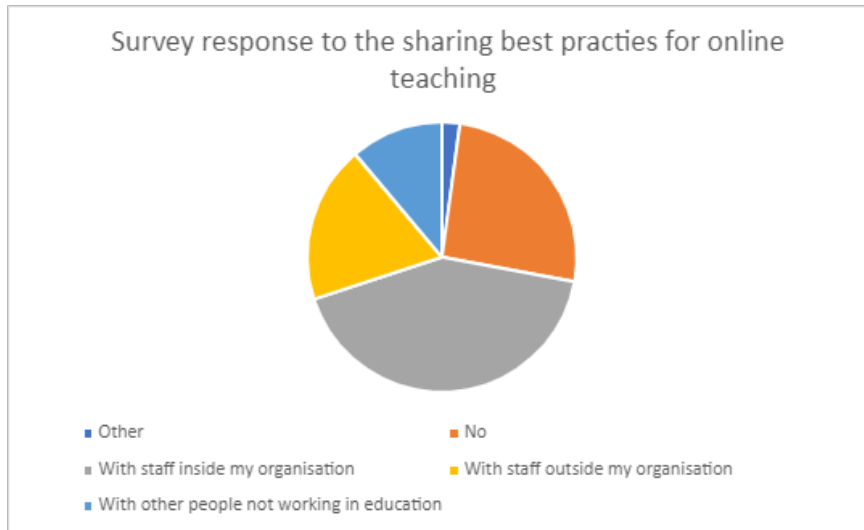
Figure 6: Survey response to whether respondents shared best practices for online teaching

More than half of the respondents shared these online teaching practices with their colleagues via informal chats. Only 15% of the respondents shared information of these practices via formal training and online information sessions such as website and forums.

Future use of accessibility tools: Interest and barriers

Looking to the future use of accessibility tools, 18% of respondents expressed an interest in knowing how content online could be made more accessible to the specific needs of people with dyslexia. 16% of the respondents were also keen on learning more about accessibility tools available online for specific needs for people who are deaf or hard of hearing. 18% also chose the option of not wanting to learn more about these accessibility tools, suggesting that they feel like the tools they currently use are serving their current needs.
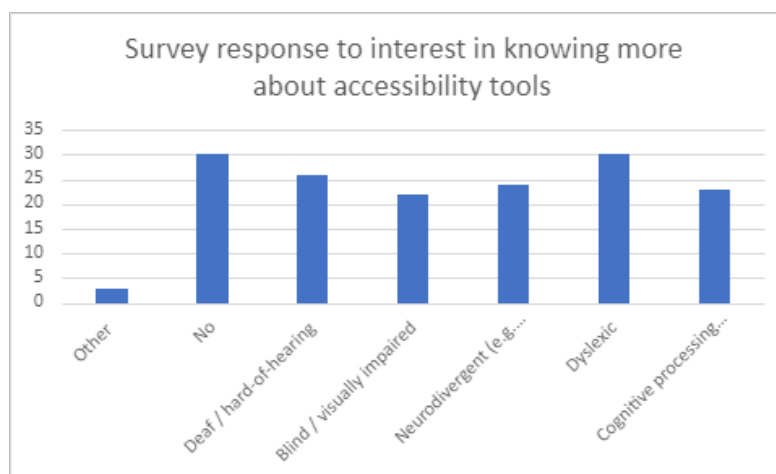
Figure 7: Survey response to interest in knowing more about accessibility tools for specific accessibility needs.

The survey respondents reported being unable to locate the exact place where they could find tools that they could use and being unaware of how to use the available accessibility tools as two of the key barriers to their use of accessibility tools. Conversely, 36% of respondents reported not having any barriers to using accessibility tools, either because they used all of the tools that they needed, or because they did not have a requirement for such tools.

Figure 8: Survey response to barriers to using accessibility tools.

Conclusions and Recommendations:

The purpose of this report was to provide a state of play on the level of awareness lecturers, higher education professionals and university students have of accessibility tools for online learning. The results of this report and the study upon which it was based, has helped to identify a number of key messages:

- **Many lecturers and students are already using digital tools to make their learning resources and presentations more accessible generally.**
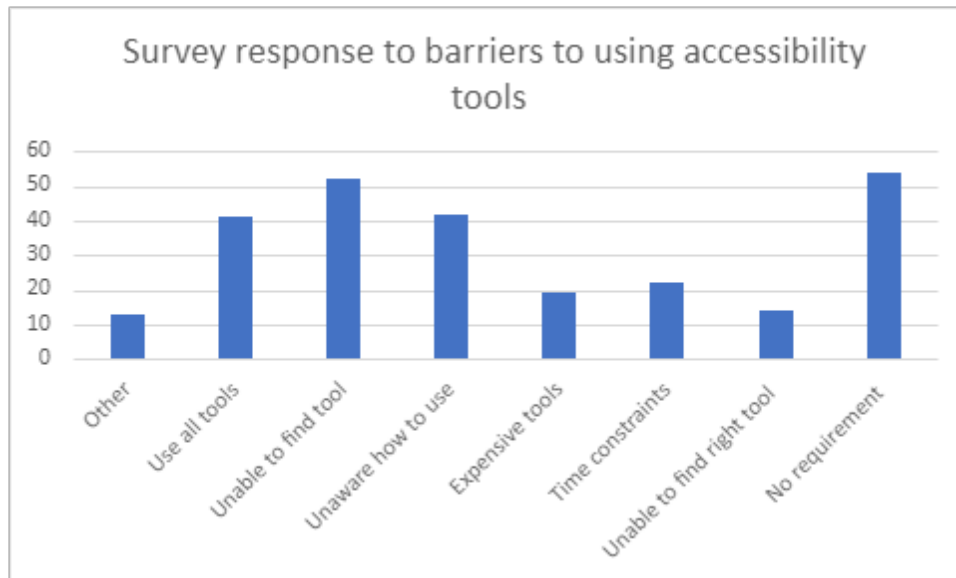 Of those using digital tools, 57% of the respondents utilised these tools for making learning materials generally accessible, promoting the true inclusion of all learners, without the need to request reasonable accommodation.

- **Less than half of respondents use digital accessibility tools in their online work.**
  Of those surveyed, only 40% were using digital tools to promote the accessibility of online learning teaching. 29% of respondents reported not using accessibility tools as they were not needed, suggesting that these lecturers are not considering the needs of future students nor building their teaching methodologies on an inclusive foundation.

- **Over half of respondents who reported not using digital tools said that they did not do so because they did not know enough about them.**
  In addition to the 31% of respondents who said they did not use accessibility tools as they did not know how to use them, many who did already use digital tools reported not being fully comfortable with their use, suggesting that HEI professionals and students require further training on these tools.

- **Informal training and prior personal use are the predominant way respondents knew about accessibility tools.**
  A lack of knowledge respondents gained from formal training suggests that universities are failing to provide the appropriate training to their staff and students on how to use digital accessible tools.

- **Universities should be more pro-active in encouraging the accessibility and inclusivity of online classes via their University Policy.**
  Only one respondent reported using digital tools due to the policy of their university, suggesting that universities are not leading the way or setting a standard for the accessibility of their online teaching. This finding is a clear indicator of the pertinence of the InclUDE project and its role in supporting universities to develop more inclusive and accessible learning environments.

- **Not being able to find digital accessibility tools, and not knowing how to use them are two key barriers preventing the use of such tools in HEI.**

  This finding again highlights the relevance of the InclUDE project and the importance of the project's results. The InclUDE repository and guidelines will provide those working and studying in higher education institutions with easy access to and clear guidance on how to use digital tools.

References:

UNESCO IIEP [3530] United Nations Children's Fund [1262], 2019. *On the road to inclusion: highlights from the UNICEF and IIEP Technical Round Tables on Disability-inclusive Education Sector Planning*. [online] Available at: http://www.iiep.unesco.org/en/inclusive-education-planning-school-all [Accessed 25 January 2022].

ISO, 2019. *Information technology — Development of user interface accessibility — Part 1: Code of practice for creating accessible ICT products and services*. [online] ISO. Available at: https://www.iso.org/standard/70913.html [Accessed 25 January 2022].

European Commission, Directorate-General for Education, Youth, Sport and Cultur*e, Farnell, T., Skledar Matijević, A., Šćukanec Schmidt, N., The impact of COVID-19 on higher education : a review of emerging evidence : executive summary, Publications Office, 2021,* https://data.europa.eu/doi/10.2766/916313

Annex 1: InclUDE IO1- Survey on accessibility tools EN

Accessibility tools are software or equipment that can be used by individuals, including persons with disabilities, to be able to more easily use/access another product, system, service or digital environment.

This survey is being conducted within the framework of the 'Inclusive University Digital Education' (InclUDE) project, which aims to promote the accessibility and inclusivity of higher education institutions, including universities.

The project partners will use survey responses to understand participants' current level of awareness of accessibility tools for online learning. They will also collect recommendations on how to encourage the use of online accessibility tools in higher education institutions.

The survey should take no longer than 10 minutes to complete.

1. **Who are you?**

Student
Higher Education Professional
Social Service Provider in the field of Education
Lecturer
Policy Maker
Other

2. **Which country do you work in?**

Austria
Belgium
France
United Kingdom
Other

3. **Do you use any accessibility tools or apps for online teaching sessions? This could include the accessibility features of Zoom, Microsoft or Adobe. Please tick all that apply**

No- I/My students don't need them
No- I'd like to but don't know what's available
Yes

Accessibility Tools

If you answered yes to the above questions, please tell us more about the accessibility tools or apps that you use by answering the questions below.

4. **Do you use Zoom's accessibility features (eg. closed captions)?**

Yes

No

Where do you find this tool? Please tick all that apply

Formal work training sessions

Informal work training (e.g. a colleague showed me)

Already use personally

Social media or other online recommendations

Family and friends

Other

For what reason do you use this tool? Please tick all that apply
To ensure that my learning resources/presentations are accessible in general

To support my own access needs

Legal Guidelines Organisation/University Policy

To support specific learners (e.g. a student who needs an accommodation)

Other

What are the advantages of this specific tool?

It is free/low price

It meets my support needs

It makes my work/studies easier to complete

It allows me to support others

Do you use Microsoft's accessibility features (eg. closed captions on teams, alt text on word, accessibility checker on PPT)?

Yes

No

Do you use Adobe PDF's accessibility features?

Yes

No

Do you use another tool or app?

Please name the tool and if possible, provide a link to where it can be found

31. How comfortable are you using online/digital accessibility tools?

Not at all comfortable

Completely Comfortable

32. What access needs do you currently meet with accessibility tools? Please tick all that apply

None

Deaf / hard-of-hearing

Blind / visually impaired

Neurodivergent (e.g. ADHD, autistic)

Dyslexic

Cognitive processing difficulties

Other

33. Would you like to find out about accessibility tools for specific access needs? Please tick all that apply

None

Deaf / hard-of-hearing

Blind / visually impaired

Neurodivergent (e.g. ADHD, autistic)

Dyslexic

Cognitive processing difficulties

Other

34. What stops you from using accessibility tools? Please tick all that apply

Nothing - I use all the tools I need

I don't know where to find the tools

I don't know how to use the tools

The tools are too expensive

Time constraints

I can't find the right tool for the access need I want to support

Nothing - I don't need any accessibility tools

Other

35. During and after the COVID-19 pandemic, did you share tips and best practice for online teaching?

No

With staff inside my organisation

With staff outside my organisation

With other people not working in education

Other

36. How did you share best practices with others?

Not applicable

Informally during chats

Formal training sessions

Online information sessions like website and forums

Other

37. Do you have tips and best practice you would like to share?

Yes, I will share this through my existing networks

No

Yes, I would be willing to share this information with the InclUDE project team (please add your email address)

38. Can we send you updates from the InclUDE project, including the final results from this survey?

No

Yes (please enter email address)

39. If you have any comments about this survey for the InclUDE project team, please share them below.

Thank you for completing this survey!

If you have any questions about the survey, or the InclUDE project, please contact inclUDEProjectErasmus@gmail.com.

The data collected via this survey will comply with the provisions of the relevant applicable data protection laws. The InclUDE Project Partners commit to carefully handling the privacy and data protection of natural persons whose personal data will be provided to them in this process. The data collected will be used strictly for purposes of research in line with the above aims. The InclUDE partners will take appropriate measures to ensure your personal data is not kept for longer than necessary for the intended purposes.

Co-funded by the
Erasmus+ Programme
of the European Union

Project No: 2020-1-UK01-KA226-HE-094428
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Annex 2: About the InclUDE project and its partners

The InclUDE project aims to promote the realisation of accessible and inclusive higher education opportunities for students with special educational needs. To achieve this goal the project has three key aims:

- To provide an easy way to search and access free and open tools for online accessibility.
- To create a practical, step-by-step resource that guides lecturers through setting up online teaching sessions that are accessible to a wide range of students.
- To create guidelines of considerations that can help lecturers to make their teaching scheduling and practice more inclusive.

Project Partners:

The University of Wolverhampton is a large UK Higher Education Institution. The university aims to be a University of Opportunity – renowned for creativity and innovation – developing students and staff who are entrepreneurial, eminently employable and well connected within a research and professionally informed environment. The mission is to be an employer-focused university connected with local, national and global communities delivering opportunity and academic excellence.

The Universität Klagenfurt (AAU) is a young and innovative university, located at the intersection of three diverse cultures. Since it was founded in 1970, AAU has become firmly established as the leading institution of academic education in the Austrian province of Carinthia, and serves as an important hub for the acquisition, exchange and transfer of knowledge across the entire Alps-Adriatic Region.

UR2 is the leading Human and Social Sciences university in western France, with over 23,000 students – including 4,500 Master's students. Over 12% of the student body are international students, with a third coming from outside Europe. Internationalisation is a key word at UR2, which takes part in several higher education mobility programs in many European training and research projects.

The [European Association of Service Providers for Persons with Disabilities,](#) EASPD, is a non-profit NGO in the disability sector, that promotes the views of over 20,000 social services and their umbrella associations. They promote equal opportunities for people with disabilities through effective and high-quality service systems