



RESEARCH ARTICLE

STUDY APPROACHES USED BY UNDERGRADUATE STUDENTS OF CONTINUOUS EVALUATION SYSTEMS AND ANNUAL EVALUATIONS SYSTEMS

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ABSTRACT

The purpose of this study was to assess the difference between study approaches used by male and female undergraduate students of continuous and annual evaluation system. The sample consisted of 100 students (50 from Dayalbagh Educational Institute, Agra where continuous evaluation system exists and 50 from B.R. Ambedkar University, Agra where annual evaluation system exists). The revised two factor study process questionnaire (R-SPQ-2F). Developed by Biggs, Kember and Leung (2001) were used. Two way analysis of variance revealed that for the deep study approach there was no difference in its use by the students of continuous and annual evaluation system. Female students were found to use deep study approach more than males. Interaction effect of evaluation system and gender was not found to be significant. Students of continuous evaluation system were found to use surface strategy approach significantly more than the students of annual evaluation system. Moreover, the highest score was found on surface study approach by the male subjects of continuous evaluation system and lowest for the females of annual evaluation system.

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INTRODUCTION

The pioneering work of Marton and Saljo (1976a) on student's approaches to study suggest that students could adopt two different approaches: Deep approach involves an intention to understand the author's meaning and active interaction with the text. Surface approach consists of study merely with the intention of reproducing information without further analysis. The deep approach refers to engaging oneself into the task appropriate suggest that students could adopt two different approaches: Deep approach involves an intention to understand the author's meaning and active interaction with the text, Surface approach consists of study merely with the intention of reproducing information without further analysis. The deep approach refers to engaging oneself into the task appropriate and seeing meaning. The surface approach refers to narrow target and rote learning. Another approach characterized by effective time and effort management geared to covering the syllabus with a view to obtaining the highest possible grades is identified as strategic approach, Fransson (1977) found that where students felt that a situation was threatening and/or where the material to be learned was perceived as having little personal relevance, a surface approach was more likely to be adopted. When students feel that they are chronically

overloaded by a continuous stream of new information, they will almost always resort to a surface approach, even if they originally had intentions to the contrary. It was found that courses that emphasize autonomy and a reduced emphasis on examinations for assessment are linked with deep approach (Entwistle, McCune Swaker, 2001) By contrast, in institutions where there is high emphasis on examination, even if student centered learning operates, students tend to demonstrate surface approach (Ramsden, Martine and Bowden, 1989). Gender has been found to be a background variable that has received considerable attention in study approach research. Several studies have shown gender to be related to the learning approach adopted by students. Females face more difficulty than males in selecting what to study and how to prioritize the material in a multiple-choice learning condition. Meyer, Dunne and Richardson (1994) examined the manifestation of structural differences in the manner in which men and women students perceive and engage the content and context of learning. Results showed that gender differences were evident in terms of deep strategic rather than surface forms of learning behavior. Duff (2003) examined the impact of approaches to learning on academic performance and it was found that male and female students showed no overall deference in their scores on the three approaches (i.e. deep, surface and strategic). These controversial results led the investigators, to further investigate especially whether such learning approached among under graduates is indeed gender related?

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Another pertinent question is whether the students studying under the two system of evaluation i.e. continuous evaluation and annual examination system differ in their use of learning approaches? Continuous evaluation system is the evaluation done throughout the course of study, and is thus an integral part of the teaching learning process. It employs unit approach in teaching and testing, thus a unit test is basically a test based on small block of content. In the continuous evaluation system periodic assessment of the students is done and it indicates regular study habits. In the annual examination system the students are evaluated only once during the whole academic year i.e. at the end the academic year. It is assumed that the students of the two systems apply different strategies and study approaches to achieve good grades.

The review of related literature shows that there is dearth of research studies on study approaches used by undergraduate students of continuous and annual evaluation systems. However, what is less well known is whether and how evaluation system of education of students and their gender would interact to influence study approaches. This study would be of importance as it would provide insight to all those students' who adopt maladaptive study habits and as a result face depression for not seeking good grades.

selected for the present study. All the subjects were the first year B.Sc. students, age ranging from 17-19 years. An equal number of male and female subjects were selected from each institute. In Dayalbagh Educational Institute, Agra, the continuous evaluation system and in B.R. Ambedkar University, Agra annual evaluation system exists. Thus for a 2(evaluation system: continuous and annual) X2 (Gender: Male and female) design there were 25 subjects in each cell.

### Tools

The revised two factor study process questionnaire: R-SPQ-2F:- This questionnaire was developed by Biggs, Kember, and Leung (2001). Participant responded to 20 items on 5- point scale ranging from "never true of me" (1) to "always/almost true of me" (5). Cronbach's alpha was 0.62- 0.73. Factor analysis indicated a good fit to the intended two factor structure.

## RESULTS

Result presented in table 1 and 2 show that the obtained F (1, 96)=3.74,  $P>.05$  for deep study approach was not found to be significant. Thus the subjects studying in continuous

**Table 1. Mean deep and surface study approach scores for different groups**

| Evaluation System | Deep study approach |        |            | Surface study approach |        |            |
|-------------------|---------------------|--------|------------|------------------------|--------|------------|
|                   | Male                | Female | Grand mean | Male                   | Female | Grand mean |
| Continuous        | 33.88               | 35.64  | 34.76      | 35.72                  | 26.12  | 30.92      |
| Annual            | 34.56               | 37.88  | 36.22      | 25.72                  | 21.12  | 23.42      |
| Grand Mean        | 34.22               | 36.76  |            | 30.72                  | 23.62  |            |

**Table 2. Summary: Analysis of variance**

| Source of Variation | Deep study approach |    |        |      | Surface study approach |    |         |       |
|---------------------|---------------------|----|--------|------|------------------------|----|---------|-------|
|                     | SS                  | df | MS     | F    | SS                     | df | MS      | F     |
| Continuous          | 92.36               | 1  | 92.86  | 3.74 | 1406.25                | 1  | 1406.25 | 48.36 |
| Annual              | 101.55              | 1  | 101.55 | 4.09 | 1260.25                | 1  | 1260.25 | 38.56 |
| Grand Mean          | 15.39               | 1  | 15.39  | 0.62 | 156.25                 | 1  | 156.25  | 4.81  |
|                     | 2384.02             | 96 | 24.83  |      | 3113.3                 | 96 | 32.43   |       |

\*\* F.99 (1, 96) =6.91\* F.95 (1, 96) =3.94

### Hypotheses

1. There would not be any difference between the subjects of continuous and annual evaluation system in regard to the deep study approach scores.
2. Male subjects would score higher on deep study approach as compared to females.
3. On deep study approach males studying in annual examination system would score highest as compared to males under continuous evaluation system, females under continuous or annual evaluation system.
4. Subjects under continuous evaluation system would score higher on the use of surface study approach than the subjects under annual evaluation system.
5. Males would score higher on surface study approach as compared to females.
6. Males studying under continuous evaluation system would score highest as compared to males under annual evaluation and females under annual or continuous evaluation system on surface study approach.

### Subjects

100 subjects (50 from Dayalbagh Educational Institute, Agra and 50 from Baba Bhimrao Ambedkar University, Agra) were

evaluation system (M=34.76) and annual evaluation system (M=36.22) do not differ from each other in the use of deep study approach of learning. This substantiates hypothesis 1 that there would not be any significant difference in the use of the deep study approach by the subjects of the two evaluation systems. Perusal of table 2 indicates that there is the significant gender difference in the use of deep study approach scores, F (1, 96)=4.09,  $p<.05$ . The male subjects scored significantly lower (M=34.22) than females (M=36.76). This rejects the hypothesis no.2. That the male subjects would score higher as compared to female subjects. The interaction effect of evaluation system and gender was not found to be significant,  $f(1, 96) =0.62$ ,  $p>.05$  and this rejects hypothesis no. 3. For the surface study approach the F value for evaluation system was found to be significant (F1, 96=48.36,  $p<.01$ ). The subjects of continuous evaluation system scored significantly higher as compared to annual examination group (Ms=30.92 vs. 23.42). Thus the hypothesis No. 4 was accepted. Males scored significantly higher on surface study approach (M=30.72) as compared to females (M=23.62) as the obtained value of F (1, 96) =38.96,  $p<.01$  was found. This accepts hypothesis No. 5 that males would score higher than females on surface approach. The interaction effect of evaluation system and gender was found to be significant F (1, 96) = 4.81,  $p<.05$ . Males under continues evaluation systems scored highest

(M=35.72) as compared to males under annual evaluation system (M=25.72) females under continuous evaluation (M=26.12) and annual evaluation system (M=21.12). This supports hypothesis No.6.

## DISCUSSION

The results showed that there was no difference in use of deep study approach by the students of continuous and annual evaluation system. The reason for this may be that the deep study approach is found to correlate positively with an intrinsic motivation orientation (Entwistle and Tait, 1994; Fazey, 1999; Gupta, 2006); with learning rather than performance goals and with the perception of internal control over success and failure in study (Kong and Hau, 1995). Thus it is evident that the two groups of subjects do not differ in their use of deep approach but they do differ in their use of surface approach. The continuous evaluation system emphasizes continuous studies and the students remain under pressure to get all the assignments completed by the end of the day. The only way to cope with this pressure is to adapt to a more instrumental surface approach. Perception of the learning environment, too much emphasis on marks and teaching method are several determinants of which learning approach is to be used by the students (Kreber, 2003; Newstead 1998). found that a decrease in deep approach occurred at the end of the module and to the proximity of a formal examination assessment that encouraged a surface approach. Contrary to the predictions of the present study, the results showed that females were found to score significantly higher than males on deep study approach, whereas for surface study approach males scored significantly higher than females. Mc Care and Costa (1987) found that female students reported themselves to be consistent and regular in their study habits, regular in monitoring their understanding and organized in note taking and assignment preparation. This may be the reason that the female group was found to use more of the deep study approach and males use more surface study approach than their counterparts. Lange, Mavondo, (2004). examined the relationship between gender, motivational differences and students, approaches to learning. The structural equation model was developed and subsequently examined for differences across gender groups. Results indicated different learning strategies for male and female subjects. Another important finding was that the higher surface study approach scores were found for the male subjects studying under continuous evaluation system and lowest scores were found for female subjects in the annual evaluation system. Surface cognitive strategies refer to rehearsal, involving the repetitive rehearsal and rote memorization of information, which helps to encode new information into short term memory, e.g., reading the course material over and over again. Deep cognitive strategies, pertaining to elaboration, organization and critical thinking, involve challenging the veracity of information encountered and attempting to integrate new information with prior knowledge and experience, which facilitates long-term retention of the target information (e.g. making an outline of important concepts). The annual evaluating system pays heavy weight to essay type questions in which deep understanding and integration of the material is tested and this requires deep cognitive processing. In the continuous evaluation system usually the evaluation is based on multiple choice questions etc. to test whether students made sense of and memorized the information provided in the course. This perhaps requires the use of surface cognitive strategies. Evans, Kirby and Fabrigar (2003) concluded that

self regulated learning was defined by measures of deep approach to, earning, need for cognition and adaptive control of learning whereas surface approach was related to irresolute control and negative need for cognition. Crocker and Park (2003) revealed that people seek to maintain, protect and enhance self-esteem by attempting to obtain success and avoid failure in domains on which self-worth has been staked, Contingencies of self worth, then, serve a self-regulatory function, influencing the situations people select for themselves, their efforts in those situation and their reactions to success and failures. Sinha and Kumari (2000) found significant positive correlation coefficients between parental inducement of self-regulation scores and deep strategy scores and negative correlation coefficient between parental inducement of self-regulation and shallow or surface strategy scores.

According to Kember (1996), deep learning begin with an intention to understand and maintain a vigorous interaction with content, whereas the surface learners. Main intention is to complete the task requirements, which are regarded as external impositions. The implication is that deep learning is somehow better than surface learning because understanding is achieved. A particularly depressing finding is that most students in most undergraduate courses become increasingly surface and decreasingly deep in their orientation to learning (Gow and Kember, 1990). The approaches to learning literature emphasizes the contextual nature of learning, learning cannot be viewed in isolation, but must be seen in a wider context including factors such as curriculum, assessment, modes of teaching, students prior experience of education, and their perception of learning. The aim therefore, is to create an environment that encourages students to develop a deep approach to learning, enabling them to develop a deeper understanding of course material, which intern creates higher quality learning outcomes.

However the limited use of surface strategies results in higher exam scores, which supports the idea that surface processing is integral to the development of a comprehensive knowledge base (Elliot, McGregor, Gable, 1999). When the use of surface strategy is instigated by metacognitive monitoring and regulation this safe guard that the limited use of these strategies is appropriate to the task and the exam. When the task is less challenging or not particularly interesting good learners could cope with surface strategy to obtain high grades. Thus they flexibly adapt their goal pursuit and manage their learning, so they are able to attune their behavior optimally to the task and achieve good results.

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