Research Paper

Education

A Study to Understand the Relationship Between Student's Perception of Academic Environment, Student Learning Approaches and Student Learning Outcomes Among MBA Students of Gujarat.

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ABSTRACT

One of the biggest concerns of modern day business schools is to make the teaching and learning processes more effective. This is a complex question but everybody wants to know what will bring better learning outcomes in their programs and what would make students learn in a better way. This is where it is very important to know the relationships between learning environment, learning approaches and learning outcomes.

This paper tries to explore relationship between student learning environment, student learning approaches and the resultant learning outcomes with reference to MBA students of Gujarat .The empirical paper is based on a detailed research done on students from 14 MBA institutes of Gujarat. This empirical paper throws light on how student learning approaches are related to student learning outcomes.

KEYWORDS

Learning Environen, Student Learning Approaches, Student Learning Outcomes, Surface & Deep Approaches of Learning

Introduction:

Research conducted across several universities in any countries have suggested that perception of learning environment plays an important role in shaping the choice of learning approaches of students. (Richardson, 1997). This is very significant since if such a relationship do exist than it give business schools a vital insight into helping students choose a particular type of enabling learning approach. This paper tries to explore the relationships between students' perception of their learning environment, their choice of learning approach and the resultant learning outcomes. Such relationships have been obtained in other regions and cultures and so this paper aims to see if these of research findings hold true for students Gujarat, India.

Theoretical Framework:

It is imperative to understand the theoretical framework and the body of research previously done to understand the relationships between Teaching approaches, Learning approaches and Learning outcomes and perceptions of academic environment.

Here, theoretical framework for measuring perceptions of academic environment and learning approaches are discussed :

Perception of Academic Environment and Course Experience Questionnaire (CEQ):

A number of attempts have been made to investigate the relationship between approaches to studying and students' perceptions of their academic environment using formal questionnaires. Ramsden and Entwistle (1981) devised the Approaches to Studying Inventory (ASI) to obtain self-reports on 16 aspects of studying and the Course Perceptions Questionnaire to obtain self-reports on eight aspects of the academic context. In practice, however, there was little overlap between students' scores on the two instruments (see Entwistle and Ramsden, 1983, 184–189; Meyer and Parsons, 1989). This might be due to inherent weaknesses in both questionnaires (Meyer and Muller, 1990; Richardson, 1990; see also Richardson, 2000, 90–96, 101–105).

Ramsden (1991) developed a new instrument, the Course Experience Questionnaire (CEQ), to measure students' perceptions of the academic quality of their courses. Since 1993, an adapted version of the CEQ has been administered annually to all students graduating from Australian universities, and an extended version of the CEQ was proposed by Wilson et al (1997) for use as a research tool. Lawless and Richardson

(2002) modified the CEQ and a short version of the ASI for use in distance education and administered both instruments to students taking courses by distance learning. They found a close association between the two instruments, such that the students' scores on the two questionnaires shared nearly half of their respective variance.

The initial evidence suggested that one could bring about desirable approaches to studying by appropriate course design, appropriate teaching methods, or appropriate forms of assessment. Nevertheless, interventions aimed at inducing desirable approaches to studying were largely ineffective (Gibbs 1992; Hambleton, Foster, and Richardson 1998; Kember et al. 1997). Eley (1992) found considerable variation in how different students perceived the requirements of the same courses. One possible explanation is that effects of contextual factors are mediated by students' perceptions of their academic environment, and hence educational interventions will be ineffective unless they also serve to bring about changes in the students' perceptions.

The Course Experience Questionnaire (CEQ) consisted of 30 statements in five scales that reflected various aspects of effective instruction: good teaching; clear goals and standards; appropriate workload; appropriate assessment; and emphasis on independence.

Respondents indicate their level of agreement or disagreement with each statement on a five-point scale. Half of the 30 items are consistent with the meaning of the scale to which they belong; the other half of the items have a meaning that is opposite to that of the scale to which they belong, and so these items are scored in reverse. Since 1993, an adapted version of the CEQ has been administered annually to all new graduates from Australian universities. This version contains only 17 of the original 30 items, and it entirely omits the Emphasis on Independence scale. However, it includes an extra scale that consists of six items concerned with the fostering of generic skills, and it is supplemented by an item in which respondents rate their overall level of satisfaction with their courses. For research purposes, Wilson, Lizzio, and Ramsden (1997) proposed that the original 30-item version of the CEQ should be augmented with the Generic Skills scale to yield a 36-item questionnaire, and they presented evidence of the reliability and validity of this instrument. Subsequent research has confirmed that there is a close relationship between students' perceptions of the quality of their courses and the approaches to studying that they adopt on those courses: in particular,

students who report positive perceptions of their courses are more likely to adopt a deep approach and are more likely to adopt a strategic approach, but they are less likely to adopt a surface approach than students who report negative perceptions of their courses. The relevant research has been carried out in Australia, Belgium, Canada, Denmark, England, Sweden and the USA (Richardson 2005; Richardson, Gamborg, and Hammerberg 2007; Sadlo and Richardson 2003). Such ideas as 'clear goals and standards', 'generic skills' and 'student independence' are part of the discourse of higher education in Western countries, but similar findings might not be obtained in other societies that do not share that discourse.

This study aimed to see if such a relationship also exists in Indian context.

The 3-P Model of Learning by John Biggs (Biggs, 1989)

There are enough significant research efforts addressing the relationships between student context, teaching context and resultant learning outcomes can easily be framed within the Biggs model (Biggs, 1989). In this model, John Biggs talks about the interface between Teaching context and Student context over three phases called Presage, Process and Product phase.

The overall assumption that Biggs has about learning through this 3-P model is that learning outcomes are a result of the interactions of the teaching and learning contexts with the student approaches to learning. The model conceptualizes a system of 3 sets of variables: the learning environment and student characteristics (presage), students' approach to learning (process) and learning outcomes (product). In basic terms, the at model proposes that, firstly, personal and situational factors influence a student to adopt a particular approach to learning which, in turn, mediates or influences the types of outcomes achieved. Secondly, the presage factors can also directly influence learning outcomes.

Both student and teaching presage factors interact to produce an approach to learning, which produces its characteristic outcome. Students bring into the learning system some predispositions that are learning-related, such as prior knowledge, abilities, values and expectations, ways of learning. These learning-related characteristics are referred to as the student presage factors that have a direct impact on the ways students choose to process academic tasks.

The teaching context is the environment set by the teacher and the institution, through the course structure, curriculum content, methods of teaching and assessment. Students perceive and interpret the teaching context and adopt a study approach that they think will help them to meet the demands of the teachers and the courses.

Hence, an approach to learning is not simply a fixed attribute of the learner, but a function of both learner characteristics and the teaching factors. The student and teaching contexts when combined, will produce a particular approach to learning which is broadly conceptualized as either 'deep' or 'surface' (Entwistle and Ramsden, 1983). The approach that students use to process academic tasks is referred to as the 'Process' phase in Biggs' 3-P model of learning.

A 'deep' approach is indicated by an intention to understand the material to be learnt, using strategies such as reading widely, combining a variety of resources, discussion, reflection, relating parts to a whole, and applying knowledge in real world situations. An intention to reproduce the material to be learnt and avoid failure through regurgitating information and using rote learning techniques characterizes the 'surface' approach.
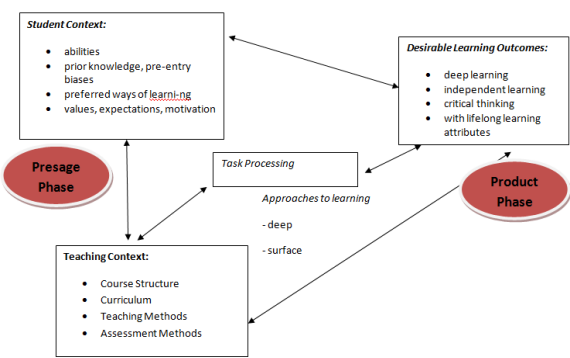
The 'Product' phase of the 3-P model suggests that study approaches are related to qualitative differences in learning outcomes. The deep approach will produce high quality learning outcomes, while a surface approach will result in lower quality outcomes.

The present study is focusing on the process and product phases of the Biggs model (which is shown below). Process factors describes how student approach their learning and product factors describes the resultant learning outcomes.

Learning Approaches:

Ramsden (1992) writes that an approach to learning 'describes a relation between the student and the learning he or she is doing'. The importance of this concept lies in understanding deficiencies in learning and recommending appropriate solutions for improving student learning.

The approach to learning is a qualitative description of what and how students learn. (Ramsden, 1992). Further, approaches to learning are not characteristics of students. Rather they 'represent what a learning task or set of tasks is for the learner. An approach describes a relation between the student and the learning he or she is doing.

Approaches to learning are direct descriptions of learning processes used by students. The taxonomy used to categorize these descriptions was initially derived from interviews and direct observation of students engaged in normal learning tasks, notably reading academic articles. Marton and Saljo (1976) identified two discrete approaches to reading articles. The first is a surface approach, consisting of concentration on superficial features of the learning task such as key words or phrases, in order to memorize or reproduce certain targeted elements. When questioned about the content of an article read, students using this approach tend to provide detailed examples but overlook the article's main message.

The second approach identified was a deep approach, in which the student focuses on the underlying meaning and purpose of an article or academic task. In addition to the deep and surface approaches, later research (Biggs, 1987) has identified a third, achieving approach, in which the student aims for the best grades and to be a model student.

Each learning approach has two dimensions, a motivation and a strategy. Learning approaches are not seen as stable psychological characteristics, and the approach adopted by an individual student may therefore vary with his or her personal motivation and the teaching context.

TABLE 1
The Meaning of the Sub-scales in the SPQ Instrument

Approach	Motive	Strategy
Surface	Surface Motive is instrumental: main purpose is to meet requirements minimally, a balance between working too hard and failing.	Surface Strategy is reproductive: limit target to bare essentials and reproduce through rote learning.
Deep	Deep Motive is intrinsic: study to actualize interest and competence in particular academic subjects.	Deep Strategy is meaningful: read widely, interrelate with previous relevant knowledge.
Achieving	Achieving Motive is based on competition and ego-enhancement: obtain highest grades, whether or not material is interesting.	Achieving Strategy is based on organizing one's time and working space: behave as "model student."

(Adapted from Biggs, 1987b, p. 11.)

The Surface Approach.: The surface motive is basically instrumental or extrinsic. The student's main purpose is to meet requirements with least effort; the resulting strategy is essentially reproductive, in that surface motivated students focus on what appear to be the most important topics or elements, and try to reproduce them accurately. They do not see interconnections between elements, concentrating as they do on the surface features or "signs" of learning, not on the meanings or implications of what is learned (Marton & Saljo, 1976). Sometimes of course the signs of learning are important

for example when formulae need to be reproduced with accuracy whether or not they are understood — but when the surface approach is used predominantly it is inimical to the usual goals of learning.

The Deep Approach: The deep motive is based on intrinsic motivation to understand, the strategy to seek meaning. The student attempts to relate the content to personally meaningful contexts or to existing prior knowledge, theorising about what is learned, "playing" with the task by forming hypotheses about how it relates to other known or interesting items, and deriving extensions and exceptions. Study behaviour is usually marked by wide reading, discussion with teachers and other students, and the like.

These approaches tend to be characteristic of students over time, but the teaching context may exert a considerable influence at any given moment. Time pressures, heavy assessment, a "cold" classroom climate, and expository teaching encourage surface learning in all students, while teaching to emphasise meaningful learning, assessing for higher order cognitive outcomes, and a context that encourages attributions of ownership and self-efficacy and learner activity rather than passivity, encourages deep learning. (Biggs & Telfer, 1987).

Trigwell and Prosser (1991) have contended that the major aim of higher education is to produce high quality learning outcomes. The learning outcomes defined for this research are academic achievement, course satisfaction and generic skills.

Research done by Trigwell (1991), Richardson (2000) have indicated that deep learning leads to higher learning outcomes and surface learning leads to lower learning outcomes.

From review of literature evidence has emerged about students' approaches to learning, namely: (a) the outcomes of a deep approach to learning are more consistent with the goals of higher education; (b) the outcomes of a surface approach to learning are highly incompatible with the goals of higher education (Biggs. 1987a. 199?: Ramsden. 1992); and (c) 'deep approaches are related to higher quality outcomes and better grades" (Ramsden, 1992). Watkins and Hattie (1981), for example, examined the relationship between approaches to learning and grade point averages (GPA) of students at an Australian university. They found significant negative correlations between a surface approach to learning and GPAs for science students, and a significant positive correlation between a deep approach and GPAs for arts students. Others such as Eley (1992) and Booth et al (1999) also found significant associations between surface approaches to learning and lower academic grades, and between deep approaches to teaming and higher academic grades. Davidson (2002) employed the SPQ to examine the relationship between students' approaches to learning and examination performance.

Results revealed no significant relationships for a surface approach to learning, and a significant positive relationship between the use of a deep approach to learning and complex examination questions, but no relationship between a deep approach and less complex examination questions.

Ramsden's 1992) model of student 'learning in context' (see Figure 2).. like Biggs' (1990) 3P Model, suggests that learning outcomes are influenced by students" approaches to learning, which are in turn influenced by the context of learning and

students" orientations to learning.

This paper tries to understand the relationship between perception of academic environment, learning approaches of MBA students of Gujarat and their subsequent learning outcomes.

Research Method:
The main objective of this research was to understand the relationships between student learning approaches and student learning outcomes of MBA students of Gujarat.

Sampling Methods:
A circular systematic sampling was done to select the respondents. Firstly, a MBA institute was selected. The criteria for selecting the institute were:

- The institute should be atleast five years old.
- The should have an intake of atleast 60 students
- The institute should be affiliated to a recognized university or should be university department

Once the institute was selected, depending upon the intake of the students every eighth (if intake was 120), or every sixth (if intake was 90) and every fourth student(if intake was 60) was selected based on his/her GCET rank (GCET was the prevalent centralized admission test for admissions to MBA in Gujarat State). Total 15 students were selected from each of the selected institute. All respondents had successfully completed their first year of MBA were in the second year of the MBA program.

In this way 195 students were selected from 13 institutes spread across Gujarat State. So the total sample size was 195. There were 112 males respondents and 83 female respondents. Out of the total respondents, 145 were non-engineers and 50 were engineers.

Instruments::
The following questionnaires were used for this research:

- RSPQ (revised study process questionnaire) by Kember & Biggs to measure learning approaches among students. It gives deep approach and surface approach scores.
- CEQ (course experience questionnaire) by Wilson et. al to measure perceptions of academic environment

These are valid and reliable instruments used and endorsed by researchers worldwide and so no separate reliability was checked for this study. However, the reliability of these instruments for all the collected responses was checked by cronbach alpha.

The cronbach alpha for CEQ was 0.75 and that for RSPQ for 0.6.

The student learning approaches (Deep Approach & Surface Approach) was measured by RSPQ.

The learning outcomes were defined as:
1. Academic Achievement
2. Development of Generic Skills

Academic Achievement was measured by the grades received by the sample respondents in their first year. The Generic Skills was measured using the Generic Skills (GS) scale of the CEQ.

Analysis & Findings:
All analysis was done using SPSS and AMOS. All the data was manually added in SPSSS and then it was screened. The data cleaning and screening was done by checking for homogeneity of variance of data, normality of data, heteroskedasticity of the data, multicollinearity of the data. The data reliability was checked using the cronbach alpha.

Since the data had two dependent variables and 2 or more independent variables, the structural equation modeling (SEM) was used. Path Analysis using SEM was done to understand the relationships between the student learning approaches

and learning outcomes.

Path Analysis using SEM:
The following steps were done using SPSS AMOS to conduct the path analysis using SEM:

- Model Specification in AMOS
- Model Fitness
- o Goodness Fit (Indices GFI, AGFI, TLI, CFI)
- o BADNESS FIT using RMSEA
- Path Analysis

Goodness of Fit:

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	38	106.563	67	.002	1.590
Saturated model	105	.000	0		
Independence model	14	583.164	91	.000	6.408

Model	RMR	GFI	AGFI	PGFI
Default model	.624	.932	.940	.595
Saturated model	.000	1.000		
Independence model	1.191	.610	.550	.528

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.817	.752	.923	.930	.920
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

The goodness of fit indices like TLI = 0.930, GFI = 0.932, AGFI = 0.940 suggest goodness of fit of the model.

Badness of Fit:

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.055	.034	.074	.317
Independence model	.167	.154	.180	.000

RMSEA is less tan 0.055 and PCLOSE is 0.317 (which is the pvalue testing the null hypothesis that RMSEA is no greater than .05. With the given PCLOSE value we are not able to reject the null. i.e. RMSEA is less than 0.05

This indicates that the model is a good fit on the badness of fit parameters.

Path Analysis for the specified model is as below:
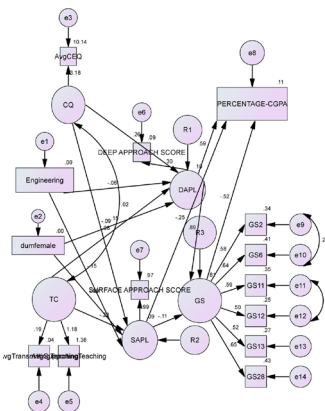
Discussions:
Relationship between perception of academic environment and choice of learning approach:

It is very evident from the path analysis using SEM that there is a statistically significant relationship existing between perceptions of academic environment, student learning approach-

es and learning outcomes.

The model suggest a strong and positive relationship between perceptions of academic environment and deep approach of learning (89 % of variance explained by the data). It also indicates a strong and negative relationship between perceptions of academic environment and surface approach of learning.

This strongly implies that even in Gujarat, like in most of the Western countries, the choice of learning approaches of students are influenced by their perception of their academic environment. So, students who thinks that their academic environment is positive tend to approach a deep approach of learning and those who think that their academic environment is not positive tend to adopt surface approach of learning.

Relationship between learning approaches and learning outcomes:
The research also indicates a strong relationship between learning approaches and resultant learning outcomes.

The standardized regression weights implies that a deep approach of learning leads to higher levels of learning outcomes and a surface approach of learning leads to a lower level of learning outcomes. This indicates that students who adopted a deep approach of learning have obtained higher academic grades and have also shown better development of generic skills. While those students who adopted a surface approach of learning have got lower academic achievement and lower generic skills development.

This is indeed a very significant finding and have lot of implications for students, teachers and academic institutes (here business schools of Gujarat) at large. The students, the teachers and business schools should make conscious attempts to foster deep approach of learning so as to get higher and better learning outcomes.

Conclusion:
This paper highlights with empirical evidence that there is a strong relationship between perception of academic environment, choice of learning approaches and learning outcomes. A positive perception of academic environment may lead to adoption of deep approach of learning which leads to higher academic achievement and development of generic skills. Similarly, a negative perception of academic environment may lead to surface approach of learning which in turn will lead to lower academic achievement and lower generic skills development.

All business schools and its teachers and of course all students want a better learning outcome ultimately. This makes it imperative for all these stakeholders to look at the providing a positive academic environment. This consists of freedom in courses, appropriate assessments, and appropriate workloads for students, good teaching practices, setting of clear goals and standards in each courses and in the overall program and focus on developing skills rather than mere teaching. Many times we ignore this basic fact when we plan our courses or programs and so the teachers and students are found doing more of a ritual of completing the course rather than focusing on real learning and long reaching skills development. This research strongly suggest that teachers should focus completely on all aspects of course design, assessments, workload of assignments, pre-reads, projects etc and also provide proper and clear guidelines etc to make the perception of academic environment positive among the course participants.

Secondly, one should try to develop a deep approach of learning towards courses and the overall program to get better results. This would warrant working at cognitive, affective and behavioral level of both; the students as well as teachers. The business schools should try to provide a conducive environment to promote deep approach of learning among students. The teachers should also introspect and see what they need to change in their routine or regular approaches to enable students develop a better learning approach.

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