Knowledge Diversities and Group Dynamics within International Master Programs

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Abstract—Although international students are allowed to study at Swedish universities since 1985, the Swedish university land-scape has undergone a strategic internationalization mainly during the recent few years. With a steadily growing number of international master programs and thereby more international students being part of the Swedish education system, a variety of problems related to cultural-diverse teaching and learning environments and their corresponding methodologies arises.

Focusing in particular on knowledge diversity and heterogeneous group work, reasons for facing such problems and suitable approaches will be discussed. Amongst others, more detailed course descriptions, profiling of newly-admitted students, or more individual pre-arrival programs are proposed. Suitable ways how to actively encourage students to interact within cultural-diverse, heterogeneous working groups are discussed, highlighting the necessity of reflection and feedback.

I. INTRODUCTION

International students (IS) are allowed to study at Swedish universities since 1985, but it was not until 2004 that the Swedish government explicitly covered internationalization in their proposition "Ny värld - Ny högskola" [1]. Currently the Faculty of Engineering at Lund University (LTH), with more than 600 partner universities, around 450 exchange students, and 100 newly admitted international master students each year, offers ten different English master programs [2].

LTH offers an 'International Mentorship Program' [3] to facilitating the students adaptation to their new environment, focusing mostly on social-cultural adjustments. Additionally, while the Swedish government motivates internationalization as a way to improve the quality at Swedish universities, guidelines for university teachers and lecturers on how to achieve such improvements and how to cope with upcoming problems are not covered to any extent. Such problems within international environments can be categorized mainly into three different groups: social-cultural problems, language skills and learning/teaching methods adjustments [4], [5].

In the following, general teaching methods with respect to teaching IS are presented in Section II. Focusing on knowledge diversity and heterogenous workgroups, suitable approaches are discussed in Sections III and IV.

II. GENERAL TEACHING TECHNIQUES

General teaching techniques for IS, helping to solve or, if possible, to avoid commonly encountered problems are discussed in [4], [6]–[8]. Amongst others, teachers should become aware of their own academic culture, try to clearly formulate

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course objectives and explicitly specify their expectations, as IS are often not aware of the used teaching methods or do not understand implicit instructions.

Moreover, teachers commonly tend to assume that their students constitute an homogeneous group, neglecting individual deficits or different cultures being involved. As suggested in [4], a so-called 'three-level approach' can be applied, starting with 'Teaching as Assimilation', and aiming towards 'Teaching as Accommodation' and 'Teaching as Education'.

While we acknowledge those problems, we limit ourselves hereinafter to, in our opinion, the main problems at LTH.

III. KNOWLEDGE DIVERSITY

Despite the introduction of the European Credit Transfer System (ECTS), several differences between courses having the same title and being taught at different universities exists. Moreover, with IS from outside the European Union, larger diversities in knowledge emerge, resulting in teachers being finally confronted with heterogeneous student groups, having highly diverse pre-knowledge.

Such knowledge diversities might be a result of, but are not limited to, different cultural and traditional teaching methods, needs based on the local industry as well as limited amount of available resources, such as lab equipments. Being in such a situation, students have commonly fewer or almost no strategies on how to deal with new ways of teaching and learning, resulting in a so-called *academic culture shock*.

Applied to the situation at LTH with its ten international master programs, it has to be noted that most courses are constructed following the Swedish system and thereby implicitly assuming a pre-knowledge at the level of Swedish students in their fourth year. Moreover, applications of IS are commonly only assessed based on previously taken course-titles and received marks during their previous studies.

Nevertheless, such knowledge diversities are one of the key factors for successful internationalization and should be seen as an opportunity to enrich and improve students' learning. Neither do those benefits show up automatically, nor do they directly follow from having IS on the campus [7]. In the following, different approaches are suggested to actively and appropriately exploit students cultural capital.

Students Cultural Capital

To exploit knowledge diversities and improve the overall learning experience, program coordinators and teachers have to acknowledge their students prior educational background and provide a transition to the new teaching environment [6], [7]. In other words, teachers have to become inter-culturally competent and teaching methods have to be adapted to an international, cultural diverse environment, rather than expecting students to adapt to a 'monocultural', inflexible environment.

In [7], [6], and [4] different approaches are discussed, being broadly categorized and summarized under pre-admission, pre-arrival, post-admission and mid-course approaches. Amongst others, profiling of newly admitted students can help to exploit their prior knowledge, such that teachers can adjust their course contents. Based on such profiles, pre-arrival programs can be offered to students with bare minimal qualifications, helping those students to catch-up with pre-requisites for their intended courses.

Additionally, more explicit course descriptions and requirements, including detailed descriptions of pre-requisites, provide IS with better guidance in finding their way into a new education system. Moreover, besides using multiple channels for information and advices during the course, including written guidance, discussion-based exploration of understanding the course contents, as well as online tools and resources [7], teachers should take every opportunity to get to know their students individually and understand their own perspective and expectations. If needed, such feedback can help teachers to offer suitable additional teaching sessions, language classes, extra study-skill modules, as well as additional information on course evaluations and assessment methods.

IV. INTERNATIONAL GROUP DYNAMICS

Another factor for a successful internationalization lies within highly interactive heterogeneous student groups with varying cultural and educational backgrounds [6]. However, students commonly tend to form working groups only with those of same age, religion, educational and cultural background [9] and avoid to talk about their problems and misunderstandings amongst each other, being afraid to stick out [4]. Moreover, cultural stereotyping, language fatigue, misunderstandings due to unqualified use of colloquialisms or idiomatic expressions, and different native and instruction languages, like in Sweden, are other barriers to cope with. Considering the following approaches might help in solving these issues.

Course Objectives

Commonly, intended learning outcomes, teaching methods, and desired audiences are defined within course objectives for both, single courses as well as whole education programs. International perspectives, however, are seldom reflected within those descriptions.

Taking into account the corresponding international framework, teachers should review their course objectives and try to 'internationalize' their descriptions [7]. Amongst others, suitable teaching methods and active engagement with different cultures should be included, encouraging the development of cross-cultural capabilities and global perspectives.

International Group Interaction

As students prefer to interact only within homogeneous groups, teachers have to actively encourage interaction be-

tween IS with different cultural backgrounds as well as between IS and local students. Highlighting the advantages of heterogeneous working groups and creating suitable tasks for heterogeneous cultural-diverse groups can encourage students to contribute actively.

With groups not always working efficiently, teachers should be prepared to provide them with guidance on how to cope with such situations, encourage them to set up rules for participation, or point out alternative solutions [6]. However, to develop new attitudes and inter-cultural competencies, it is inevitably necessary to urge students to reflect and evaluate their individual cultural experience [6]. Otherwise, culturaldiverse teaching and learning might be counterproductive, or even emphasize foreignness and confirm existing stereotypes and prejudices [10].

V. CONCLUSIONS

Problems in international master programs within culturaldiverse teaching and learning environments in general and specifically at LTH have been highlighted. Moreover, focusing on knowledge diversity and mostly homogeneous groups among international students, reasons for facing such problems have been discussed.

Different approaches on how to organize an international master program within an international environment have been presented. The suggested approaches exploit the students cultural and academic diversities and adjust the programs policies from students' pre-admission, pre-arrival to post-admission and mid-course interaction. Additionally, different methods to encourage heterogeneous interactions among students have been discussed. Besides designing the course objective in a suitable way, considering the cultural and educational background information of the students, students have to be provided with guidance on group work, including the necessity of reflections and feedback.

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