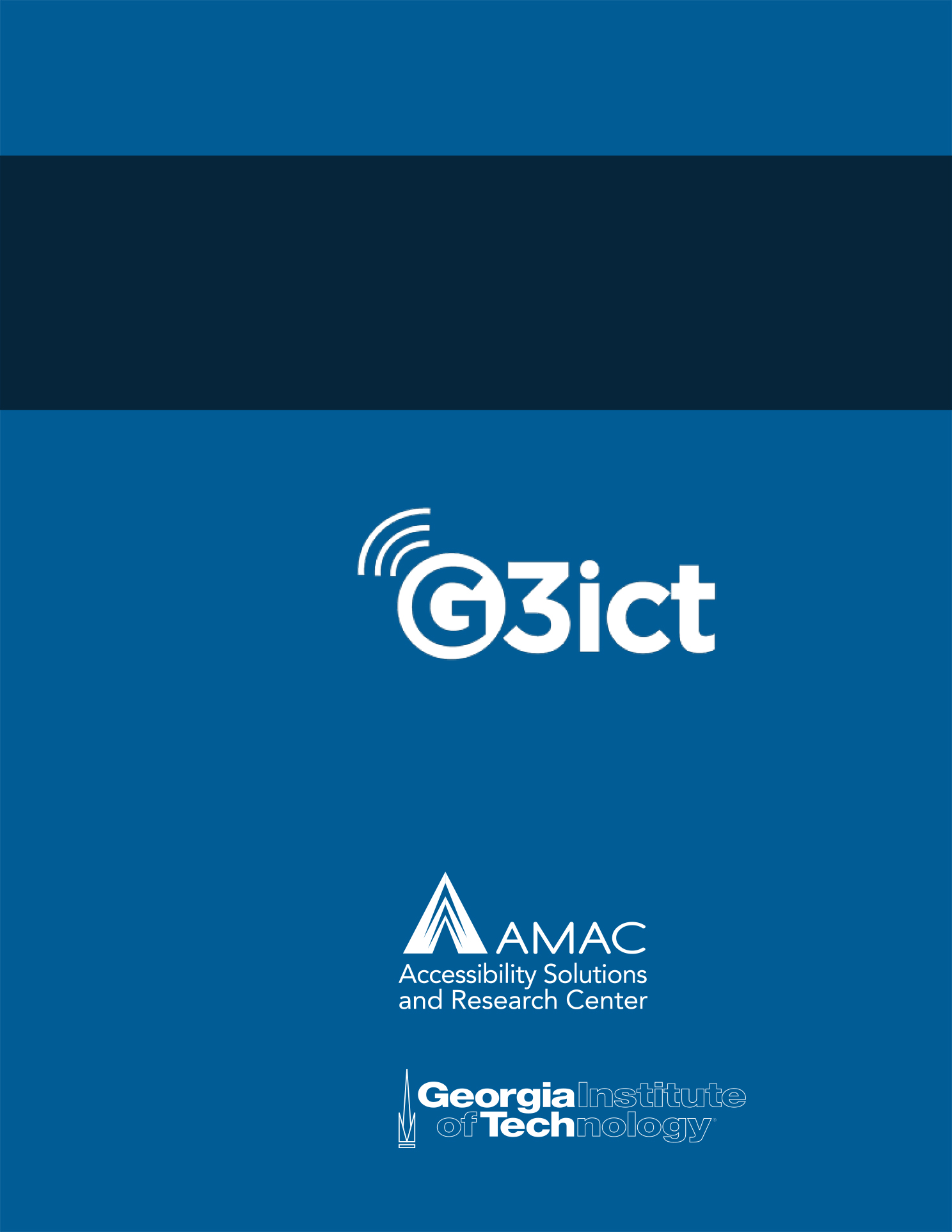
**June 2016**

# An International Survey of Accessible ICT Practices in Post-Secondary Education Institutions

**About G3ict**

G3ict – the Global Initiative for Inclusive Information and Communication Technologies – is an advocacy initiative launched in December 2006 by the United Nations Global Alliance for ICT and Development, in cooperation with the Secretariat for the Convention on the Rights of Persons with Disabilities at UN DESA. Its mission is to facilitate and support the implementation of the dispositions of the Convention on the Rights of Persons with Disabilities on the accessibility of Information Communication Technologies (ICTs) and assistive technologies.

**About AMAC Accessibility**

The mission of AMAC Accessibility Solutions and Research Center in the Georgia Tech College of Design. is to improve the human condition through equal access to technology-based and research-driven information, services and products, for individuals with disabilities. AMAC Accessibility provides services, expertise, tools and technology to empower college disability service providers, educators, corporations, non-profits, and government institutions throughout the United States and abroad to provide equal access to education, work, and life for people with disabilities of all kinds.

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**Special thanks to** G3ict and its Global Higher Education Steering Committee, and AMAC Accessibility for sharing the survey instrument with their networks of contacts.

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**Disclaimer**

The ideas and opinions expressed in this publication are solely attributed to the authors and cited sources and do not reflect those of G3ict, the Georgia Institute of Technology, the College of Design, or AMAC Accessibility Solutions and Research Center.

**Foreword**

A year ago, G3ict and AMAC Accessibility Solutions began to discuss the status of ICT accessibility in higher education institutions with several questions in mind: What do we know about ICT accessibility in universities around the world? What can we learn from them about their practices and challenges in implementing ICT accessibility? If we were to create a way to benchmark their accessible ICT practices, would we see patterns of needs for technical assistance and training supports? Is there interest in the global community to find a means of sharing information about accessible ICT practices that will accelerate their adoption? Who are the champions of ICT accessibility within universities around the world? What can we learn from one another?

In an effort to begin to address some of these questions, we developed a survey to capture some of this information, recognizing the limits of any survey tool, the lack of specific contacts to which to address the survey in most countries, and the challenges of handling the inevitable questions of who, in each university, would be the most knowledgeable person for its completion.

Given these constraints, we embarked on the global survey initiative to extract and analyze data, identify patterns of need for awareness, training and technical assistance, with a goal of reaching between 50 and 70 respondents worldwide as a starting point. Through this effort, our hope is to identify champions of ICT accessibility within higher education who value sharing information and networking with other champions around the world, and ultimately, to fuel interests and a means of continuing this effort.

The survey was initiated jointly by G3ict and the Georgia Institute of Technology, AMAC Accessibility and Research Center, College of Design, with funding from AMAC Accessibility.

G3ict and AMAC Accessibility are committed to advancing and accelerating the adoption of successful policies and practices for ICT accessibility aligned with the Convention on the Rights of Persons with Disabilities in higher education throughout the world.

The target population for the survey consists of faculty and staff from around the world who were identified as subject experts in any area of disability services or information or accessibility technologies by G3ict, the Georgia Institute of Technology, or by international representatives serving on the Steering Committee for this initiative. It has been distributed to approximately 3000 institutions of higher education from around the world.

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## Introduction

## Aim of the Study

The study purported to gather preliminary information about successful ICT accessibility practices and needs from respondents at universities around the world. A longer-range aim of the initiative is to develop a network of champions of ICT accessibility at universities, and from this network, identify strategies for continuing to expand and share information to accelerate the adoption of successful practices.

## Data Collection

Information to assess the current state of ICT accessibility at institutions of higher education in the U.S. and other nations was gathered through an online survey. The survey was distributed to members of networks at G3ict, AMAC Accessibility, and the Chronicle of Higher Education.

## Target Population

The target population for the survey consisted of faculty and staff from around the world who were identified as subject experts in any area of disability services or information or accessibility technologies by G3ict, the Georgia Institute of Technology, or by international representatives serving on the ICT Global Higher Education Steering Committee for this initiative. The survey was distributed to approximately 3000 institutions of higher education around the world. So far, 57 institutions responded to the survey.

## Survey Results

# Part I. Demographic and Background Information

## 1.1. Countries Participated

Administrators from institutions of higher education in 13 countries responded to the survey. Of those 57 responding institutions, more than half (33) were from one country, the United States. Only four countries had multiple entries.

Table 1. Total Number of Participants and Countries Represented

| **Country** | **Frequency** | **Percent** |
| --- | --- | --- |
| United States | 33 | 57.9 |
| Australia | 7 | 12.3 |
| Not specified | 5 | 8.8 |
| Canada | 3 | 5.3 |
| Brazil | 1 | 1.8 |
| Czech Republic | 1 | 1.8 |
| Egypt | 1 | 1.8 |
| Germany | 1 | 1.8 |
| Guatemala | 1 | 1.8 |
| Russian Federation | 1 | 1.8 |
| Switzerland | 1 | 1.8 |
| United Kingdom | 1 | 1.8 |
| Vietnam | 1 | 1.8 |
| **Total** | **57** | **100.0** |

Figure 1. Countries Represented

## 1.2. Institution Type

Online vs. Traditional

Of the 57 participating institutions, approximately one-third were traditional face-to-face environments, with another third were hybrid institutions offering both onsite and online education. The remaining institutions did not characterize the type of institution.

Table 2. Type of Institutions Represented: Online vs. Traditional

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Hybrid institution | 20 | 35.1 |
| Traditional education (face to face) set up | 17 | 29.8 |
| Online distance institution | 1 | 1.8 |
| *Total Responses* | *38* | *66.7* |
| Missing Responses | 19 | 33.3 |
| **Total Participants** | **57** | **100.0** |

Figure 2. Type of Institutions Represented: Online vs. Traditional

Public vs. Private

More than half of the responding institutions were public.

Table 3. Type of Institutions Represented: Public vs. Private

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Public | 32 | 56.1 |
| Private | 7 | 12.3 |
| *Total Responses* | *39* | *68.4* |
| Missing Responses | 18 | 31.6 |
| **Total Participants** | **57** | **100.0** |

Figure 3. Type of Institutions Represented: Public vs. Private

## 1.3. Student Enrollment

Two-thirds of the survey respondents reported student enrollment. The sizes ranged across the spectrum from small to very large institutions.

Table 4. Student Enrollment

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| 0 – 5,000 | 9 | 15.8 |
| 5,000 – 10,000 | 7 | 12.3 |
| 10,000 – 15,000 | 4 | 7.0 |
| 15,000 – 20,000 | 4 | 7.0 |
| 20,000 – 25,000 | 3 | 5.3 |
| 25,000 – 30,000 | 2 | 3.5 |
| Over 30,000 | 10 | 17.5 |
| *Total Responses* | *39* | *68.4* |
| Missing Responses | 18 | 31.6 |
| **Total Participants** | **57** | **100.0** |

Figure 4. Student Enrollment

## 1.4. Students Receiving Accessibility Services

Responding institutions reported a range of students receiving accessibility services from none (only one country) up to 40 percent (also only one country.) Most institutions reported five to 10 percent of students receiving services.

Table 5. Percentage of Students Receiving Accessibility Services

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| 0 | 1 | 1.8 |
| 2 | 1 | 1.8 |
| 3 | 2 | 3.5 |
| 5 | 6 | 10.5 |
| 6 | 5 | 8.8 |
| 7 | 1 | 1.8 |
| 10 | 5 | 8.8 |
| 20 | 2 | 3.5 |
| 25 | 1 | 1.8 |
| 29 | 1 | 1.8 |
| 40 | 1 | 1.8 |
| *Total Responses* | *27* | *47.4* |
| Missing Responses | 30 | 52.6 |
| **Total Participants** | **57** | **100.0** |

Figure 5. Percentage of Students Receiving Accessibility Services

## 

## 1.5. Respondents’ Primary Job Area

Approximately half of those responding to the survey hold jobs in the area of student support, with others in administration, faculty, staff and IT positions.

Table 6. Respondents’ Primary Job Area

|  |  |  |
| --- | --- | --- |
|  | Frequency | Percentage |
| Student Support | 23 | 40.4 |
| Administration | 5 | 8.8 |
| Faculty | 5 | 8.8 |
| Staff (other) | 3 | 5.3 |
| Information Technology | 2 | 3.5 |
| Legal and/or Compliance | 1 | 1.8 |
| *Total Responses* | *39* | *68.4* |
| Missing Responses | 18 | 31.6 |
| Total Participants | 57 | 100.0 |

Figure 6. Respondents’ Primary Job Area

## 

## 1.6. Respondents’ awareness of the UN Convention on the Rights of Persons with Disabilities

More than half (56.1 percent) of the survey respondents were aware of the United Nations Convention on the Rights of Persons with Disabilities, but perhaps a surprising 43.9 percent were not.

Table 7. Respondents’ Awareness of the UN Convention on the Rights of Persons with Disabilities (UNCRPD)

|  |  |  |
| --- | --- | --- |
|  | Frequency | Percent |
| Yes, I am | 32 | 56.1 |
| No, I am not | 25 | 43.9 |
| Total | 57 | 100.0 |

Figure 7. Respondents’ Awareness of the UN Convention on the Rights of Persons with Disabilities (UNCRPD)

## 

## 1.7. Respondents’ Primary Resources for ICT Accessibility

Resources the respondents of the study use are presented below.

*Professional Organizations:* ATHEN, AHEAD, Deque University, AMAC, G3ict, WebAIM, Media Access Australia (Access IQ), W3C Consortium, DAISY, Bookshare, AccessText Network, GOALS project.

*Guidelines and Standards:* EN 301 549, Section 508, ADA.

*Conferences Exhibitions:* ICCHP, ASSETS, CHI, INTERACT, Sight City.

*Others:* Journals, Web blogs, Webinars, Faculty Centers, Listservs, Newsletters from disability groups, Peers at other institutions, ICT accessibility vendors and providers, Networking with colleagues.

# 

# Part II. Organizational Structure

## 2.1. National Legislation Related to Inclusive ICT Practices in Education

More than two-thirds of the responding institutions are from nations with legislation related to inclusive ICT practices in education. Of course, the participation of the United States could account for the majority of those responses.

Table 8. Existing National Legislation Related to Inclusive ICT Practices in Education in Country of Respondent

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Yes | 39 | 68.4 |
| No | 18 | 31.6 |
| **Total** | **57** | **100.0** |

Figure 8. Existing National Legislation Related to Inclusive ICT Practices in Education in Country of Respondent

Participants reported lead ministry for the national legislation related to ICT practices in education as Department of Education, Department of Justice, Equal Opportunity Employment Commission Office for Civil Rights, and The Ministry Education and Science of the Russian Federation.

## 

## 2.2. Institutional Policy on Inclusive ICTs in Education

Slightly fewer than half of the participating institutions reported having policies on inclusive ICTs in education, but almost another third reported being engaged in developing policies at this time.

Table 9. Existing Institutional Policy on Inclusive ICTs in Education

|  |  |  |
| --- | --- | --- |
|  | Frequency | Percent |
| Yes | 25 | 43.9 |
| Not currently, but working on it | 17 | 29.8 |
| No | 15 | 26.3 |
| Total | 57 | 100.0 |

Figure 9. Existing Institutional Policy on Inclusive ICTs in Education

## 

## 2.3. Monitoring Accessible ICT Policy Actions

The number of institutions that reported monitoring ICT policy actions parallels the number that have, or are working on, ICT policies at the institutional level.

Table 10. Monitoring Accessible ICT Policy Actions

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| No | 30 | 52.6 |
| Yes | 27 | 47.4 |
| **Total** | **57** | **100.0** |

Figure 10. Monitoring Accessible ICT Policy Actions

Reported practices in monitoring ICT policy actions can be grouped under two categories as monitoring ICT policy actions through institution wide structured review practices and departmental level review practices.

Institution wide structured review processes are being managed either through office of vice president or DSS office. Participants explained these procedures as having one centralized plan of action and collaborative effort among different units such as DSS, IT, Distance Learning.

One good example, from Russia, is as below:

*“Our Center for the Deaf has representatives in most of the governmental councils concerning accessible ICT. We monitor laws and policy in this field. We take part in the most significant conferences and forums on this topic in Russia and abroad. Inside the institution we perform regular briefings and monitor the departments where deaf and hard of hearing students study.”*

Another good practice is, from UK, is as below:

*“We monitor feedback from staff and students in relation to our Accessible and Inclusive Learning policy. We also carry out an annual evaluation of all students who have disclosed a disability to the university regarding the support they may or may not have received throughout their studies.”*

Departmental level review means that policy actions are being monitored by different units within the university without having interdepartmental collaboration. Participants reported Vice-Provost for Diversity and Inclusion, SSD, ADA offices and Assistive Technology Service units taking this role.

One respondent mentioned making the policy action review process more centralized is on progress and university president and board of visitors will be in charge.

## 

## 2.4. Accommodations and Support Services Provided

With only two exceptions, the responding institutions reported offering accommodations and support services to students, and 80.7 percent offer those supports to faculty and staff. Half of the institutions offer accommodations and support services to visitors.

Table 11. Accommodations and Support Services Provided

|  |  |  |
| --- | --- | --- |
| **Category of Individuals** | **Frequency** | **Percent** |
| Students | 55 | 96.5 |
| Faculty and Staff | 46 | 80.7 |
| Visitors | 30 | 52.6 |
| Alumni | 12 | 21.1 |
| Retirees | 7 | 12.3 |
| None of the Above | 2 | 3.5 |

Figure 11. Accommodations and Support Services Provided

## 

## 2.5. Committee for Overseeing ICT Accessibility

Slightly more than one-third of the institutions reported having a committee to oversee ICT accessibility, with another 19.3 percent working toward that goal. Still, 42.1 percent have no oversight group.

Table 12. Institution-Designated Group that Oversees ICT Accessibility

|  |  |  |
| --- | --- | --- |
|  | Frequency | Percent |
| No | 24 | 42.1 |
| Yes | 22 | 38.6 |
| Not now, but working on it | 11 | 19.3 |
| Total | 57 | 100.0 |

Figure 12. Institution-Designated Group that Oversees ICT Accessibility

Some of the respondents reported that different departments/offices are collaborating for overseeing ICT accessibility and those units are: Disability Services, IT, Online Learning, Disability Resource Center, Computer Center. One of the institutions has a “University Equality and Diversity Committee”, which is overseeing Disability Committee.

One of the best practices is as below:

*“We have interdepartmental university committee on accessibility and technology. Co-chairs represent Disability Services, Computer Services, and University Counsel. The committee was formed to establish guidelines, standards, and provide monitoring of the ICT accessibility policy.”*

One respondent reported that separate entities within the college need to collaborate more than they presently do. And one respondent explained they have recently formed web accessibility committee and a close captioning task force but they don’t have a committee for overall ICT accessibility.

## 

## 2.6. Training Provided for ICT Accessibility to Faculty and Staff

The institutions were almost evenly divided between those who do and do not provide ICT accessibility training for faculty and staff.

Table 13. Training Provided for ICT Accessibility to Faculty and Staff

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Yes | 29 | 50.9 |
| No | 28 | 49.1 |
| **Total** | **57** | **100.0** |

Figure 13. Training Provided for ICT Accessibility to Faculty and Staff

Results show that half of the participating institutions are actively providing training for ICT Accessibility to faculty and staff. Trainings are provided through DSS, Network Learning Initiatives (NLI), Faculty Centers, and IT units. Mostly online trainings and webinars are offered and some participants also reported face-to-face trainings.

Content of the trainings include accessible electronic documents, creating accessible PDFs, importance of inclusive environments, captioning, legal ramifications of accessibility, e-text, web accessibility awareness, ADA requirements, and assistive technology.

One institution is currently working on a MOOC for teaching ICT accessibility, and the other mentioned AHEAD and AHG webinars are being followed. One institution is offering training not only faculty or staff but specifically to developers. Low participation rate was reported by one participant.

## 

## 2.7. Top Three Accessible ICT Training Needs

The three top accessible ICT training needs identified by the institutions were E-learning/online learning accessibility, the preparation of accessible electronic documents, and high-level overviews of ICT accessibility. Web accessibility and ICT awareness were not far behind.

Table 14. Top Three Accessible ICT Training Needs of Institutions

|  |  |  |
| --- | --- | --- |
|  | Frequency | Percent |
| E-learning/online learning accessibility | 28 | 49.1 |
| Accessible electronic documents | 25 | 43.9 |
| ICT Accessibility Overview | 23 | 40.4 |
| Web accessibility | 19 | 33.3 |
| ICT accessibility awareness | 17 | 29.8 |
| Assistive technology | 13 | 22.8 |
| Video captioning | 13 | 22.8 |
| W3C WCAG 2.0 training | 11 | 19.3 |
| Real-time remote captioning | 7 | 12.3 |
| Audio description | 5 | 8.8 |
| Other (specified) | 5 | 8.8 |
| Video relay services (remote sign language services) | 1 | 1.8 |

Figure 14. Top Three Accessible ICT Training Needs of Institutions

## 

## 2.8. Technical Support for ICT Accessibility

Almost three-fourths of the responding institutions provide technical support for ICT accessibility.

Table 15. Technical Support Provided for ICT Accessibility

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Yes, it does. | 42 | 73.7 |
| No, it does not. | 15 | 26.3 |
| **Total** | **57** | **100.0** |

Figure 15. Technical Support Provided for ICT Accessibility

## 

## 2.9. Need Assessment for Students with Disabilities

Likewise, more than three-fourths of the institutions conduct needs assessments for students with disabilities to determine the appropriate and reasonable accommodations needed.

Table 16. Need Assessment Conducted for Students with Disabilities

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Yes | 44 | 77.2 |
| No | 13 | 22.8 |
| **Total** | **57** | **100.0** |

Figure 16. Need Assessment Conducted for Students with Disabilities

Participating institutions mainly has offices such as DSS, SSD, EDRC, or Accessibility Services for conducting need assessment for students with disabilities and face-to-face interview and self-reporting instruments are the most frequently used techniques.

Mainly DSS, SSD, EDRC, Accessibility Services, DRC are taking major role in conducting need assessment and determining appropriate and reasonable accommodations though individual interview with student. Some of the institutions require documentation of disability.

Eligible staff working at the aforementioned offices are conducting interviews and preparing individual plans for students. Occupational therapist, clinician, and therapist were mentioned as titles of these eligible staff.

One good practice is as below:

*“Our students with disabilities meet with a counselor to determine needs on an individual basis. Once determined the student gets a Classroom Assistance Letter to make the professor aware of the accommodation and other appropriate parties are notified (the Learning Center for classroom testing, Special Services Technician for alternate format books, etc.”*

One participant reported that “accommodations are provided based on guesswork and anecdote, or the relatively arbitrary strictures of the law.”

## 

## 2.10. Involvement of Individuals with Disabilities in Accessible ICTs Procedures

Slightly more half of the institutions involve individuals with disabilities in planning, implementing, evaluation, and/or monitoring the accessibility of ICTs.

Table 17. Involvement of Individuals with Disabilities in Accessible ICTs Procedures

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Yes | 31 | 54.4 |
| No | 26 | 45.6 |
| **Total** | **57** | **100.0** |

Figure 17. Involvement of Individuals with Disabilities in Accessible ICTs Procedures

Inclusion of people with disabilities in planning, implementing, evaluating, and monitoring accessibility of ICTs have been mostly through gathering feedback from them throughout the year. Some institutions are conducting annual survey investigating if students with disabilities are satisfied with accessibility services on the campus. Some of the institution reported that students with disabilities are evaluating accessibility of software and hardware and providing suggestions on issues. Employing people with disabilities in relevant offices and employing students with disabilities on part-time base were also mentioned.

One of the best practices reported is as below:

*“Disabled students and representatives from the Students' Association sit on all relevant committees.”*

## 

## 2.11. Specific Positions for ICT Accessibility

More than half of the institutions report having specific positions for ICT accessibility, but 42.1 percent do not.

Table 18. Existing Positions for ICT Accessibility

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Yes | 33 | 57.9 |
| No | 24 | 42.1 |
| **Total** | **57** | **100.0** |

Figure 18. Existing Positions for ICT Accessibility

Specific positions reported by participating institutions are listed below:

* Accessibility Advisory Support Specialist / Program Manager / Specialists / Auditor / Coordinator
* Assistive Technology Coordinator / Specialist / Instructor
* Technology Advisor Disability Information Officer
* Alternative Media Specialist
* Disability Services Coordinator
* Web Accessibility Specialist
* IT Specialist (partially responsible)
* Webmaster (partially responsible)
* Director of information systems (responsible for the accessible technology initiative)
* Member of Audio-Visual Services department in the university

## 

## 2.12. Including Accessibility in ICT Procurement Process

More than half of the institutions include accessibility in procurement policies and practices, but a significant 43.9 percent have not done so.

Table 19. Including Accessibility in ICT Procurement Process

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| No, it is not. | 32 | 56.1 |
| Yes, it is. | 25 | 43.9 |
| **Total** | **57** | **100.0** |

Figure 19. Including Accessibility in ICT Procurement Process

# Part III. Inclusive ICT Infrastructure

## 3.1. ICT Accessibility Standards and Guidelines Used

When asked about ICT accessibility standards or guidelines being used at institutions, institutions had some surprising responses. Although all would be expected to use WCAG 2.0, the international standard for web accessibility, only 56 percent reported doing so. Even more surprising, given that 33 of the survey participants were from the U.S., only 19 indicated that they use the guidelines of Sec. 508, which are specifically applicable to education.

Table 20. ICT Accessibility Standards or Guidelines Used at the Institutions

|  |  |  |
| --- | --- | --- |
| **Standard/Guideline** | **Frequency** | **Percent** |
| WCAG 2.0 Web Accessibility | 28 | 56 |
| Sec. 508 of Rehabilitation Act | 19 | 38 |
| DAISY Consortium Guidelines | 3 | 6 |
| Internal Institutional Accessibility Guidelines or Standards | 17 | 34 |
| Other accessibility guidelines | 15 | 30 |

Figure 20. ICT Accessibility Standards or Guidelines Used at the Institutions

## 3.2. Strategies, Challenges, Lessons Learned, and Suggestions for Incorporating Accessibility into ICT

*Challenges*

One of the biggest challenge participants reported was “buy in” from executive management. Majority of the respondents mentioned this issue and added that accessibility has not been taken seriously by senior management group and that it is seen as a cost that needs to be minimized.

Another challenge reported by many participants is not having a formal procurement process for accessible ICT. It has been reported that accessibility is not addressed prior to purchasing and accessibility issues are attempted to be fixed afterwards. One participant provided below explanation about difficulties that this approach creates:

*“No formal vendor process to ensure accessibility is addressed in contracts prior to purchasing. The default action of the institution is "Disability Services" can handle fixing this. With a staff of only 2 full time employee - and only one person with any technology background, not even IT background, this is not a feasible means of ensuring equal and equitable access to all programs, services, and activities.”*

One participant highlighted that not having specific guidance from the federal government caused his unit use and interpret industry standards. The exact opposite situation was also reported as a challenge; one participant mentioned that it is very difficult to influence vendors to adhere to institutional standards.

Another common challenge most of the participants mentioned is attitudes toward accessibility. Participants highlighted that accessibility is not taken seriously and importance of universal design is not understood.

Finally, textbooks written by faculty, not having audio description, and expensive prices for braille books are also mentioned as challenges.

*Lessons Learned*

Lessons learned provided by the participants are listed below:

* Communicating and educating the university community is an important and ongoing task
* Tasks must be implemented into existing workflows to be successful.
* *“It has been more difficult to get faculty buy-in, but by using hands-on trainings where we show them how easy it is to do, we are slowly getting them onboard. Online Learning is imposing deadlines that help as well.”*

*Suggestions*

Suggestions provided by the participants are listed below:

* Leadership support (top level buy-in) is vital to successful implementation of company-wide program.
* A central committee comprised of university leadership is important for making decisions, monitoring progress, and enforcing policy.
* Developing a broad, flexible policy statement backed by concrete standards and guidelines.
* Providing university members with guidelines and checklists and setting timelines for remediation of different areas (computer labs, classrooms, websites, etc.).
* Establishing who is responsible for making content and/or resources accessible.
* Designating appropriate resources to maintain and support ICT access is crucial.
* Developing top-down plans and strategies with specific goals for continuous improvements is necessary.
* Developing measurable objectives with actual set follow-up intervals
* Gathering feedback from disability users' groups

## 

## 3.3. Accessibility ICT Services, Products and Systems Provided to Students and Staff with Disabilities

An examination of ICT services, products and systems provided to students and staff revealed that a majority of the responding institutions have assistive technology, accessible learning management course platforms, accessible document conversion, and accessible computer labs, but fall short in other key categories. Only one-third report accessible registration platforms – almost the starting point for students toward an accessible education. Fewer than one-third reported accessible emergency notification systems, and only 20 percent reported accessible health systems. Accessibility services needed by people with some specific disabilities were even less available.

Table 21. Accessibility ICT Services, Products and Systems Provided to Students and Staff with Disabilities

|  |  |  |
| --- | --- | --- |
|  | Frequency | Percent |
| Assistive technology | 44 | 88 |
| Accessible computer labs | 28 | 56 |
| Accessible electronic document conversion | 27 | 54 |
| Accessible learning management course platform | 26 | 56 |
| Accessible library environment (journals, articles, manuscripts) | 22 | 44 |
| Video captioning | 20 | 40 |
| Real-time remote captioning | 20 | 40 |
| Accessible registration platform | 16 | 36 |
| Accessible teleconferencing system | 15 | 30 |
| Accessible emergency notifications | 15 | 30 |
| Accessible media players | 14 | 28 |
| Accessible collaborative learning environments | 12 | 24 |
| Accessible health services | 10 | 20 |
| Accessible hybrid learning environments | 9 | 18 |
| Accessible kiosks | 6 | 12 |
| Audio description | 5 | 10 |
| Accessible studios | 4 | 8 |
| Accessible texting environment | 4 | 8 |

Figure 21. Accessibility ICT Services, Products and Systems Provided to Students and Staff with Disabilities

## 

## 3.4. Responding Accessibility Needs of the Students

Fewer than ten percent of the respondents rated their institutions as meeting the accessibility needs of students “very well.” Slightly more than one-third felt their needs were met “fairly well.”

Table 22. Competency Level of Responding Accessibility Needs of the Students

|  |  |  |
| --- | --- | --- |
|  | Frequency | Percent |
| Fairly well | 21 | 36.8 |
| Neither well nor poorly | 9 | 15.8 |
| Not very well | 9 | 15.8 |
| Not well at all | 6 | 10.5 |
| Very well | 5 | 8.8 |
| *Total responses* | *50* | *87.7* |
| Missing responses | 7 | 12.3 |
| Total Participants | 57 | 100.0 |

Figure 22. Competency Level of Responding Accessibility Needs of the Students

## 

## 3.5. Timeliness of Student Accommodation Services

Two-thirds of the survey respondents believe that their institutions provide accommodations to students with disabilities within a timeframe that enables them to keep pace with their nondisabled peers.

Table 23. Timeliness of Student Accommodation Services

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percent** |
| Agree | 20 | 35.1 |
| Strongly agree | 18 | 31.6 |
| Neither agree nor disagree | 8 | 14.0 |
| Disagree | 2 | 3.5 |
| Strongly disagree | 2 | 3.5 |
| *Total responses* | *50* | *87.7* |
| Missing responses | 7 | 12.3 |
| **Total Participants** | 57 | 100.0 |

Figure 23. Timeliness of Student Accommodation Services

## 3.6. Support for Developing Universally Designed Courses

Fewer than half of the responding institutions report support for universally designed courses, even though universal design has been demonstrated to benefit all.

Table 24. Institutional Support for Developing Universally Designed Courses

|  |  |  |
| --- | --- | --- |
| **Response** | **Frequency** | **Percent** |
| No, it does not | 28 | 49.1 |
| Yes, it does | 22 | 38.6 |
| *Total responses* | *50* | *87.7* |
| Missing responses | 7 | 12.3 |
| **Total Participants** | **57** | **100.0** |

Figure 24. Institutional Support for Developing Universally Designed Courses

## 

## 3.7. Courses Taught Related to Universal Design for Learning, ICT Accessibility, and/or Web Accessibility

Slightly more than one-fourth of the responding institutions teach courses related to universal design for learning, ICT accessibility or web accessibility. Nearly one-half do not.

Table 25. Courses Taught Related to Universal Design for Learning, ICT Accessibility, and/or Web Accessibility

|  |  |  |
| --- | --- | --- |
| **Response** | **Frequency** | **Percent** |
| No, it does not | 27 | 47.4 |
| Yes, it does | 16 | 28.1 |
| I’m not sure | 8 | 14.0 |
| *Total responses* | *51* | *89.5* |
| Missing responses | 6 | 10.5 |
| **Total Participants** | 57 | 100.0 |

Figure 25. Courses Taught Related to Universal Design for Learning, ICT Accessibility, and/or Web Accessibility

Courses taught at the participating institutions are listed below:

* Dept. Computer Science: Course on Accessible Documents (Master level)
* Dept. of Architecture: Accessibility for Architects
* Dept. of Education Science: Seminars on Inclusion in Educations
* Education and Rehabilitation Sciences classes teach about universal design and assistive technology
* Computer and Information Science classes incorporate accessibility into technical programming projects
* The concept of universal design was introduced in the K-12 teacher program that prepares teachers to serve children with learning disabilities

Part IV. Monitoring

## 4.1. Services and Products Monitored

The result related to monitoring services, products and environments for accessibility roughly parallel those for existing accessibility, with the same categories (assistive technology and accessible computer labs) being commonly monitored, but the same gaps in services receiving low rating in the monitoring realm.

Table 26. Services and Products Monitored

|  |  |  |
| --- | --- | --- |
| Services, Products or Systems Monitored for Accessibility | Frequency | Percent |
| Accessible registration platform | 11 | 23.9 |
| Accessible learning management course platform | 18 | 39.1 |
| Accessible collaborative learning environments | 7 | 15.2 |
| Accessible teleconferencing system | 6 | 13.0 |
| Accessible studios | 3 | 6.5 |
| Accessible hybrid learning environments | 7 | 15.2 |
| Accessible electronic document conversion | 9 | 19.6 |
| Assistive technology | 34 | 73.9 |
| Accessible computer labs | 22 | 47.8 |
| Accessible media players | 7 | 15.2 |
| Video captioning | 13 | 28.3 |
| Real-time remote captioning | 10 | 21.7 |
| Audio description | 3 | 6.5 |
| Accessible texting environment | 2 | 4.3 |
| Accessible library environment (journals, articles, manuscripts) | 13 | 28.3 |
| Accessible health services | 3 | 6.5 |
| Accessible emergency notifications | 10 | 21.7 |
| Accessible kiosks | 3 | 6.5 |
| Exclusive/None of the above | 7 | 15.2 |

Figure 26. Services and Products Monitored

## 4.2. ICT accessibility Monitoring Procedures

Participating institutions monitor ICT accessibility in various ways including annual audits and reports, gathering feedback from students and staff, and self-monitoring. Annual audits are conducted by staff working in relevant offices such as DSS, Center for Equal Access, and Assistive Technology Office. Similarly, formal and informal feedback is gathered from students and stuff throughout the year by related unit stuff. E-mail surveys, face-to-face interviews are used to measure progress and address challenges. Departments conducting self-monitoring are making sure that services they are providing is accessible. No institution-wide collaboration was mention for departmental level monitoring. Manual and automated accessibility testing techniques are being utilized by institutions and sometimes ad-hoc evaluations are conducted.

One good practice to monitor accessibility of the Learning Management System and courses are provided below:

*“For LMS, we are actively working on the Canvas LMS infrastructure with the vendor to fix what we perceive as fundamental accessibility issues. We are working with other Assistive Technology professionals (ATHEN Members) on a Canvas Accessibility Working Group. For the course accessibility, we are working to improve UDOIT an open source LTI (extension) to Canvas to have faculty validate (an/or fix) their course content placed into Canvas for their classes.”*

One opposite practice was reported as below:

*“There is no campus-wide monitoring and most departments/faculty are not even aware of the need to evaluate for accessibility or to create materials with accessibility in mind.”*

## 

## 4.3. Strategies, Challenges, Lessons Learned, and Suggestions for Conducting Accessibility Monitoring for the ICT Services

*Strategies*

One of the participants maintained that “proactive approach” is very helpful in terms of monitoring ICT accessibility. He defined proactive approach as taking accessibility into consideration in the beginning of the process, starting from procurement stage, not at the end of the process.

*Challenges*

Challenges provided by the participants are listed below:

* In most cases the biggest challenge is not being included at all.
* We are only aware of an issue if a user reports it.
* Funding / economic barriers
* The instructors rarely understand where the accessibility people are coming from, and the accessibility people rarely understand what the instructors are trying to achieve.
* Our challenge is to get all people interested and committed to this.
* Bureaucratic process to refocus on how we can best support students to reach their learning outcomes via accessible ICT services.
* Really tricky to find an “owner” of these processes. Everyone agree, but no one want to take on responsibility

*Lessons Learned*

Lessons learned provided by the participants are listed below:

* It involves culture change.
* We quickly found out that having a team conduct these reviews was the best policy for accuracy.

*Suggestions*

Suggestions provided by the participants are listed below:

* Designate accessibility liaisons in each organizational unit who are responsible for completing annual surveys of ICT services.
* The use of automated tools to monitor website accessibility must be confirmed with time-consuming manual checks.
* Communicate annual report with top university leadership.
* Standardize annual report content so progress can be measured over time.
* Increase awareness campus wide.
* Collaboration between other departments and the office of disability support as well as the 504 coordinators needs to be implemented in a way so that all accessibility issues are taken into consideration.
* A team of individuals whose responsibility for monitoring ICT services should be established.
* More attention to overall universal design learning principles required.
* Resourcing and prioritizing the needs of the excluded ahead of the mainstream is a must.

One example for monitoring ICT accessibility is as below:

*“The most useful way of monitoring ICT accessibility is public reports, conferences, forums and showcases on this topic. We participate in all of the M-Enabling Summits in Washington DC - it was very helpful, as long as other conferences. Last year we helped in organizing the first M-Enabling Summit in Russia and also get a lot of experience and valuable contacts and information.”*

Another good example is:

*“Top-Down (BOV, University President, Provost, ITC) directed and supported by colleges, directors, and departments heads has the best chance of success. This requires a formal plan, measurable objectives, scheduled intervals for reporting milestones, transparency, and a trust that it will succeed or be continuously improved from the bottom.”*

# Appendixes

## Appendix A – Invitation Letter

This survey is initiated jointly by G3ict and the Georgia Institute of Technology, AMAC Accessibility and Research Center, College of Design, with funding from AMAC Accessibility. The objective of the survey is to identify the gaps and needs of post-secondary education and their commitments as measured by regulations, policies and programs, their capacity to implement inclusive environments, and their outcomes (accessibility performance and available services).

G3ict and AMAC are committed to advancing and accelerating the adoption of successful policies and practices for ICT accessibility aligned with the Convention on the Rights of Persons with Disabilities in higher education throughout the world. G3ict is an advocacy initiative launched in December 2006 by the United Nations Global Alliance for ICT and Development, in cooperation with the Secretariat for the Convention on the Rights of Persons with Disabilities at the UN’s Department of Economic and Social Affairs (DESA). Its [mission](http://g3ict.org/about/mission) is to facilitate and support the implementation of the dispositions of the Convention on the Rights of Persons with Disabilities on the accessibility of Information Communication Technologies (ICTs) and assistive technologies. G3ict relies on an international network of ICT accessibility experts to develop and promote good practices, technical resources, and benchmarks for ICT accessibility advocates around the world.  It is incorporated as a nonprofit organization in the state of Georgia, USA, and headquartered in Atlanta.

The target population for the survey consists of faculty and staff from around the world who were identified as subject experts in any area of disability services or information or accessibility technologies by G3ict, the Georgia Institute of Technology, or by international representatives serving on the Steering Committee for this initiative. It is being distributed to approximately 50 – 75 institutions of higher education from around the world.

The survey will require approximately one hour of your time. Your participation in the survey is entirely voluntary and you may terminate your participation in the survey at any time. AMAC requests permission to contact you by phone, SKYPE or email to clarify your responses to open-ended questions if necessary.

Survey results will be used to benchmark the gaps and needs identified by respondents. The results of the survey will be used to develop a White Paper which will be presented at the M-Enabling Conference in Washington, DC June 13-14, 2017. It is our hope that these efforts – the survey, the White Paper, and participation of respondents at the M-Enabling Conference – will bring together individuals who are the accessibility champions within their post-secondary institutions to share and learn from other champions from around the world. At the M-Enabling Conference, we want to develop a roadmap to replicate this process within continents and countries around the world as one means of accelerating and advancing the implementation of the CRPD in higher education.

We kindly request you complete the survey no later than (3 weeks from distribution date).

For questions about the intent of this survey, questions, or clarifications, respondents may contact Zerrin Ondin at [zondin6@gatech.edu](mailto:zondin6@gatech.edu).

## Appendix B – Survey

**PART I. Organizational Structure**

1. Does your country have national legislation related to inclusive ICT practices in education?

* Yes, it does.
  + Please specify the lead ministry.
* No, it does not.

1. Are you familiar with the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)?

* Yes, I am.
* No, I am not.

1. Does your institution have an “Inclusive ICTs in Education” policy?

* Yes, it does.
* No it does not have it currently but we are working on it. (please skip to question 5)
* No, it does not. (please skip to question 5)

1. Does your institution monitor ICT policy actions?

* Yes, it does.
  + Please explain how (optional /text box frequency /responsible office)
* No, it does not.

1. Does your campus provide accommodations and support services to:

* Students
* Faculty and Staff
* Visitors
* Alumni
* Retirees
* All of the above
* None of the above

1. Does your institution have a committee for overseeing ICT accessibility?

* Yes, it does.
  + Please provide more information about the committee (optional /text box)
* No it does not have a committee in place but we are working on it.
* No, it does not.

1. Does your institution provide faculty and staff trainings for ICT accessibility?

Yes, it does.

Please provide more information about training provided (optional /text box)

No, it does not.

1. Please specify top three training needs of your institution in terms of accessible ICT.

* ICT accessibility overview
* Web accessibility
* E-Learning / online learning accessibility
* W3C WCAG 2.0 training
* Accessible electronic documents
* Assistive Technology
* Video captioning
* Video relay services (Remote sign language support)
* Real-Time Remote Captioning
* Audio description
* ICT Accessibility Awareness
* Other, please specify (text box)

1. Does your institution provide technical support for ICT accessibility?

* Yes, it does.
* No, it does not.

1. Does your institution conduct need assessments for students with disabilities to determine the appropriate and reasonable accommodations needed?

* Yes, it does.
  + Please provide more information about the assessment process (optional/text box)
* No, it does not.

1. Are persons with disabilities in your institution involved in planning, implementing, evaluating and/or monitoring the accessibility of ICTs?

* Yes, they are.
  + Please provide more information about the involvement process and their roles (optional/text box)
* No, they are not.

1. Are there any specific positions for ICT accessibility in your institution?

* Yes, there are.
  + Please specify who is funding these positions.
* No, there are not.

1. Is accessibility part of the ICT procurement policies and practices in your institution?

* Yes, it is.
* No, it is not.

**PART II. Inclusive ICT Infrastructure**

1. Please indicate which of the ICT accessibility conformance standards / guidelines below are being used in your institution.

* Web Content Accessibility Guidelines (WCAG) 2.0 web accessibility standards / ISO/IEC 40500:2013
* Section 508 of the Rehabilitation Act
* European Standardization Organization (ESOs) / Mandate M 376 EN 301 549
* DAISY Consortium guidelines and specifications
* Internal institutional accessibility standards / guidelines
* Other accessibility standard(s) / guidelines, please specify (textbox)

1. Please share strategies, challenges, lessons learned, and suggestions for incorporating accessibility into ICT in your institution. (textbox)
2. Which of the accessibility ICT services, products and systems below are provided to students and staff in your institution?

* Accessible registration platform
* Accessible learning management course platform
* Accessible collaborative learning environments
* Accessible teleconferencing system
* Accessible studios
* Accessible hybrid learning environments
* Accessible electronic document conversion
* Assistive Technology
* Accessible computer labs
* Accessible media players
* Video captioning
* Real-Time Remote Captioning
* Audio Description
* Accessible texting environments
* Accessible library environments (i.e. journals, articles and manuscripts)
* Accessible health services
* Accessible emergency notification environment
* Accessible kiosks

1. How well do you think you meet the accessibility needs of students at your university?

* Very good
* Fairly good
* Neither good nor bad
* Not very good
* Not good at all

1. Students with disabilities receive accommodations within a timeframe that enables them to keep up with their peers.

* Strongly agree
* Agree
* Neither agree nor disagree
* Disagree
* Strongly disagree

1. Does your institution support and promote faculty to develop universally designed courses?

* Yes, it does.
* No, it does not.

1. Does your institution teach courses related to universal design for learning, ICT accessibility, and/or web accessibility?

* Yes, it does.
  + Please share course titles or subject areas.
* No, it does not.
* I’m not sure.

1. Please describe a situation where ICT accessibility was successfully implemented.

* **Accessible labs** (computer labs that have accessibility features and have assistive technology tools installed) (textbox for explanation)
* **Accessible course design** (practices in designing and integrating the ICTs into educational environment so is making it accessible) (textbox for explanation)
* **Accessibility initiative (**initiatives for supporting accessible ICT practices, awareness raising campaigns that have the explicit aim of developing positive attitudes towards disability) (textbox for explanation)
* **Research and Development projects** (to lead to new accessible ICT tools that are applicable to learners with disabilities?) (textbox for explanation)
* **Mentorship program** (specifically for students with disabilities to became familiar with ICT applications)(textbox for explanation)

**PART III. Monitoring**

1. Which of the services, products and environments below are being monitored internally in terms of accessibility in your institution?

|  |
| --- |
| **Services** |
| Accessible registration platform |
| Accessible learning management course platform |
| Accessible collaborative learning environments |
| Accessible teleconferencing system |
| Accessible studios |
| Accessible hybrid learning environments |
| Accessible electronic document conversion |
| Assistive Technology |
| Accessible computer labs |
| Accessible media players |
| Video captioning |
| Real-Time Remote Captioning |
| Audio Description |
| Accessible texting environments |
| Accessible library environments (i.e. journals, articles and manuscripts) |
| Accessible health services |
| Accessible emergency notification environment |
| Accessible kiosks |

1. Please highlight how ICT accessibility is monitored? (textbox)
2. Please highlight strategies, challenges, lessons learned, and suggestions for conducting accessibility monitoring for the ICT services. (textbox)

**PART IV. General and Contact Information**

1. Contact information

* Institution Name
* Institution Location (City / Country)
* Name (optional)
* Title (optional)
* E-mail address (optional)

1. What is your job’s primary area of focus?

* Administration
* Legal and/or Compliance
* Faculty
* Student Support
* Information Technology
* Procurement
* Staff (other)

1. How would you rate your current ICT accessibility knowledge?

* I have no knowledge
* I have an awareness
* I have some knowledge
* I have deep knowledge
* I am an expert

1. What primary resources do you use or follow with regards to ICT Accessibility? (textbox)
2. Which of the below options describes your institution best?

(check all that apply)

**A)**

4-year institution

teaching university

research university

2-year institution

technical / vocational institution

community college

**B)**

Online distance institution

Hybrid institution

Percentage of the courses available online (estimate)

**C)**

Public

Private

1. What is the estimated student enrollment of your institution?

* 0 – 5,000
* 5,000 – 10,000
* 10,000 – 15,000
* 15,000 – 20,000
* 20,000 – 25,000
* 25,000 – 30,000
* Over 30,000

1. Please provide the percentage of students requiring accessibility services in your institution if this information is available to you. (textbox)
2. Is there anything else about your institutions ICT accessibility practice that you would like to share? (textbox)
3. Would you like to participate additional surveys related to ICT Accessibility?

* Yes
  + Please make sure you share your email address.
* No

## An IRB approval letter addressed to Dr. Christopher Lee.Appendix C – IRB Approval Letter