

# Interdisciplinary education for students from diverse background – how can we further enhance our capacity?

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**ABSTRACT:** The number of interdisciplinary educational programmes for international students from diverse academic and/or professional background increased significantly over the last few decades. Teaching and administrative staff engaged in such educational activities at Lund University have gained wealth of experiences, but the experiences have not been widely shared. To address this, we ran a project engaging 20 people from 8 institutions in 4 faculties within Lund University in close collaboration with Centre for Educational Development (CED), with the primary purpose of documenting, sharing and reflecting upon actual challenges they have faced and how they have overcome such challenges in practice. The main outcome of this project is a book, “Diversity in Education: Crossing Cultural, Disciplinary and Professional Divides.” In this roundtable discussion, we seek to explore concrete means to bring the initiative forward so as to further enhance our capacity to provide high quality interdisciplinary educational programmes for students from diverse backgrounds. The central theme of the discussion is: what do educational practitioners – teaching as well as administrative staff – need in order to continuously provide a good learning environment to a student enrolled in such an educational programme. The views of prospect participants (educational practitioners) will be collected with a view to suggest a concrete set of actions for pathways forward.

## 1 BACKGROUND

*Internationalisation* and the growth of *interdisciplinary approaches* in education have transformed universities worldwide in recent decades. In Sweden alone, the number of foreign students registered at universities tripled, from 13,900 in 2001 to 46,700 in 2010 (Swedish Higher Education Authority, n.d.). Pushed by societal demands and educational reforms in the 1960s and 1970s, the interdisciplinary fields continued to grow, and today cover a variety of subjects. Examples include environment, culture, management, communication and media, public health, engineering and science, bio-medical sciences, urban and rural development, to name but a few (Humphrey et al., 2005; Klein, 2006; Jacob, 2015).

Interdisciplinary nature of the educational programmes means that the backgrounds of the students are diverse not only *culturally* but also *academically and/or professionally*. Students in an interdisciplinary educational programme most often have studied only one or two disciplines prior to their enrolment in the programme, leading to classrooms with students from various academic backgrounds. Interdisciplinary studies often takes the form of problem-solving (Repko, 2012; Newell, 2007), and attract students with work experience in various fields.

Interdisciplinary programmes for students with diverse backgrounds have many pedagogical benefits – the most prominent one is perhaps learning to work with people with different perspectives. However, they also pose challenges in the classroom and beyond. What are the challenges for university staff serving overseas students, both inside and outside the classroom? How can we equip these students, in spite of their diverse academic and professional backgrounds, with sufficient disciplinary knowledge so their unique skills can be effectively integrated into their further studies and careers? How do we design courses for students from different backgrounds? Which pedagogical approaches, methods, and techniques can be used? How can we facilitate group work among students from diverse backgrounds? What are the needs of foreign students so that they can concentrate on their studies and perform well? What issues do teachers face when not teaching in their native language? How do we follow up with students after they graduate?

To address these challenges, from June 2014 we ran a small project engaging 20 people from 8 institutions in 4 faculties within Lund University in close collaboration with Centre for Educational Development (CED). The participants have been engaged in interdisciplinary programmes for students with diverse backgrounds in various capacities, such as teaching and academic staff, director of educational programmes and peer-learning tutor. Their rich experiences, which would be of great use to those who are/will be engaged in educational activities of similar types, have not been widely communicated, however. The project was carried out, therefore, with the primary purpose of documenting, sharing and reflecting upon the experiences of these educational practitioners, focusing on actual challenges they have faced, and how they have overcome such challenges in practice. The main outcome of the project is a book, “Diversity in Education: Crossing Cultural, Disciplinary and Professional Divides”, supplemented with visual materials.

The book provides examples of educational programmes at the Masters or PhD level in different fields, with varying breath both in terms of nationality of the students and the number of disciplines incorporated in the programme. The book consists of three parts: I) examples of concrete pedagogical approaches, II) creation and maintenance of positive learning environment and III) overall programme perspectives. All chapters discuss specific challenges educational practitioners have faced in carrying out interdisciplinary educational programmes for students with diverse backgrounds, and how they overcome such challenges. The book has three main features: 1) addressing several aspects – international students, interdisciplinary programme, students with diverse academic and/or professional backgrounds – at the same time; 2) written from the perspective of (mostly) non-native English speakers working in a setting where English is not the national language; and 3) inclusion of the views and experiences of both teaching and administrative staff. Table 1 provides an overview of topics covered in the book.

*Table 1.* Topics covered in the book “Diversity in Education: Crossing Cultural, Disciplinary and Professional Divides”

Themes	I: Concrete pedagogical approaches	II: Positive learning environment	III: Overall programme perspective
Topics	<ul style="list-style-type: none"> <li>• Employment of peer writing tutors to assimilate new students to their new academic environment, and motivate them to improve their writing skills</li> <li>• Development of critical thinking skills through harnessing diverse backgrounds of students, utilising peer reviewing</li> <li>• Use of authentic learning tasks to encourage increased interaction amongst students and enrich learning outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Practical means to support international students in understanding the academic setting and cultural norms</li> <li>• Establishment of equitable learning environment: language, academic culture, social capital, intrinsic vs. extrinsic motivators</li> <li>• Practices introduced and maintained by administrative staff to build a “Home”</li> </ul>	<ul style="list-style-type: none"> <li>• Pedagogic challenges stemming from cultural differences (e.g. admission requirements, grading systems, teaching in a foreign language, teacher-student relationship, plagiarism)</li> <li>• Creation of an academic village to run an international, interdisciplinary PhD programme</li> </ul>

## 2 ROUNDTABLE DISCUSSION – WAY FORWARD?

While we hope this book serve as a good starting point, more work is needed to enhance our capacity to provide high quality interdisciplinary educational programmes for students from diverse backgrounds. In this roundtable discussion, we would like to discuss concrete actions to push the initiative forward. We seek to address the following overall theme:

What do educational practitioners – teaching as well as administrative staff – need in order to continuously provide a good learning environment to a student enrolled in an interdisciplinary educational programme together with fellow students with other cultural, academic and/or professional backgrounds?

We intend to ask the prospect participants – teaching and administrative staff who have been/will be engaged in interdisciplinary educational programmes for students from diverse background – the following questions:

1. What are their roles in an interdisciplinary educational programme for students with diverse background?
2. What actual challenges have they encountered when carrying out their tasks?
3. What (may) help them overcome such challenges?
4. What (may) hinder them from overcoming/reducing such challenges?
5. What concrete means of support may be helpful to enhance their capacity for carrying out their tasks?

Through these questions, we seek to identify areas in which more work is needed to enhance the capacity of educational practitioners in this field. The inputs from the participants are compared to the topics addressed in the aforementioned book, and we discuss how the respective areas can be explored further. Moreover, if time allows, we intend to consider practical capacity building activities that can be employed. Some of such activities could be carried out utilising various resources we have such as CED, the authors contributing to the book and others engaged in relevant activities, the book and other reading materials. We ask the participants other capacity building activities related to the field, and discuss what we can learn from such activities. Potential synergies with existing/prospect activities could be also considered. Our ambition is to wrap up the session with a concrete set of actions for pathways forward.

## REFERENCES

- Humphrey, J.D., Coté, G.L., Walton, J.R., Meininger, G.A., & Laine, G.A. (2005). A new paradigm for graduate research and training in the biomedical science and engineering. *Advance Physiological Education*, 29: 98-102
- Jacob, W J. (2015). Interdisciplinary trends in higher education. *Palgrave communications*.
- Klein, J. T. (2006). A Platform for a Shared Discourse of Interdisciplinary Education. *JSSE-Journal of Social Science Education*, 5, 4, 10-18.
- Newell, W. H. (2007). Six arguments for agreeing on a definition of interdisciplinary studies. *AIS Newsletter* (December). 29(4). [On-line]. Available: [www.muohio.edu/ais](http://www.muohio.edu/ais) [21 April 2015]
- Repko, A. F. (2012). *Interdisciplinary Research - Process and Theory*. Second Edition. Sage Publications: Thousand Oaks.
- Tojo, N. and Kiss, B. (Eds). (in press). *Diversity in Education: Crossing Cultural, Disciplinary and Professional Divides*.
- Swedish Higher Education Authority. (n.d.). Internationell mobilitet. . [On-line]. Available: [www.uk-ambetet.se/statistikuppfoljning/statistikdatabasomhogskolan/internationellmobilitet.4.4e0b8cfa143c50b1fe153.html](http://www.uk-ambetet.se/statistikuppfoljning/statistikdatabasomhogskolan/internationellmobilitet.4.4e0b8cfa143c50b1fe153.html) [10 April 2015]