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Eftring, Håkan; Glessmer, Mirjam; Andersson, Elna; Argelius, Carina; Maini Gerhardsson, Kiran; Gersbro-Bülow, Elisabet; Jackson, Ida; Lindberg, Marit; Morreau, Louise; Motte, Damien; Petersson, Anna; Prykhod'ko, Olena; Pugh, Rhiannon; Rezeli, Melinda; Rowa, Christina; Wendt, Cecilia; Zalar, Alva; Åbjörnsson, Lotta

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LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

Tips for creating inclusive classrooms at LTH

Håkan Efrting¹, Mirjam S. Glessmer¹, Elna Andersson¹, Carina Argelius², Kiran M. Gerhardsson¹,
Elisabet Gersbro-Bülow¹, Ida Jackson¹, Marit Lindberg¹, Louise Morreau², Damien Motte¹,
Anna Petersson¹, Olena Prykhodko¹, Rhiannon Pugh¹, Melinda Rezeli¹, Christina Rowa²,
Cecilia Wendt¹, Alva Zalar¹, Lotta Åbjörnsson²

¹LTH, Faculty of Engineering, Lund University ²Lund University

Abstract—All people are different. All teachers are different. All students are different. They have different life situations, different study situations, and different preferences, conditions, and abilities. How can we take this diversity into account when we plan our teaching and exams? What situations should we prepare for? How can we help students focus on their learning and not on unnecessary obstacles we unconsciously introduce? If we make small efforts upfront, this lets us avoid much larger efforts later on when we are confronted with the reality of students in our class and their different needs.

At this round table, let us discuss diversity in teaching and learning. During fall 2023, a pilot of the course “The Inclusive Classroom” was run at LTH, the Faculty of Engineering at Lund University. We present the compiled, most important

take-aways of participants and instructors, in addition to individual case-studies. In a nutshell: There are a lot of easy things you can do that can already have large effects, and you are not alone: LTH has many resources to support you. Please join a supportive, engaged community and learn from and with us!

Index Terms—Universal Design for Learning, UDL, Student diversity, Inclusion, Accessibility

I. INTRODUCTION

HIGHER EDUCATION should be open to, and welcoming of everybody admitted to a university. As university teachers in Sweden, we are required to comply with the UN Convention on the Rights of Persons with Disabilities [1]. According to article 24, “States Parties shall ensure that persons with disabilities are able to access [...] adult education and lifelong learning without discrimination and on equal terms with others”.

We also need to comply with the Swedish Discrimination Act [2] by taking “measures for accessibility to enable the person [with disability] to come into a situation comparable with that of persons without this disability where such measures are reasonable”. The requirements for active measures within education include teaching methods and examinations. Furthermore, the Swedish Act on the Accessibility of Digital Public Services [3] (“The DOS law”), based on the EU Web Accessibility Directive, entails that websites and their content must meet the accessibility requirements in the European standard EN301549 [4].

These increasingly higher legal requirements protect the rights of students with disabilities, but to reach our pedagogic goals of enhancing learning for all our students, we need to take student diversity into account already when planning our courses. We need to plan for increased flexibility in our learning activities and exams and focus on teaching the diversity of students we have – not the students we would like to have, or the nonexistent “average” student. Increased flexibility can also save time for teachers when unexpected situations occur, e.g. when a student is ill or has clashing lectures.

Universal Design for Learning (UDL), defined in the CAST UDL guidelines [5], is a useful framework for proactively meeting student diversity. Focusing on flexibility benefits all students and makes students with disabilities a natural and welcoming part of student diversity. But what does that mean in practice, how can we as teachers provide students with learning experiences that are welcoming and inclusive?

In a pilot of the course “The Inclusive Classroom” during

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H. Efrting is a senior lecturer at Certec, the Division of Rehabilitation Engineering and Design, Department of Design Sciences, LTH, Lund University, P.O. Box 118, SE-221 00 Lund (**corresponding author**; e-mail: hakan.efrting@certec.lth.se; phone: +46709600665).

M. S. Glessmer is a senior lecturer in academic development at the Center for Engineering Education, LTH (e-mail: mirjam-glessmer@lth.lu.se).

E. Andersson is a coordinator at the educational unit, LTH (e-mail: elna.andersson@lth.lu.se).

C. Argelius is a coordinator at Disability Support Services, Lund University (e-mail: carina.argelius@stu.lu.se).

K. M. Gerhardsson, is a teacher and researcher at the Department of Health Sciences, Lund University (e-mail: kiran.maini_gerhardsson@med.lu.se).

E. Gersbro-Bülow is the Head of Office at Student Service, LTH (e-mail: elisabet.gersbro-bulow@lth.lu.se).

I. Jackson is a student welfare officer at Student Service, LTH (e-mail: ida.jackson@lth.lu.se).

M. Lindberg is a lecturer in Architecture, Form and Design, LTH (e-mail: marit.lindberg@abm.lth.se).

L. Morreau is a psychologist at Student Health, Lund University (e-mail: louise.morreau@stu.lu.se).

D. Motte is a senior lecturer at the Division of Innovation, Department of Design Sciences, LTH, Lund University (e-mail: damien.motte@design.lth.se).

A. Petersson is a senior lecturer in the Department of Architecture and Built Environment, LTH (e-mail: anna.petersson@abm.lth.se).

O. Prykhodko is a researcher at Department of Food Technology, Engineering and Nutrition, LTH (e-mail: olena.prykhodko@food.lth.se).

R. Pugh is a senior lecturer at the Division of Innovation, Department of Design Sciences, LTH, Lund University (e-mail: rhiannon.pugh@circle.lu.se).

M. Rezeli is a researcher at the Department of Biomedical Engineering, LTH (e-mail: melinda.rezeli@bme.lth.se).

C. Rowa is a coordinator at Disability Support Services, Lund University (e-mail: christina.rowa@stu.lu.se).

C. Wendt, artist and guest teacher, Department of Architecture and Built Environment LTH (e-mail: cecilia.wendt@abm.lth.se).

A. Zalar is a doctoral student at Architecture and Culture, LTH (e-mail: alva.zalar@abm.lth.se).

L. Åbjörnsson is a system manager at Unit for Educational Services, Lund University (e-mail: lotta.abjornsson@edusupport.lu.se).

the fall of 2023, 18 teachers and other stakeholders from LTH met for seven afternoons to discuss challenging situations, legal requirements, available support systems, UDL literature, practical tips and tricks, and last but not least, to create a community of peers working towards the shared goal of inclusive classrooms at LTH. We wrote and shared reflections on different aspects of an inclusive classroom before each meeting, received input from many different stakeholders, and discussed in small groups and in the plenum. Here are our main take-aways in hopes of helping other LTH teachers.

II. STEPS TOWARDS AN INCLUSIVE CLASSROOM

During our discussions, we realized that there are three main areas that we can approach differently to substantially empower us as teachers in inclusive classrooms. Below, we discuss what we feel is a helpful mindset, share practical teaching tips, and present resources available at LTH.

A. Mindset

A first important take-away is that – as much as we might wish there was, and as much as we are used to thinking about students that way – as soon as we look at more than one facet of a student, there is no such thing as an “average” student (we highly recommend watching Todd Rose’s TEDx talk, *The Myth of Average*, on this topic [6]). This diversity is not only to be understood in terms of physical or neuro-physical challenges (color vision, hearing ability, ability to focus in a noisy environment), but also in terms of skills (some students are extremely skilled), prior knowledge, ability to communicate, belonging to different programs, etc. To design a course for an inclusive classroom is to embrace this diversity. If we accept that each student has different skills and abilities and embrace student diversity, instead of seeing students as either belonging to “the norm” or to those pesky “outliers” deviating from this norm, we can start **designing to the edges** [6], that is, designing courses that take this diversity into account. As shown in [7], if diversity is embedded in a course design, it will not necessarily require extra time and resources from the teacher.

The second main take-away was that **we, as individual teachers, do not have to solve everything on our own**. A lot of resources exist at LTH (for specifics, see paragraph C below), and many of our struggles are not unique to us and our individual teaching situations. There are many other teachers in similar situations, and we can learn from and with each other. Just discussing challenges and potential solutions with peers is hugely empowering!

B. Practical tips

If we design to the edges from the beginning, this saves a lot of time and headache later on. Flexible design and **varied use of teaching methods** is commonly recommended in Universal Design for Learning (UDL) [8]. In practice, this means looking at the intended learning outcomes in a course syllabus to explore the flexibility that we have already in the short term: If, for example, groupwork or presentation in front of a group is required, but group size or in-person vs remote, or synchronous vs asynchronous, are not specified, we can easily offer

different options. In the long term, we can then work towards changing the syllabi to accommodate an even wider variety of teaching methods.

A second useful practical tip is to **help students establishing constructive relationships with peers** by facilitating group work. It is very important to acknowledge that students already have prior experiences with group work that may not exclusively have been positive and that those experience might influence engagement. Nevertheless, we choose group work for their benefit, to support learning of important skills needed in their future professions, and for the benefit for society. Being transparent about this can lower the resistance to engage [9]. Structuring group work, through for example explicit instruction on roles in the group, and agreement on expectations and team policies in group contracts [10], and other cooperative learning structures [9], makes it more likely to become a constructive experience, as does monitoring the functioning of groups and intervening early if necessary [10]. If conflicts arise, the focus should be put on the issue at hand and its consequences for the work, not a person, their traits or history [11]. It might be helpful to use persons, possibly professionally trained for the task, external to the course, so that solving interpersonal conflicts and assessment of student learning stay very clearly separated.

Further stressing the understanding that a lot of resources are available at LTH for both teachers and students and that we do not have (and should not try!) to provide all imaginable support ourselves, but rather draw on experts, we can systematically **raise students’ awareness of resources** that are available at LU/LTH. This could mean, for example, pointing to resources on the course’s Canvas page, including a slide in a lecture, or inviting specialists into the course. For specific resources available at LTH, see paragraph C below.

C. LTH-specific resources

There are a lot of experts and resources available at LTH that we were not sufficiently aware of before. Below, we share a (most likely incomplete) list of what we found to be most helpful to know about:

Disability Services (Pedagogiskt stöd) [12] are the place where students get to meet disability officers who, based on students’ disability certificates for which they have been assessed by licensed healthcare professionals, make decisions and recommendations for how to support the students. As teachers, we can seek conversation with Disability Services to receive guidance on how to practically provide the recommended accommodations.

Health Services (Studenthälsan) [13] provide support directly to students that experience for example stress, anxiety about public speaking, or other issues that affect students’ mental well-being linked to their study situation. They offer many different formats like individual consultations, but also self-help groups for students. As teachers, we can point students there, and we can even invite Health Services colleagues to visit our courses and provide input to students there, for example on how to deal with stress or other common issues.

Student counselors (studievägledare) and psychological counselors (kuratorer) [14] can be

approached by students for counseling and advice, but also by teachers who want to discuss how to deal with challenging situations in their teaching. They offer individual consultations as well as consultations in group.

Lund University has several academic support units, at LTH specifically the **Centre for Engineering Education** [15]. They are in place to support individual teachers through consultations, or groups of teachers through regularly scheduled as well as demand-driven workshops, in addition to the compulsory higher education teacher training courses [16]. All courses address laws and regulations as well as inclusive teaching as important topics. It is our job, and our pleasure, to support you. Please do not hesitate to get in touch!

A big collection of **online resources** is constantly being created by the **Unit for Educational Services (Enheten för undervisningsstöd)**. They have resources aimed at students [17] that we can use as inspiration for how to talk to students about different kinds of challenges (e.g. study techniques or what to keep in mind before using Generative Artificial Intelligence tools), or to point students there directly. Other resources are aimed at teachers [18], specifically a Q&A on digital accessibility.

Last but not least, what we felt was most empowering was to realize how many of our **colleagues**, both teachers and colleagues in the units mentioned above, are working on similar challenges, and how helpful it is to exchange experiences and ideas. We strongly encourage you to start talking to colleagues about your experiences and challenges – you are probably much less alone than you might feel!

III. CONCLUSION

Creating an inclusive classroom can feel daunting and like a big burden that teachers are not trained or equipped for. It can feel overwhelming and lonely. But it does not have to be. There are a lot of resources available at LTH, both for teachers and for students, and a supportive community of teachers passionate about creating an inclusive LTH exists. If you want to create a more inclusive classroom yourself and would like to connect with us, you are very welcome to contact any or all of the authors of this article to bounce ideas, for moral support, for community!

IV. THE ROUNDTABLE SESSION

At the roundtable session, we will elaborate on this paper, as well as present individual projects that were conducted during this course. Two of those are published in these conference proceedings: “Bringing the edges to the core”, by Damien Motte and Rhiannon Pugh [7], and “Course development – lessons learned from usability evaluations”, by Kiran Maini Gerhardsson [19]. We then open up for discussion of all of our experiences and tips, and hope to learn from and with you!

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