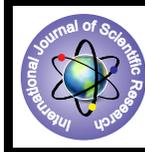


A Study to Understand the Relationship between Student Learning Approaches and Student Learning Outcomes Among MBA Students of Gujarat.



Higher Education

KEYWORDS : • Student Learning Approaches
• Student Learning Outcomes
• Surface & Deep Approaches of Learning

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ABSTRACT

Teaching and learning and learning outcomes are many times treated in silos. It is important to understand various learning approaches and how are they related to their subsequent learning outcomes. In the field of higher education wherein the students are mature and thinking individuals do they have any control over their learning outcomes by changing or controlling their learning approaches?

This paper tries to explore relationship between student learning approaches and the resultant learning outcomes with reference to MBA students of Gujarat using John Biggs model of teaching & learning approaches and learning outcomes.

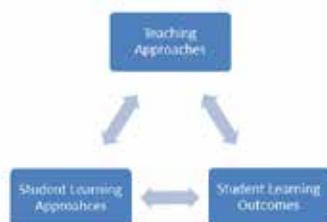
The empirical paper is based on a detailed research done on students from 14 MBA institutes of Gujarat. This empirical paper throws light on how student learning approaches are related to student learning outcomes.

Introduction:

Recent mushrooming of business schools in Gujarat has led to a huge churn out of MBA graduates in the market. Whether these MBAs have got the necessary Knowledge, Skills and Attitude to face the realities of the actual business world is a question that is still looking for answers. Many business schools have adapted to the changing industry needs and have bring in changes at the level of faculty intake, curriculum relevance and design, pedagogy methods, learning experience and better throughput mechanisms. Newer methods of teaching along with the traditional methods have found place in the present business schools. On the other side, the students have also learnt to respond to various curriculum designs and teaching methods and have adjusted not only to the new learning experience but also have developed their own learning approaches to cope up with the diverse demands of a MBA curriculum.

As Ryan and Carroll (2005) note, 'students find the transition to higher education taxing, until they become accustomed to academic language and conventions, independent learning and class participation. Moving from undergraduate studies to post-graduate professional courses is not an easy transformation for many students. This situation is very clear and distinct in the Business Schools of Gujarat where most of the students come from a diverse background ranging from native places, to medium of education in school/colleges to socio-cultural belongings. Many students come from smaller towns or cities; many have not studied in English medium till 10th grade or 12th grade. This makes teaching and learning very difficult, complex and tactful task at the MBA schools of Gujarat. It is evident in the recent literature that students tend to feel overwhelmed and anxious in a learning environment and teaching approach that disregard and greatly deviate from their previous learning experience, and which may in some cases, contradict and threaten their existing cognitive framework.

The study aims to understand the relationships between Teaching Approaches, Learning approaches and Learning outcomes.



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.

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.

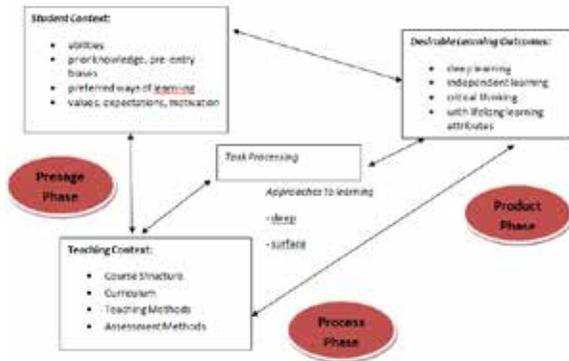
Both student and teaching presage factors interact to produce an approach to learning, which produces its characteristic outcome. Students bring into the learning system some predispositions that are learning-related, such as prior knowledge, abilities, values and expectations, ways of learning. These 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 3
The Meaning of the Strategies in the BPO Instrument

| Approach | Motives | Strategy |
|-----------|--|---|
| Surface | Surface Motives to instrumental: meet purpose or to meet requirements externally, to please teachers, winning top marks and passing. | Surface Strategy to reproduction: look target to learn memorized and reproduce through rote learning. |
| Deep | Deep Motives to intrinsic: study to understand content and competence in particular academic subjects. | Deep Strategy to meaningful: seek widely, interrelate with genuine relevant knowledge. |
| Achieving | Achieving Motives to focus on competition and self-endorsement: obtain highest grades, whether or not interested in learning. | Achieving Strategy to focus on competing well in class and working system failure or “model student.” |

(Adapted from Biggs, 1997b, p. 11.3)

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, 1992; 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 learning 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 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

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 Ap-

proach) 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 SPSS 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
 - Goodness Fit (Indices GFI, AGFI, TLI, CFI)
 - 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.

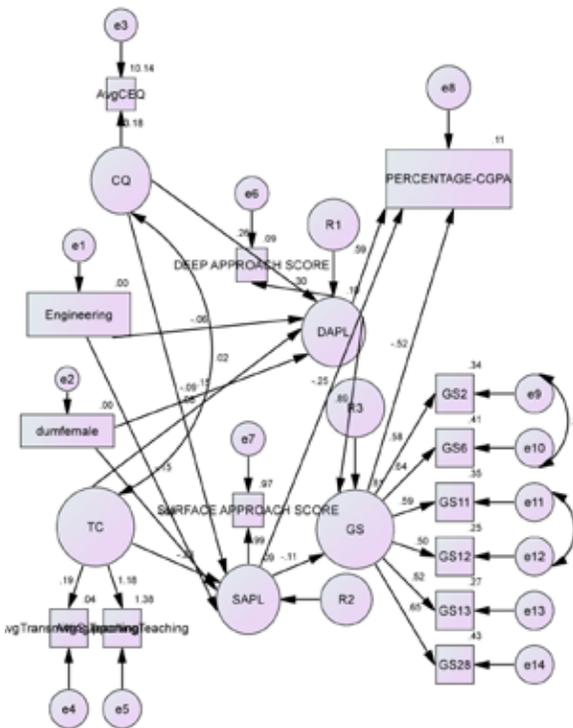
Badness of Fit:

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

RMSEA is less than 0.055 and PCLOSE is 0.317 (which is the p-value 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:

It is very evident from the path analysis using SEM that there is a statistically significant relationship existing between student learning approaches and 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 deep approach of learning leads to development of higher order learning outcomes. All business schools and its teachers and ofcourse all students want a better learning outcome ultimately. This makes it imperative for all these stakeholders to look at the learning approaches and how they can be moulded. 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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