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Environment, motivation and learning preferences: A study of higher education students in Pakistan

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ABSTRACT

Approaches to learning are the ways of going about learning. Three main approaches have been identified in research on student learning: a deep approach, a surface approach and a strategic approach. This study aimed at investigating relationship between perceptions of the learning environment, academic motivation, learning preferences and approaches to studying among higher education students in Pakistan. The study was conducted with the students in B.A. /B.Sc. Honors' and Master Degree programs at two universities. A questionnaire was administered to a randomly selected sample of the students. Correlation analysis was carried out to examine the relationship between the perceptions, academic motivation, learning preferences and approaches to learning. The results of the study showed that the students who had positive perceptions of the learning environment, adopted the deep approaches to studying, whereas, those who had negative perceptions, adopted the surface approaches to studying. Moreover, the findings showed meaningful association between the perceptions, academic motivation, learning preferences and approaches to studying.

Keywords: Approaches to learning; perceptions of learning environment; academic motivation; learning preferences; higher education student

INTRODUCTION

Approaches to studying may be defined as the ways of going about learning. Students in higher education adopt a deep approach or a surface approach to learning (Marton & Soljö, 1976). The deep approach to learning is characterized by attempts to understand the learning material and to relate the new information with the previous knowledge and experience. Those who adopt the deep approach to learning, try to apply knowledge to real life issues. The surface approach, on the other hand, is characterized by attempts to memorize the material for reproduction in the examination. Another approach to studying is a strategic approach whereby the students try to achieve the highest grades with cost effective use of time and effort (Ramsden, 1979). According to Richardson (1994), the deep approach and the surface approach to studying are found in all systems of higher education.

How a student deals with a learning task is not a characteristic of the student (Biggs, 1999) but depends on the context in which he or she learns (Laurillard, 1979). Students respond to the perceived demands of the learning environment (Laurillard, 1979; Ramsden, 1979**).** The same student may adopt different approaches on different occasions according to the demands of the courses (Ramsden, 1992). Moreover, students may have preferences with regard to approaches to studying but may not maintain their preferred approaches if it is not supported by the learning environment (Biggs, 1999).

Approaches to learning and studying refer to qualitative aspects of learning; the way people learn instead of how much they learn (Ramsden, 1992). Quality of learning outcomes is associated with how the students go about learning (Biggs, 1979; Marton & Soljö, 1976; Ramsden, 1992; Trigwell & Prosser, 1991). The deep approaches lead to high quality learning and the surface approaches to low quality learning outcomes. (Ramsden, 1992).

Ramsden (1979) found that contextual variables (student-teacher relationship, commitment to teaching, workload, vocational relevance, teaching methods, social climate, clear goals and standards and freedom in learning) influenced the students' interest in the learning task. Entwistle (1987) argued that good teaching leads to intrinsic motivation and the deep approach to studying. On the other hand, both intrinsic and extrinsic motivation to learn is constrained by the teaching that does not involve the students in the learning process (Hanrahan, 1998). Motivation explains the difference between students in terms of amount of effort that they put into learning (Entwistle, 1987). Entwistle maintained that motivation relates to the learners' motives and goals and also to the interest generated by the teachers and rewards by the system.

LITERATURE REVIEW

Motivation is an integral part of an approach to learning, and determines the approach by interacting with student's strategy to learn (Willis, 1993). Entwistle (1987) argued that the students' motivation can be enhanced by making the curricula more relevant to vocational career. In a study, Ramsden (1983) found that polytechnic students were more

likely than the university students to use the deep approach to studying. According to him, perceived relevance of the courses might have motivated the students to use the deep approach to studying. Kember (2000) also argued that Asian students are motivated by the courses that prepare them for gainful employment. He maintains that the motivation created by relevance of the courses to the future employment cannot be viewed negatively because it is associated with greater effort by the students to understand the material.

Learning Environment and Approaches to Learning

The learning environment may be student-centered or teacher-centered. The teacher-centered environment focuses on teaching and the student centered environment focuses on learning. In teacher-centered learning environment efforts are directed toward improving the teaching skills of the teachers to make the teaching more effective. Such an environment is not characterized by active involvement of the students and lecturing is a predominant mode of instruction in this environment. There is not very much interaction among the students and between the teacher and the students. It lacks debate and discussion in the classes and teaching learning process is unidirectional and dominated by the teacher. The teacher does not act as facilitator but as a dispenser of knowledge. The teacher focuses on transmission of knowledge to the students. The teachers who use teacher-focused strategy tend to encourage surface approach among their students (Trigwell & Prossor, 1996).

The student-centered learning environment is characterized by active participation of the students in the learning process. Knowledge is not transmitted from teacher to students like the teacher cantered learning environment but it is created through debate, discussions and teaching learning activities. "By providing safe spaces in which students are accepted and respected, and in which uninformed, ambiguous, non-rational, illogical, unclear ideas, expressions and play are welcomed and listened to, we can nurture creativity, the desire to learn" (Mann, 2001).

Constructive learning is associated with conceptual-oriented and student-oriented environment; whereas, reproductive learning is associated with reproduction-oriented and teacher-oriented learning environment (Wierstra, Kanselaar, Linden, Lodewijks, & Vermunt, 2003). Ramsden (1998) argued that teachers can enhance the students' learning by creating student-centered environment where they have opportunities to be actively engaged with the learning tasks. "Institutions of higher education have a responsibility to create learning environments that promote deep level learning. To what extent this actually happens depends…on individual instructors...structure of the program and culture of the department (Kreber, 2003, p. 59).

Approaches to learning are not characteristics of the individuals; they are influenced by demands of the learning environment (Laurillard, 1979; Ramsden, 1979). According to Biggs (1999), learning process consists of presage (individual and contextual factors), process (approaches to studying) and product (learning outcomes) factors. He argues that individual factors (e.g. ability, interest, prior knowledge) and contextual factors (e.g. curricula, teaching, and assessment) determine the approaches to studying. Lizzio, Wilson and Simons (2002) investigated the relative effect of presage factors (e.g. Ability, personality, prior academic ability) and contextual factors (e.g. curricula, instruction, assessment) on the students' approaches to studying. The students' perceptions of the current learning environment (e.g. teaching quality, assessment, course design) were stronger predictor of learning in university than their prior achievement at school.

METHODOLOGY

The study was conducted with students who were enrolled in honors or master's degree programs at the two universities in Lahore. If a department was running both the honors and the master's degree programs then the students who were in honors degree programs were included in the population; however, the students in master's programs were included if the department did not offer the honors program. The population included both the male and the female students in all the years of the educational programs offered in the morning and afternoon/evening.

Multistage sampling procedure was used to draw samples from two clusters (two universities) of the population. The samples were conducted separately at the two universities. At the first stage, all the departments of each university (which offered honors programs or master's programs or offered both honors and master's programs) were divided into four categories of disciplines: social sciences, science and technology, humanities and management sciences. At the second stage, sampling frames were formed at the each sampled department at both the universities. Then samples of the students were drawn from the sampling frames prepared at the sampled departments by taking into account the year of study and timing of the educational degree program.

The total sample consisted of 912 students from 22 departments in the four subject areas at the two universities. In total, there were 494 males and 418 females aged between 17 and 27 with a mean age of 20.53 years.

Instruments

The questionnaire consisted of five parts. Part A was based on the 36-item Course Experience Questionnaire and was used (after minor changes to make it suitable for use in Pakistani context) to measure the students' perceptions of their learning environment (CEQ; Wilson, Lizzio, & Ramsden, 1997). Based on a factor analysis of the students' responses to this part of the questionnaire, Ullah et al. (2011) defined four scales: Instructional Practices, Appropriate Workload, Generic Skills and Appropriate Assessment.

Part B of the questionnaire contained one item on learning resources, two items on student support (McInnis, Griffin, James, & Coates, 2001) and two new items

concerned with physical space and computing resources. Part C was based on an instrument that had been devised by Entwistle, Tait, and McCune (2000) to measure the students' preferences for different types of course and teaching but included three additional items concerned with preferences for different types of assessment. Part D consisted of seven new items intended to measure students' level of motivation. Part was based on Entwistle, McCune, and Hounsell's (2003) Approaches to Learning and Studying Inventory (ALSI).

The questionnaire consisted of five parts A-E. All the items in each part of the questionnaire were followed by five answer categories, from definitely agree to definitely disagree. The questionnaires were administered to the students during their classes. Attempts were made to contact absent students through the teachers or their classmates. If a student was not contactable then he was replaced with another student from the same class, gender and year of study.

DISCUSSIONS

The responses to Parts A–E were analyzed separately to determine the underlying constructs that the students had used (reported; Ullah et al. 2011). The technique known as factor analysis provides evidence that a questionnaire measures one or more distinctive traits or constructs. Pearson product-moment correlation coefficient was used to analyze the relationships between the variables (factor-based scales).

Table 1 show that supporting understanding is positively correlated with both engagement and reliability, and transmitting information has positive correlation with reliability and negative correlation with engagement. Students' preferences for courses, teaching and assessment that support transmission of information have a positive association with reliability and a negative association with engagement.

Table 1

Correlation between Scales from Learning Preferences and Motivation

	Engagement	Reliability
Supporting Understanding	.23**	.23**
Transmitting Information	-.08*	.08*

* $p < 0.05$

Table 2 shows that supporting understanding; engagement and reliability have positive correlation with instructional practices, generic skills and learning resources. Appropriate workload and appropriate assessment have negative correlations with transmitting information. The appropriate assessment also has positive correlation with the engagement and the reliability.

Table 2

Correlation between Scales from Students' Perceptions of Learning Environment, Learning Resources, Learning Preferences and Motivation

	Supporting Understanding	Transmitting Information	Engagement	Reliability
Instructional Practice	.22**	-.00	.58**	.30**
Appropriate Workload	.06	-.17**	.06	.04
Generic Skills	.22**	.02	.38**	.32**
Appropriate Assessment	.00	-.22**	.06	.03
Leanings Resources	.16**	-.00	.41**	.27**

** $p < 0.01$

practices, appropriate workload, generic skills, appropriate assessment, engagement and reliability and a positive correlation with transmitting information. The surface approach also has a negative correlation with the learning resources.

Appropriate workload has a positive correlation with the deep approach and a negative correlation with the surface approach. Appropriate assessment has a positive correlation with the deep approach and negative correlation with the organized studying and the surface approach. The transmitting information has positive correlation with the organized studying, surface approach and the monitoring studying, and a negative association with the deep approach.

Table 3

Correlation between the scales from students' perceptions of the learning environment, learning resources, learning preferences, motivation, and their approaches to learning

	Deep Approach	Organized Studying
Instructional Practices	.66**	.19**
Appropriate Workload	.10**	.02
Generic Skills	.52**	.22**
Appropriate Assessment	.07*	-.10**
Learning Resources	.39**	.12**
Supporting Understanding	.30**	.15**
Transmitting Information	-.09**	.13**
Engagement	.62**	.22**
Reliability	.35**	.29**

* $p < 0.05$; ** $p < 0.01$

This study was correlational in nature and identified particular learning patterns instead of identifying causal relationships. Therefore, strictly speaking, the results did not say anything about the nature or direction of the underlying causal relationships among the constructs being measured by the scales. For example, the results showed that the students who had more positive perceptions of their courses were more likely to use desirable approaches to studying. However, they did not show whether this was because

(a) Having more positive perceptions caused students to use more desirable approaches,

(b) Using more desirable approaches caused students to have more positive perceptions or

(c) The causal relationship between perceptions and approaches went in both directions.

Correlation analysis was carried out to investigate the relationship between the perceptions of the learning environment, approaches to studying, learning preferences and academic motivation among the students. According to the results of the study the students who preferred the learning environment that supports understanding were more likely to be engaged and reliable. On the other hand, the students who preferred the learning environment that supports transmission of information were not likely to be engaged with their study.

The students who had positive perceptions of the instructional practices, generic skills and the learning resources were more likely to be engaged and reliable (motivated); they were also more likely to prefer the learning environment that supports understanding. The correlations also suggested that the students who had positive perceptions of the workload and assessment were not likely to prefer the learning environment supports transmission of information.

The students who had positive perceptions of the learning environment (instructional practices, generic skills, and workload, assessment and learning resources) were more likely to use the deep approaches but they were not likely to use surface approach to studying. The findings are consistent with the findings of the previous studies (Kreber, 2003; Laurillard 1979; Lawless & Richardson, 2002; Parsons, 1988; Ramsden, 1979; Ramsden, 1991; Ramsden & Entwistle, 1981; Richardson, 2003; Richardson, 2005; Richardson, 2009; Richardson, 2009; Richardson, Dawson, Sadlo, Jenkins & Maccines, 2007; Richardson, Gamborg & Hammerberg. 2005; Richardson & Price 2003; Sadlo & Richardson 2003; Trigwell & Prosser, 1991; Wilson, Lizzio & Ramsden, 1997).

The correlations suggested that students who were engaged and reliable (motivated) were more likely to use the deep approach, organized studying and monitoring studying but they were not likely to use the surface approach. The findings are broadly consistent with Entwistle and Tait (1990), Ramsden (1992), Davies, Sivan and Kember, (1994), Berglund, Daniels, Hedenborg and Tengstrand (1998), Delva, Kirby, Knapper and Birthwistle (2002), and Abraham (2006).

The students who preferred the learning environment that supports understanding were more likely to use the deep approach, organized studying and the monitoring studying. On the other hand the students who preferred the learning environment that supports transmission of information were more likely to use the surface approach, organized studying and the monitoring studying but they were not likely to use the deep approach to studying. The findings are consistent with Byrne, Flood, & Willis, (2004), Entwistle and Tait (1990), Hativa and Birenbaum (2000), Kember and Wong (2000), Sharma (1997), Wierstra, Kanselaar, Linden, Lodewijks and Vermunt (2003) and Wong and Watkins (1998).

Students who perceived the assessment practices to be appropriate were likely to use the deep approach to studying; however, they were not likely to use the organized studying and the surface approach. The positive perceptions of assessment practices were more likely to discourage the organized studying and the surface approaches than to encourage the deep approach to studying among the students. The findings are broadly consistent with Abraham (2006), Case and Gunstone (2002), Entwistle and Entwistle (1991), Lizzio, Wilson and Simons (2002), Richardson, Gamborg Hammerberg (2005) and Struyven, Dochy and Janssens (2005).

CONCLUSIONS

The study was correlational in nature; therefore, existence and direction of association between the variables was not analyzed. According to the results of the study, perceptions of the learning environment, approaches to studying, academic motivation and learning preferences were found to be associated with each other in a meaningful way. Students' positive perceptions of the learning environment were associated with their use of deep approaches, and the negative perceptions were associated with their use of surface approach to learning. The students learning preferences and academic motivation were associated with both their perceptions and approaches. Moreover, the students' academic motivation was associated with their learning preferences. In other words, students who were more motivated than others preferred the learning environment that supports understanding. The study identified the aspects of the learning environment that were associated with the desirable approaches to learning and the aspects that were associated with the less desirable approaches to learning. The results can be used to modify the learning environment to enhance students' approaches to learning and quality of the learning outcomes.

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