

SOME ASPECTS OF CULTURAL DIVERSITY AND LEARNING STYLES IN INTERNATIONAL HIGHER EDUCATION

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Common feature of higher education today is the increasing cultural diversity in student populations. Researchers attribute the changing face of the students to trends in multiculturalism, internationalization and globalization. Understanding how students learn in the multicultural environment is an important part of selecting appropriate teaching methods. Of relevance to this lecture is the increasing presence of international students in higher education of Hungary as well. Our aim is to provide an integrated framework for developing students' cross-cultural competence by drawing on the cultural diversity and learning strategies. This quantitative, questionnaire-based research was conducted among foreign physiotherapy students at Semmelweis University in 2011.

Keywords: higher education, cultural diversity, cross-cultural competences, learning style, learning methods, experiential learning

The culturally diverse would seem to be the ideal resource that educators can develop their students' cross cultural competence. Evidence from the education literature suggests that common feature of higher education today is the increasing cultural diversity in student populations (Bengoetxea, 2011; Canepescu, 2011). Researchers attribute the changing face of the students to trends in multiculturalism, internationalization and globalization (Currie & Newson, 1998). The globalization of the higher education sector and increasing diversity in local populations has meant that many universities around the world, classrooms have become increasingly diverse in terms of their cultural composition and the number of nationalities' represented (Ramburuth & Welch, 2005).

Organization for Economic Co-operation and Development (OECD) statistics indicate that there were just over 2.6 million students studying abroad in 2008 (Organization..., 2009). Further statistics in the reports of Higher Education Authority (HEA) indicate that 85 percent of all international students in the world study mainly within 30 OECD countries. It is interesting to note that the top four countries in the Anglo cluster (US, UK, Australia, Canada) account for 55 percent of all international students, that other countries (Higher..., 2003). Such trends in student movements across the world have added to the diversity already present in these countries with their multicultural populations, and it is predicted that the

number of students in search of higher education in foreign countries will continue to increase over the next 25 years (Higher..., 2010).

Cultural diversity as cross-border tertiary education has been defined as the movement of people, programs, providers, curricula, projects, research and services in higher education across national jurisdictional borders (Education..., 2010). As a subset of educational internationalization, cross-border tertiary education is part of international efforts to develop cooperative projects, commercial initiatives and academic exchange programs. There are numerous reasons for the emergence of cross-border tertiary education programs (Chetro-Szivos, 2010).

Of relevance to this paper is the increasing presence of international students (also referred to in the literature as foreign students) in BA of physiotherapy at the Faculty of Health Sciences of Semmelweis University (SU) in Hungary. Our aim is to provide an integrated framework for developing students' cross-cultural competence by drawing on the cultural diversity and learning strategies in higher education.

Target and goals

The Faculty of Health Sciences started foreign language teaching in the Physiotherapist specialist programme in the 2004/2005 academic year. The range of training courses offered by the Faculty is continually widening so an increasing number of possibilities are opening up for students who want to study in English. The number of foreign (Cypriot, Greek, Norwegian, Swedish, Irish, Chinese, Vietnamese, Iranian, Russian, Israeli etc.) students studying in our foreign-language courses is increasing year by year.

One of the important aspects of international programmes is to educate college professors about the student learning styles. Understanding how students learn is an important part of selecting appropriate teaching strategies. The purpose of this paper is: (1) to examine learning styles of foreign students in international classrooms and (2) to evaluate the impact of cultural diversity for developing of cross-cultural competences in order to help the students become more aware of their own learning strategies and motivation for learning.

Learning styles versus cultural diversity

How people prefer to learn is their learning style preference? Differences in learning styles are a result of such things as past life experiences, genetic-make-up, life and educational experiences and the demands of the present environment with multicultural aspects (Kolb, 1984). Recent research on learning questions of students in higher education from other regards has also been reported examines the relationships among the learning styles, feedback and information technologies (Lehmann, 2000; Keszthelyi, 2005).

Goodman, Phillips and Boyacilliger (2003) and others (e.g. Smart, Volet & Ang, 2000) point out that the culturally diverse classroom brings with it many challenges. One of the important aspects of educational challenges due to cultural diversity is to educate college professors about the students learning styles. Understanding how students learn in the multicultural environment is an important part of selecting appropriate teaching methods. Lectures structured so that all learning styles are addressed enabling every student to become actively engaged in the lessons. There are several models of learning styles, as well as several instruments to measure them. One of

them is the model of Fleming who developed an original analysis tool for the measurement of the leaning styles named VARK (Fleming, 1995).

Methods

We adopted the VARK questionnaire that used by Zapalska and Dabb (2002) and we integrated with some cultural aspects. What does it mean the acronym of VARK?

“V” as *visual* – some group of students is coded visually, like in the form of graphs, charts, and flow diagrams. They prefer to learn by picturing information or enhancing it via colours and layout. “A” as *aural* – the most common mode information exchange in speech that arrives in the questionnaire. “R” as *read* – some students reveal preferences for accessing information from printed words. This group of learners is coded as read since reading and writing are their preferred modes for receiving information. “K” as *kinesthetic* – the last group of students are coded as kinesthetic. Learners from this group like concrete, multi-sensory experiences in their learning. No student or teacher is restricted to only one of the four modes. Both students and teachers may exhibit a strong preference for one particular mode and at the same time they may have a relative weakness or strength in some other modes.

The instrument is a self-reported questionnaire of two main parts. The first part is about the cross-cultural management and the second one is about learning styles with 13 questions that allows students to describe the features of their educational experience that they most prefer.

Results

This quantitative, questionnaire-based research was conducted among foreign physiotherapy students (n=61, from all students 93 persons) at SU in spring 2011.

Students are from France, Ireland, Norway, UK, Sweden (Northern-Western Europe), Austria, Germany (Central-Eastern Europe), Cyprus, Greece, Italy, Spain (Southern Europe), Iran, Israel, Saud Arabia, Turkey (Middle East), China, India, Japan, Vietnam (Asia), Mauritius, Nigeria (Africa), Canada and USA (America).

Students could make a selection for each question (from 3 or 4 options) and if necessary they may omit a question or choose two or three responses. Posting the answers for each student usually leads to the following outcomes that can be seen in Table 1.

Table 1. *An example of students' responses*

Name	V	A	R	K
Thomas	7	1	8	0
Liu	10	3	3	5
Oranchimeg	5	7	3	2
Zilu	2	4	7	5
etc.				

We compared the results (preferences) to the cut-off points for the style of preference the student corresponds to from the VARK pack that is prepared by Zapalska. This ranges from strong preference cut-off points, to weak preference cut-off points. A score for a mode that stands out from the others

will indicate a strong or very strong preference. Table 2. is about determining learning preferences of students.

Table 2. *Determining leaning preferences*

Total responses	Very strong	Strong	Mild
	Preference indicated by a score that exceeds any other score by		
up to 16	4	4	7
17-22	6	5	8
23-30	3	3	9
31+	2	3	7

Some students are in the uni-modal group when they preferred only one learning preference. Others with two learning modes get to the group of bi-modal and three preferences mean tri-modal. Those students with no clear preference we named multi-modal. We collected the previous results from original countries (continents) and classified them into one type of the modal groups in Table 3.

Table 3. *Modal groups from learning styles*

	Students	Unimodal	Bimodal	Trimodal	Multimodal
NW Europe	10	3	2	2	3
CE Europe	7	1	3	1	2
Southern Europe	14	2	6	2	4
Middle East	12	3	2	4	3
Asia	8	1	2	3	2
Africa	7	1	2	2	2
America	3	1	1	1	0
Total	61	12	18	15	16

We calculated the percentages of all the modal-groups. The research results of multi-modal group show that multi-modal preferences for learning develop through some learning factors like the class size, the number of classmates from home countries, experiences of other cultures (study, work, friends, neighbours, travel) may be a contributing factor to the development of learning preferences.

According to data the learning preferences for each nation, each gender, each religion combined but there was not a significant difference among the each sample. We found that students from Southern Europe (Cyprus, Greece, Italy, Spain) preferred bi-modal learning styles primary with kinesthetic and visual modes.

All groups of targets learn the all four types, although the majority had been previously taught by the lecture method. Every students expressed preferred conditions for learning through handling objects via games and simulations for real-world experience, studying on their own via reading and visual techniques.

Our findings are consistent with Cheng (1987), who reported that foreign students in the USA must shift from the lecture method to a freer learning

environment. They must be exposed to solving problems instead of memorizing facts. Students must learn to locate information themselves instead of depending on their educators' lectures.

Subjective impressions and teaching experiences

In the classroom teachers have the opportunity to observe the students' behavioural, communication skills and during practices their problem solving skills also. During these interactions many cultural differences appear (Spindler & Hammond, 2000).

In a culturally diverse class we can observe the patterns of multicultural and intercultural communication as well. In a multicultural class students often use their mother tongue among each other for asking help or discussing. It asserts their self-confidence in problem-solving situations. In a multicultural class students prefer working with students from the same culture or from a very similar culture.

The teachers can observe that students from different cultures cope with similar students and doing well beside the other groups of students but the different cultures hardly cooperate with each other.

In an intercultural class everyone use the common language and students from different cultures prefer cooperate with each other often asking help to get know different accomplishments. The patterns of communication and problem solving skills also depend on previous school experiences and abilities to use cross-cultural competencies.

Conclusions

The differences among learning styles become more striking as our learning communities in higher education have become more diverse. Each student has a specific learning style or set preferences and that instruction should be designed to best accommodate that unique way or combination of learning styles.

Students learn differently from each other by face-to-face simulations, they can also gain direct experience of cultural interactions through multicultural group-work (Rauner & Maclean, 2008; Ryu & Parson, 2009).

In order to help the students succeed and to develop their cross-cultural competences, college professors need to know more about differences in learning styles and the complexity of the learning process. The VARK instrument could provide both students and educators in the international program with a stimulus for reflection and a change in both learning and teaching methods.

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