



Inclusion 4EU

Towards a Framework of Inclusive
Software Design Process and Practices



Erasmus+

T
DUBLIN
OLLSCOIL TEICNEOLAÍOCHTA
BHAILE ÁTHA CLIATH
TECHNOLOGICAL
UNIVERSITY DUBLIN

Inclusion4EU partners

- TU Dublin (Lead), Informatics Europe, Telecom Sud Paris, Mälardalen University, SAP, St John of God Community Services.



Inclusion4EU - Aim

- To create tools and resources to enable ***computer science lecturers and industry practitioners*** incorporate human-centred inclusive software design into their teaching and work practices
- Considering diverse users in software design not only leads to a better product but also fosters a more inclusive, fair, and innovative technological landscape.

Motivation

- Digital inclusion is underpinned by legislation
 - Legal mandate
 - Existing legislation and the forthcoming EU Accessibility Act
 - Accessibility is included as a transversal competence in the EU e-Competence Framework for ICT Professionals
 - Higher education and industry need to respond

Inclusion4EU Project Phases

- Phase 1: Explore and Understand
- Phase 2: Co-Design for Active Inclusion
- Phase 3: Training programmes for academics and industry practitioners

- **All project outputs hosted on the project platform**

[Inclusion4EU – Co-Design for Inclusion in Software Development Design \(ascnet.ie\)](http://ascnet.ie)

Inclusion4EU: European Survey

- Existing Competencies in the Teaching of Inclusive Design in Informatics programmes
- Responses from 48 European Higher Education Institutions
- Results are a comprehensive insight into teaching practices for Inclusive Design in Informatics programmes
 - Will inform the development of new curricula and learning resources as part of the Inclusion4EU project

Inclusion4EU: European Survey

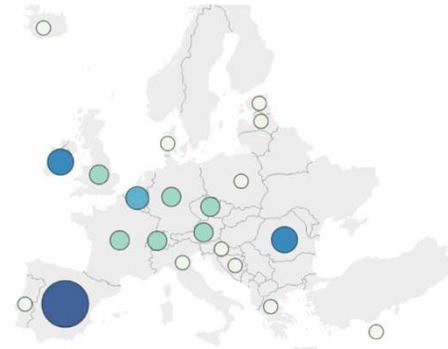
- Twenty-three countries were represented among the 48 respondents that took part in this survey

Does your institution teach Inclusive Design as part of any Informatics or related programmes?

Yes: 24, No 24

What country is your institution primarily based in?

Value ○ 1 ○ 4 ○ 10



Map: Inclusion4EU • Created with Datawrapper

When inclusive design is taught

- Over 90% of the respondents rate the teaching of Inclusive design as either being “Important” or “Very Important”
- People teaching Inclusive design come from a wide variety of backgrounds, with many coming from multiple disciplines

What is the background of the people teaching Inclusive Design?



Chart: Inclusion4EU • Created with Datawrapper

When inclusive design is taught

- Half of the respondents (50%) indicated that students are exposed to these topics for 1 to 5 hours per semester, while only 8.5% reported 20+ hours

How many hours per semester would you say is an average student exposed to Inclusive Design topics?

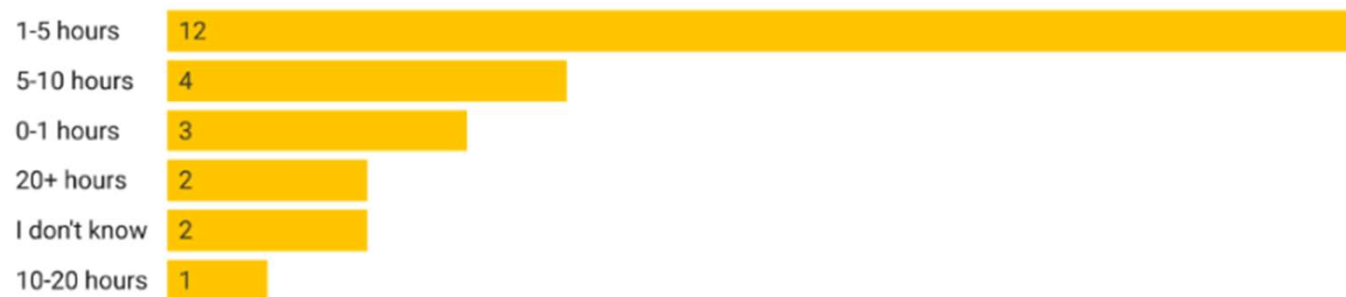


Chart: Inclusion4EU • Created with Datawrapper

When inclusive design is taught

Do you think the following would improve the extent to which Inclusive Design is taught in your institution?

Strongly Disagree Disagree Neutral Agree Strongly Agree

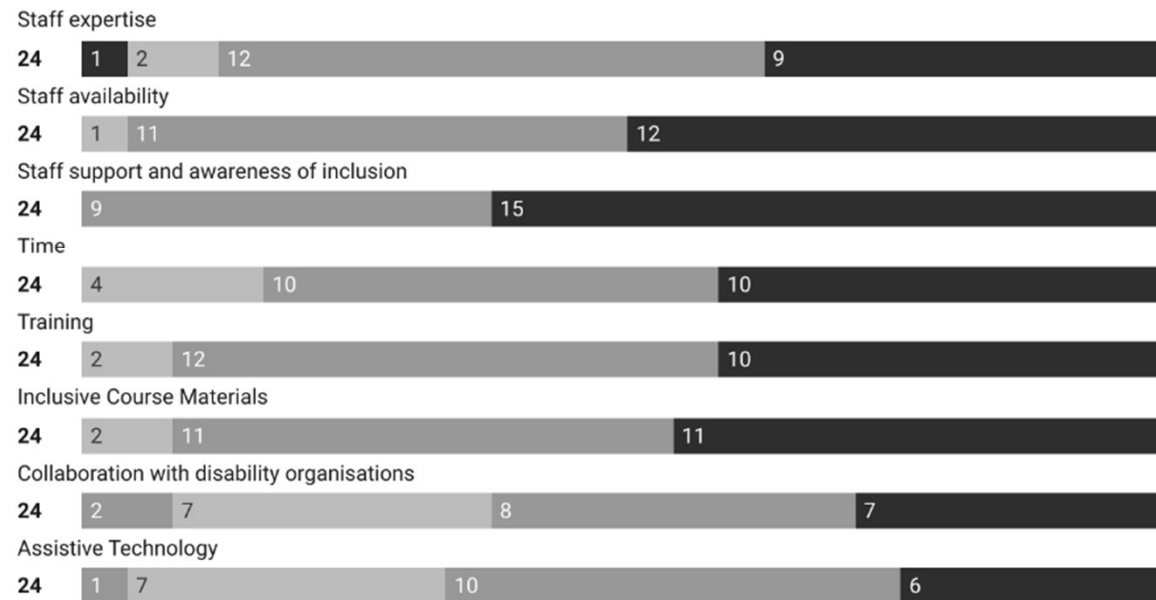
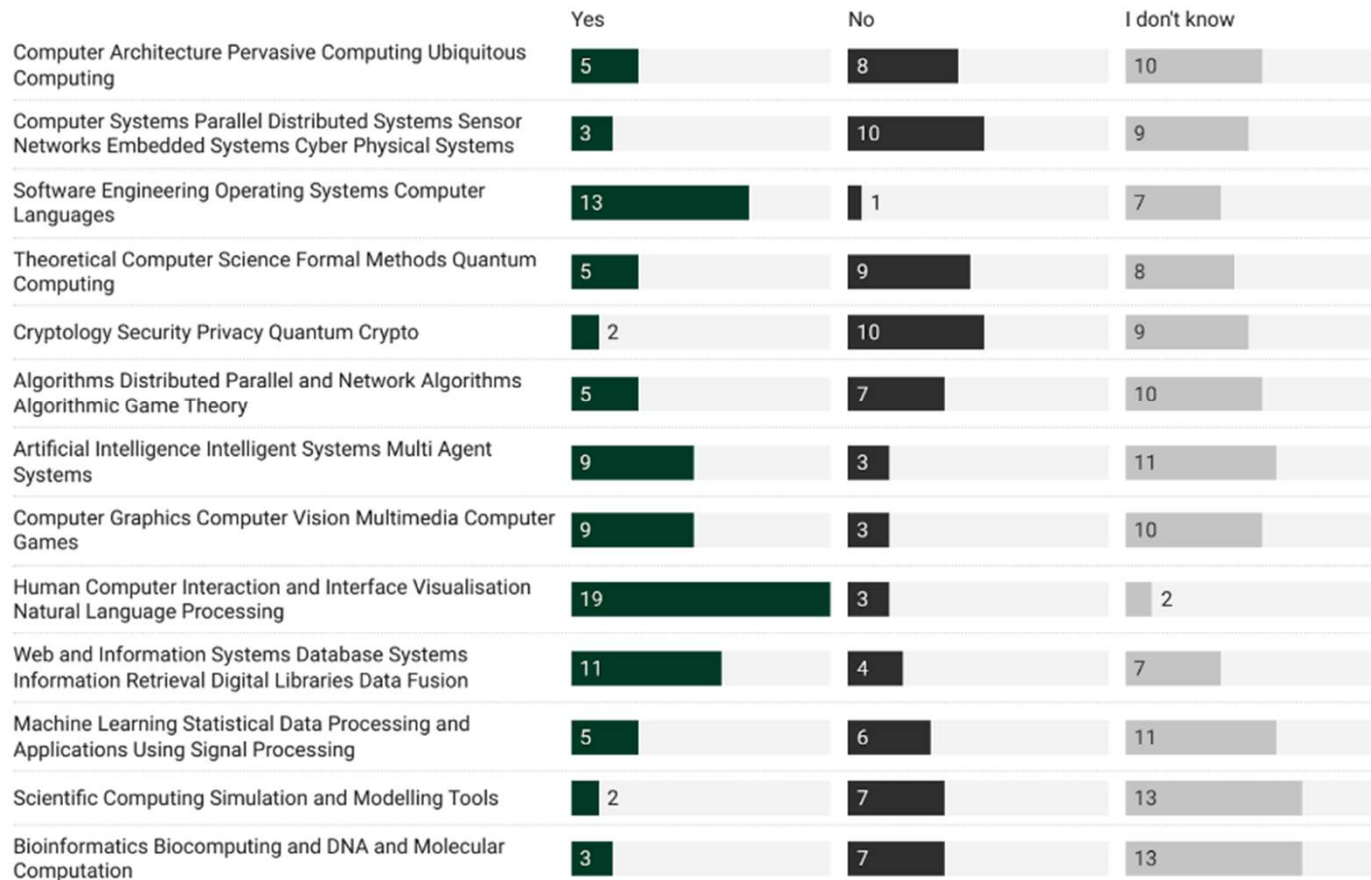


Chart: Inclusion4EU - Created with Datawrapper

When inclusive design is taught

Within which disciplines is Inclusive Design taught?

■ Yes
 ■ No
 ■ I don't know



When inclusive design is not taught

- Over 50% of respondents consider teaching Inclusive Designs as either being “Important” or “Very Important”.
 - Equips future technology professionals to develop applications that address diverse user needs, ensuring accessibility and inclusivity.
 - Helps graduates navigate ethical challenges and meet legal requirements
 - Informatics professionals have an ethical duty to consider the societal impact of their work.
- Over 50% of respondents stated that there is an issue with staff expertise and availability
- 80% stated that their programmes are too busy to incorporate inclusive design
- One third of respondents believe that Inclusive Design is not relevant to the modules they teach
- Over 60% of respondents stated that they have never considered adding inclusive design into their programmes.

Recommendations

- Teaching and Assessment Content.
 - Off-the-shelf content that makes it easy for any Computer Science lecturer to deliver lessons on the topic of Inclusive Design, including content that discusses the general impact that computers are having on society, and specifically the inclusion dimension
- Software Design Integration.
 - content that explores the broad area of the design and development of software, and where Inclusive Design fits into that process.

Recommendations

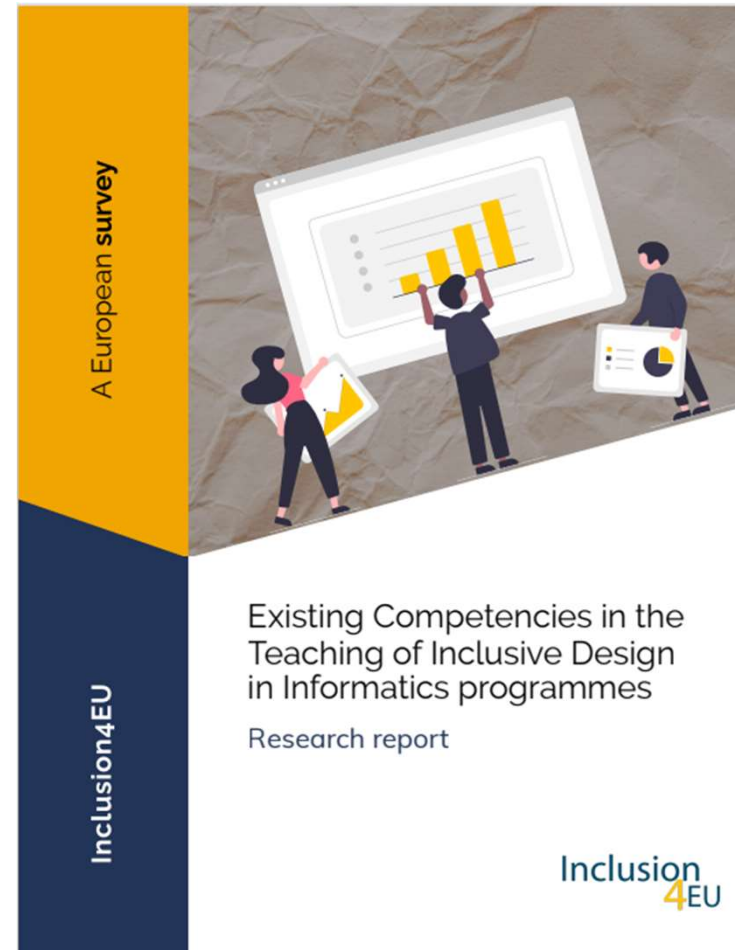
- Diverse Recruitment.
 - recruitment of more diverse people in all roles within the organisation, including students, researchers, administrators, and managers
- Create Awareness
 - Artefacts including creating posters that highlight aspects of Inclusive Design such as accessibility standards, inclusive language, and inclusive methodologies

Recommendations

- Engagement with Diverse Communities
 - People with diverse needs, and organisations that aid them, should be invited to give guest lectures and collaborate with students on building more inclusive technology solutions
- Training
 - Staff at all levels of the organisation should be encouraged to participate in training about inclusion and accessibility.

Survey Report

- Link to the full survey here:
- [Research – Inclusion4EU](#)



Conclusion

- The Inclusion4EU project is developing a repository of practical resources for academics and industry practitioners to incorporate into their practice
 - Reports, case studies, validated interventions
 - Recorded and tested tacit knowledge gained from real life co-design experiences
 - Collection of methods successfully applied and validated by real users
- Please feel free to use any of our resources:
[Resources – Inclusion4EU \(ascnet.ie\)](http://ascnet.ie)

Acknowledgements



- This work is co-funded by the Erasmus+ Programme of the European Union. **DISCLAIMER:** The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Contact Us

inclusion4eu@gmail.com 

Inclusion
4EU

Contact Us 

Inclusion
4EU

INCLUSION AT HEART

We investigate Co-Design as a methodology to make the software development process more inclusive, starting from the education of future Computer Science professionals.

Inclusion4EU researches and develops new curricula, best practices and learning resources that can be used in class by Computer Science teachers to initiate students to Co-Design.

- <https://ascnet.ie/inclusion4eu-website/>
- inclusion4eu@gmail.com
- @Inclusion4EU