

Diversity in the classroom: Addressing diverse learning and creating inclusive spaces for interdisciplinary interaction

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Introduction

Most European Universities are adopting an “internationalization” agenda that grants access to higher education to a larger and heterogeneous students (Hultgren et al., 2014, p. 4). International masters’ programs are increasingly attracting students from different academic, linguistic and cultural backgrounds (Doiz et al., 2012; Van der Walt, 2013).

The University of Copenhagen, one of the European leaders in the provision of higher education in English (Mosneaga and Agergaard, 2012; Wächter and Maiworm, 2014, p. 46), has promoted an internationalization agenda since the early 2000s, and strategically aims at attracting more international, especially non-European, students and staff in the future¹. However, little effort has been made into addressing the linguistic, cultural and academic background of students and how this affects classroom dynamics and learning. The University staff face the consequences of the internationalization policy decisions made at higher levels, without having the resources to address the students’ diversity in a meaningful way (Mosneaga & Agergaard, 2012). As a result, the students that have different previous academic experiences often clash with local ways of teaching, learning and participating, which may frustrate Danish, international and staff members alike (Nissen, 2019).

¹ University of Copenhagen, Talent and collaboration – Strategy 2023. See <https://about.ku.dk/strategy2023/>

This study tests participatory research methods to address diversity in learning and to create awareness of the students' personal needs and their classmates' needs. Thus, the methods applied aim to promote a safe, inclusive and comfortable space for teaching and learning in international higher education programs. Ultimately, the study aims to help establish the internationalization strategy of the University of Copenhagen in practice.

State of the art: Science of teaching and learning

Students enter international higher education programs with a diverse range of academic backgrounds (natural, technical, medical, social, and human sciences), cultural backgrounds (national and international students) and diverse personalities and learning preferences.

How academic backgrounds affect teaching and learning

Each discipline has its peculiarities, and therefore different teaching and learning approaches. Apart from general teaching forms, e.g. one-way lectures, reading the syllabus and discussing in plenum, or doing group work to solve a specific problem, there are teaching forms that are better suited to specific disciplines. Humanities range from factual disciplines to philosophical and cultural disciplines and benefit from memorable activities such as collective analysis, discussions and constructions (Rienecker et al., 2015, p.251). Teaching empirical applications of social sciences, i.e. when teaching activities include empirical data and how it exemplifies the 'real world' as a not-exact science, the complexity increases and therefore, using real case studies and debate exercises are beneficial to motivate students and increase their learning outcomes (*ibid*, p.253). Natural sciences also encompass difference disciplines that measure empirical data and use a systematic knowledge validation methods. Many of natural science disciplines use practical work, often in labs or fields, and often uses advanced technologies for data collection and analysis. Teaching methods that are advantageous in natural sciences are flipped classrooms (e.g. virtual labs) and building concept maps to learn theory (*ibid*, p.254-255).

The examples above show the variety of teaching methods that students are exposed to in their respective fields. And when students continue into higher educations (e.g. an interdisciplinary Masters' degree in Environment

and Development) that draw from theory and practices of multiple disciplines, students will be differently challenged due to their previous knowledge and experience.

How cultural backgrounds affect teaching and learning

Apart from disciplinary differences, the environment where students undertake their studies shape their learning approaches to learning (Rienecker et al., 2015, pp.98-99). This environment is related to the cultural teaching context.

Local and international students go through an extensive psychological formation process throughout their education that form their 'experiences' (Nissen, 2019, p.37). These past experiences adapt how students learn and participate in class. In some countries, such as Denmark and Sweden, the relationship between teachers and students is closer and critical thinking and participation in class is highly promoted. Whereas, in other European countries, such as France or Italy, the teacher-student distance is larger and the teaching methods are teacher-centered, instead of student centered (See results below).

How the student type affect teaching and learning

Students develop different learning approaches depending on the context: the learning activities and environment. Student's learning approaches may be 'deep' or 'surfaced', which will determine their learning outcomes. Teachers can shape the learning environment, and the associated learning outcomes, by using different teaching techniques (having students as audience vs. participants, and focusing on research content vs. process) (Rienecker et al., 2015, pp. 49&99).

In addition, the students' family background, the skills and abilities and prior schooling shape the intentions, goals and commitment of the students. The goals and commitments affect the academic performance, the interactions with the teachers, and *vice versa*. The continuous relational loop between these elements results in different degrees of academic integration, i.e. whether the student is legitimately acknowledged by an institution and whether the student effectively learns. The institutional acknowledgement comes through exam grades and degree completions. In addition, if the student finds the education interesting, reflects on its contents and formative feedback, and engages in learning and sharing knowledge, then they will

achieve a full academic integration. This reinforces the goals and commitments of the students and their personal departure decision (Tinto, 1987, p.114).

Aim of the study

The overall aim of this study is to make students **aware of how their previous academic and cultural teaching experiences** have shaped their learning, and formulate their **needs** to help them participate in class and learn. Through the use of participatory methods, the goal is to create a **common understanding** of their peers' background and needs, and build a safe, inclusive and comfortable learning environment that helps the internationalization strategy of higher education programs.

The 'Practicing Interdisciplinarity' course and the exercise

Practicing Interdisciplinarity² is a 7.5 ECTS course situated in Block 1. The course is mandatory for first year MSc students from the Environment and Development program. The course touches upon topics which are relevant to both specializations of this MSc program, namely Agriculture and Ecology, and Livelihoods and Governance. In 2021, 35 students from all over the world and representing diverse academic backgrounds were enrolled in the course.

In order to bring awareness of the diversity of the students' academic and cultural backgrounds I used quantitative and qualitative methods. First, I shared a questionnaire survey to be filled in before the exercise. The aim of the survey was to collect data on students' preferred *learning styles*; which *academic discipline(s)* do they feel closer to; whether they have ever *felt left out* in the classroom, and under what circumstances; whether they have felt left out in *online teaching*; what they thought that was affecting *inclusion and participation* in online learning. This data served to understand the classroom composition.

Second, I grouped together the results of the questionnaire and I presented them in class to spark discussions and gather qualitative data. Before presenting the results, I made a short introduction about the difference

² See course description here: <https://kurser.ku.dk/course/NIFK20006U>

between inclusion and integration, and why it is important to embrace diversity, get inspired by students' diverse backgrounds, identities, learn from each other and support each other. In essence, *integration* refers to something that is wrong and needs fixing, for example, "students with special needs". While *inclusion* means that we are all diverse, and that we all have different needs and competences, as a way to celebrating diversity.

We discussed the results of the questionnaire and students were prompted to give their opinions about them. Thereafter, the students conducted an exercise where they needed to reflect individually about how did participation in class work where they studied their bachelor/other studies, and share their experiences in small groups. Each student wrote post-its with statements about their teaching culture and associated locations (optional) and placed them on a flipchart. In the following exercise, they were asked to write down anonymous post-its with their 'personal needs': what would help them participate and feel included in a group or class discussion.

Third, I planned to discuss the results of the exercises in plenum, with the aim of creating awareness of each other's needs, customs, and incorporate this into the students' group-work dynamics. This exercise was aimed at helping students draft a set of guidelines for their group-work.

Results and discussion

The results of the questionnaire survey showed that all students have different preferences to learn and retain information (Figure 1). Based on these (expected) results, I explained the students that during the module that I was going to teach in the consequent two weeks, I had planned teaching methods to cater for different learning styles. Some students would enjoy reading the scientific papers before class, while others will learn with hands-on exercises, I also offered theoretical lectures and watching videos as teaching methods.

Results from the survey on diversity – Learning styles

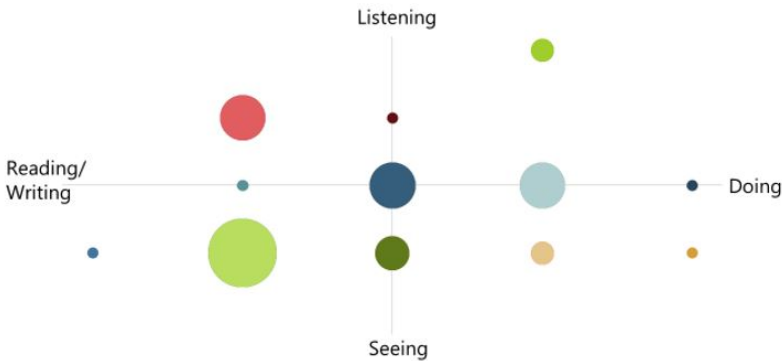


Figure 1. Results of 23 responses to the following questions: ‘How do you usually prefer to learn: by reading/writing or by doing/experimenting?’ and ‘by seeing (observing pictures, diagrams, written directions), or by hearing (listening to lectures, documentaries)?’ Bigger circles represent higher number of respondents.

Most of the students participating in this course were feeling closer to the disciplines of social sciences (80%), some to humanities (30%), some to natural sciences (30%) and few to the business sector (10%) (Students could choose more than one academic background). This denotes that the class was diverse, but highly dominated by social scientists.

Many of the students (43%) claimed not to feel left out in class; however, almost as many feel left of sometimes due to their lack of knowledge in the subject (40%). Fortunately, this course includes a wide variety of subjects belonging to different disciplines, and therefore, students will experience both ‘easy’ and ‘challenging’ days. And even in they feel behind in one course, they will feel on top on another where they are closer to their domain. Many of the students feel left out due to their introversion (30%), and some because of language/communication skills (10%). Some people mentioned that their cultural background and customs makes them feel left out (7%). These concerns raised by the students denote the importance of doing these kind of exercises of reflecting and sharing personal needs to feel supported and overcome shyness to ask questions and share opinions in class. Opening up this discussion can also raise awareness among those

who do not feel left out, that others might have a harder time participating and need to have the space to share.

In 2020, online teaching was predominant and therefore assessing how students felt with this form of teaching was crucial. Half of the students have experience with online teaching and do not feel left out. However, some students do feel left out in online teaching, and we do not know how the people who do not have experience yet may feel about it.

When students were asked if they have noticed differences with online teaching when it comes to diversity, learning and inclusion, 33% of them answered affirmatively and raised very good points. For example, three students wrote that the distance between teachers and students is wider in online teaching, and it is harder for teachers to understand student's needs for learning. Two students mentioned that it is harder to participate (break into the debate) and hear everyone's voices in online teaching. On a similar note a student wrote that it is "harder for shy people to participate and it is easier to 'hide' ". A student mentioned that "One cannot rely on body language and eye contact" in online teaching and another wrote "Closed cameras complicate teaching and participation". Finally, one student wrote that "People tend to listen more in classrooms, but many are more daring to ask questions digitally". These are very interesting reflections on online teaching, and denotes the importance of having cameras open, addressing people by name to know who is being addressed, working in break out rooms to have more voices heard, and using creative ways to make students participate.

When discussing the results of the questionnaire in plenum, it was evident that students from social science and humanities backgrounds were more used to these kind of discussions (Rienecker et al., 2015, p.251-253), and they tended to dominate all open discussions. Nevertheless, very few of them spoke up in plenary discussions. Perhaps because they did not know me yet, or because they did not understand that this was a simple exercise to get to know their opinion.

The exercises using post-its worked much better than the discussion in plenum, as it allowed time for self-reflection and writing before sharing with their small groups. The students had time to share about their previous experiences in groups of five, and the conversations were lively and engaged. They said that they learnt a lot from each other's teaching culture.

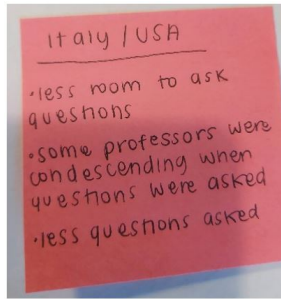


Figure 2. Example of students’ experiences of teaching culture in their previous institutions.

The results showed big differences in the teaching culture between Scandinavian countries and the rest of the countries (mainly Italy, France, Spain, USA and China). Students coming from abroad do not have much experience with small classrooms, open and critical discussions, and in general, an informal relationship with their professors. Students had different group work experiences, and regardless of country of origin it was mainly unstructured. According to Nissen (Nissen, 2019), group work often causes problems between international and Scandinavian students. The different group dynamics students are used to often make international students adopt a passive role and local students position themselves as ‘experts’ regardless of whether this is true or not. This was not observed in the classroom where I taught. Group discussions were driven by outspoken and international students and Scandinavian, often the ones with good domain of English.

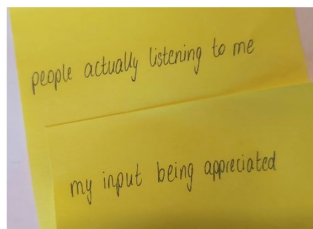


Figure 3. Example of students’ needs to participate in class discussions.

The students expressed what would help them participate more in class discussions. The results are summarised here into five themes:

- Needs related to **personal knowledge and skills**: knowing the subject and being fluent in the language of instruction
- Needs **required from professors**: e.g. being approachable and engaging, giving feedback and addressing students by name
- Needs related to the **teaching method**: e.g. having time to think/reflect their answers, having discussion starters (readings, videos) and providing knowledge about the topic before discussion, time for group discussions prior to discussing in plenum, clear guidelines, randomised groups
- Needs related to **classroom environment**: create a good atmosphere, a safe space where one can be wrong and will not be judged, where all ideas are welcome, there is positive reinforcement. A space for “stupid questions” [which means asking that they have not understood something, not *stupid* after all]. Having a casual discussion culture, without hierarchies.
- Needs **related to the other students in the class**: knowing that the other students are paying attention and appreciative of the input of others. Classmates should be free of judgement and be respectful. Having highly participative students encourages others to also participate. Knowing that everybody would have to come up with an answer to the question and that everybody now has the ability to answer it. Knowing the other classmates.

I was planning to analyse the results of the two previous exercises meanwhile they were on a break, but it proved harder to group and find patterns than what I expected. Therefore, I summed up some of the points written in the post-its and moved on to the final exercise, coming up with guidelines for group-work. The last exercise aimed at creating a respectful discussion dynamic that would respect the needs and customs of each individual.

My department supervisor read my project proposal before the teaching session and suggested to let the students express why they think it is important to address diversity in the classroom. Therefore, I raised this question at the end of the class and students mentioned that it is important to have ‘open discussions’, understand cultural taboos and overcome assumptions or prejudices, to bring in different perspectives and understand the concerns that others might have.

We ended the teaching session, with a round of sharing to evaluate the exercises. The students agreed that it was nice to have time for self-reflection before discussing in small groups. They would have liked to have more time to hear about the teaching cultures from the other groups, and less time to develop the group-work guidelines – which I will change the next time I teach.

Final reflections and concluding remarks

I used the outcomes of the exercises during the two weeks that I taught these students. For example, before a brainstorming exercise or an open discussion, I reminded them what they wrote about how important it is for them to feel that the others are listening, that all ideas are good ideas, and that this is a safe environment. I also reminded them that most of us are not native English speakers and that the goal is to understand each other, therefore they should not feel judged if they do not speak grammatically perfect.

I noticed a huge change in the discussion dynamics over the two weeks: initially only a handful of them participated in open discussions –the same that had dominated the discussion in the lectures prior to my module-, and by the end of the two weeks all students felt comfortable sharing their thoughts.

The exercises I planned fulfilled the goal of making students aware of their previous academic and cultural teaching experiences, their own needs and those of their peers. Using a questionnaire survey and post-its allowed for all voices to be heard, and this helped the most shy or introvert students to have their chance to communicate without having to speak up in front of the class.

In conclusion, through participatory methods, the teacher can create a favourable context for all student types, who come different cultural and academic backgrounds, to have their voices heard, participate in class and achieve deep learning. Understanding and respecting different cultures and departing points for the students can create truly inclusive spaces for learning and achieve the internationalization of higher education in the full meaning of the word.

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