

Effectiveness of Self Learning Modules on the Achievement and Retention of Undergraduate Students in Commerce

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ABSTRACT

Individualisation of instructions is the need of the time. Effective learning requires individual guidance, personal attention and overall individual efforts of the learners. Self Learning Modules may prove to be a boon for students due to their enriched features. They perform the role of an efficient teacher. Students become independent thinkers. They gain the freedom to learn without restrictions. Due to increased enrolment of students and knowledge explosion, the need of Self Learning Modules is the demand of the time. In order to develop and find out the effectiveness of Self Learning Modules (SLM) for higher education, the present venture has been taken up. The students may excel in their related fields if they are provided Self Learning Modules for self-study purpose.

Keywords- Modules, Achievement, Retention

Learning in true sense requires individual guidance, personal attention and overall individual efforts of the learners. Self Learning Modules may prove to be a boon for students due to their enriched features. They perform the role of an efficient teacher. Students become independent thinkers and learn to accept responsibility. Intrinsic reward creates good feeling among the students. Self-learning modules give the opportunity to develop a good work ethic. Due to increased enrolment of students and knowledge explosion, the need of Self Learning Modules is the demand of the time. Along with it, knowledge through Self Learning Modules also helps to inculcate self-study habits and self-confidence among students which are very much essential to enhance learning. Various researches conducted by researchers such as Chopra (1988), Greager and Murray (1991), Dhamija (1993), Dutt (1998), Aggabao (2002), Rastogi (2003) and Puri (2009) highlighted that the Self Learning Modules are more effective as compared to conventional mode of teaching. In India, the development of Modules is in its infancy stage and most of the researchers developed modules and found out their effectiveness for school students. Very few researchers developed SLM for higher education level. In order to develop and find out the effectiveness of SLM for higher education, the present venture has been taken up. The students may excel in their related fields if they are provided Self Learning Modules for self-study purpose.

REVIEW OF RELATED STUDIES

Debi (1989) conducted a study on Developing and Testing the Effectiveness of Programmed Learning Material in the syllabus of Principles of Education in the B.T. course of Gauhati University. The PLM was found to be effective compared to the Traditional Method of Teaching in achievement in 'Principles of Education' in sub-tests 1, 2 and 3. There was a significant difference between the post-test scores of the experimental group and those of the control group. Greager and Murray (1991) offered Modules to the teacher. They found that the Modules helped the students to learn as well as provided better chances to the students to interact with the teacher

because it reduced the routine instruction time.

Dhamija (1993) compared the effectiveness of the three approaches of teaching namely Conventional, Radio-vision and Modular on the achievement of students in social studies. The mean gain scores of students in Civics when taught through Modular approach were more than the mean gain scores of students when taught through Radio-vision as well as Conventional approach thereby indicating that Modular approach was more effective in teaching Civics in comparison to Radio-vision and Conventional approach.

Agrawal (1995) conducted a research on the Comparative study of conceptual understanding by Programmed Instruction and Computer Assisted Instruction. The objective of this study was to compare the relative effectiveness of two methods of teaching Programmed Instruction (PI) and Computer Assisted Instruction (CAI) for the conceptual understanding of students. It was found that the PI and CAI were quite effective for teaching Biological concepts to class IX students regardless of their sex, intelligence or SES level. CAI method was not equally beneficial to all the students. It was better for boys, students of higher intelligence and students belonging high socio-economic status group.

Chaudhari (1997) conducted a research on the Investigation into Effectiveness of Linear Programmed Material and Branching Programmed Material in the Subject of Accountancy for Standard XI in Relation to Certain Variables. The objectives of the study were to prepare an effective Linear Programmed Material and branching Programmed Material on “Rectification of Errors” in the subject of Accountancy for Standard XI syllabus of Gujarat state and to compare the effectiveness of both the types of programmes. It was found that the Linear and Branching Programmes were equally effective.

Dutt (1998) conducted a research on Effect of Self Learning Modules on Achievement of Senior Secondary Students in Relation to their Sex and Place of Residence. It was found that sex accounted for differential achievement in Economics. Male students got significantly higher mean post achievement test scores than female students. Students belonging to both rural and urban places of residence achieved almost identical mean post achievement scores.

Arya (1999) conducted a research on the Comparison of Instructional Strategy with Traditional in terms of selected cognitive variables. The objectives of the study were to develop the instructional strategy and study its effectiveness in terms of students’ performance on criterion tests and comprehensive test. The developed Instructional Strategy was found to be effective in terms of achievement of students on criterion test and comprehensive test. The developed Instructional Strategy was found to be significantly superior to traditional method.

Kohal (1999) conducted a research on the Effectiveness of Self Learning Modules on Achievement in Geography in relation to Mastery and Non Mastery Teaching Strategies, Intelligence and Study Habits. The objectives of the study were to develop self learning modules in Geography as a subject at 10+1 level in arts stream and to study the effectiveness of self learning modules in Geography in terms of achievement. It was found that the students taught through Mastery Teaching Strategies attained more Geographic concepts than the students taught through Non-mastery Teaching Strategy. So Mastery Strategy proved more superior to Non-mastery Strategy in teaching Geographic concepts.

John (2000) conducted a research on Self- Instructional Methods as a Reinforcement Strategy in Learning Genetics among Higher Secondary Students. The objectives of the study were to

develop and evaluate the programmed instructional packages (PIM) and computer instructional packages (CAIM) on 'Genetics' for teaching the standard XII students selected for the study, to develop tools to measure the effectiveness of self - instructional packages on 'Genetics' through programmed instructional packages (PIM) and computer instructional packages (CAIM) and to study and compare the effectiveness of self- instructional methods and materials i.e. PIM and CAIM as a reinforcement strategy on achievement and retention of cognitive skills in 'Genetics' such as knowledge, understanding and application among the students selected for the study. It was found that both the reinforcement strategies are equally effective in learning and retaining the same in the experimental groups.

Aggabao (2002) conducted a study aimed at Developing Individualized Self Instructional Modules on Selected Topics in Basic Mathematics for Instructional use at the Teachers College in Isabela State University. After making use of the experimental method, it was concluded that the students as well as teachers have a positive attitude towards the use of self-instructional materials as a mode of instructions in Basic Mathematics.

Rastogi (2003) developed Self Instructional Material on Educational Statistics for B. Ed. students. In this experimental research, a comparison was seen between two strategies as Traditional Classroom Teaching and Self-Instructional Material. The statistical analysis revealed that a significant change in level of knowledge regarding Educational Statistics was obtained in both the groups. Also, learning in both the groups was enhanced to a significant level, and there was more retention through Self Instructional Material strategy. This indicated that Self Instructional Material strategy was more effective than Traditional Classroom Teaching strategy.

Shetty (2004) conducted a research on the Development of a Self-Instructional Module on Staff Development for the Secondary School Principals. The objectives of study were:

1. To develop instructional material on self - development for secondary school principals.
2. To try out the instructional material developed for secondary school principals on staff development and
3. To evaluate the effectiveness of the instructional material on staff development for secondary school principals.

It was found that the modules helped the Principals to enhance their abilities of organizational management. These helped the principals to have better and effective communication, wherever required technology was used. They were active listeners, effective negotiators and were able to conduct meetings effectively after learning the various techniques of communication from the modules.

Arora & Singh (2005) conducted research on Development and Evaluation of Self-Learning Modules to enhance the Traditional Physiology Class at CMC Ludhiana. The results (post-test average of 84%) indicated that Self-learning Modules were an effective method of studying and reinforcing learning. Comparison with other teaching methods indicated that the students would prefer Self Learning Modules as an additional method of learning but not a replacement for lectures and text-books. Students recommended that SLM experiment should continue and suggested an SLM library for self study. Puri (2009) conducted a study on Effect of Self-Learning Modules on Environmental Awareness in Elementary School Students Belonging to Different Socio-Economic Status and School Systems. It was found that Self-Learning Modules proved effective when compared to Conventional teaching in Private, Gurukul and Govt.

schools.

OPERATIONAL DEFINITIONS OF THE TERMS

Module

According to Oxford Advanced Learner's Dictionary, Module is a unit that can form part of a course of a study. It provides thorough understanding of the content matter in a more effective manner. Goldschmid and Goldschmid (1973) define a module as "a self-contained, independent unit of a planned series of learning activities designed to help the student accomplish certain well defined objectives". In this study, self-learning modules refers to self-instructional, self-explanatory, self-contained, self-directed, self-motivating and self-evaluating material to assess the achievement of the students.

Achievement

According to Oxford Advanced Learner's Dictionary of Current English, Achievement means a thing that somebody has done successfully, especially using their own effort and skill. In the proposed study, achievement refers to the scores obtained by students on the criterion-referenced test after learning through self-learning modules and conventional teaching.

Retention

According to Oxford Advanced Learner's Dictionary of Current English, Retention means the ability to remember things. It is the power of retaining, recalling and recognizing what has been learned. In the proposed study, retention means students' ability to retain the content after 7 days (according to study conducted by Jowett Nathan et. al. in 2007) of teaching through self learning modules and conventional mode of teaching.

OBJECTIVES OF THE STUDY

1. To compare the effectiveness of self-learning modules and conventional mode of teaching (lesson plans) on the academic achievement of undergraduate students in Business Management.
2. To compare the retention level among undergraduate students in Business Management when taught through self-learning modules and conventional mode of teaching (lesson plans).

HYPOTHESES OF THE STUDY

1. The students exposed to self-learning modules will achieve higher in the specified units of Business Management than those exposed to conventional mode of teaching.
2. The students exposed to self-learning modules will have better retention in the specified units of Business Management than those exposed to conventional mode of teaching.

FINAL EXPERIMENT

Final Experiment was conducted in Dayanand Mahila Mahavidyalya, Kurukshetra. 51 students comprised the sample for conducting final experiment.

METHODOLOGY

Experimental Method was used in the study. To compare the effectiveness of two methods of teaching (Self-learning modules and Conventional mode of teaching), pre-test-post-test control group design was used.

MEASURING TOOLS

The measuring tools were used to measure the intelligence level, achievement and retention of the students of B. Com. (1st year).

In this study, the following measuring tools were used:

Raven's Standard Progressive Matrices (2005) was used to assess the intelligence level of students for making two similar groups.

Criterion Referenced Tests (CRTs) were used to assess the entry level behaviour of the students. These were also used for assessing the achievement level of students after completing each unit.

Retention Tests were used to assess the retention level of students after 7 days of teaching each unit.

INSTRUCTIONAL TOOLS

The instructional tools were used to impart instructional material to the students through self-learning modules and lesson-plans.

In this study, the following instructional tools were used:

Self-Learning Modules

Lesson Plans

Self-learning modules and lesson plans were developed on the following topics of Business Management of B.Com. (1st year).

- Planning; Meaning and Types of Plans- (A) On the basis of Time (B) On the basis of Managerial Levels
- Types of Plans on the basis of Use
- Organising; Concept and Types of Organisation Structure- Line Organisation Structure & its Types, Line & Staff Organisation Structure
- Functional Organisation Structure
- Leadership; Meaning and Styles- Motivational Leadership Styles
- Power Based Leadership Styles and Result Based Leadership Styles
- Motivation; Meaning, Process and Theory of Motivation
- Communication; Meaning, Process and Principles of Effective Communication
- Communication Network
- Controlling; Meaning and Process

STATISTICAL TECHNIQUE USED

t -test was used to compare the effectiveness of Self-Learning Modules and Conventional Mode of Teaching.

FINDINGS

On the basis of analyses and interpretation of data, the following findings have been drawn:

The first hypothesis was "The students exposed to self-learning modules will achieve higher in the specified units of Business Management than those exposed to conventional mode of teaching." Findings of the study revealed that the students exposed to self-learning modules achieved higher in the specified units of Business Management than those exposed to conventional mode of teaching. The t-ratios were found to be significant (at .05 level). The values of t-ratio for all the modules were :

Planning; Meaning and Types of Plans- (A) On the basis of Time (B) On the basis of Managerial Levels

t-value = 2.55

Types of Plans on the basis of Use

t-value = 2.20

Organising; Concept and Types of Organisation Structure- Line Organisation Structure & its Types, Line & Staff Organisation Structure

t-value = 2.31

Functional Organisation Structure

t-value = 3.99

Leadership; Meaning and Styles- Motivational Leadership Styles

t-value = 4.78

Power Based Leadership Styles and Result Based Leadership Styles

t-value = 1.93

Motivation; Meaning, Process and Theory of Motivation

t-value = 2.75

Communication; Meaning, Process and Principles of Effective Communication

t-value = 1.98

Communication Network

t-value = 2.15

Controlling; Meaning and Process

t-value = 1.83

The second hypothesis was “The students exposed to self-learning modules will have better retention in the specified units of Business Management than those exposed to conventional mode of teaching.” Findings of the study revealed that the students exposed to self-learning modules retained higher in the specified units of Business Management than those exposed to conventional mode of teaching. The t-ratios were found to be significant (at .05 level). The values of t-ratio for all the modules were:

Planning; Meaning and Types of Plans- (A) On the basis of Time (B) On the basis of Managerial Levels

t-value = 2.13

Types of Plans on the basis of Use

t-value = 2.16

Organising; Concept and Types of Organisation Structure- Line Organisation Structure & its Types, Line & Staff Organisation Structure

t-value = 2.31

Functional Organisation Structure

t-value = 2.17

Leadership; Meaning and Styles- Motivational Leadership Styles

t-value = 1.78

Power Based Leadership Styles and Result Based Leadership Styles

t-value = 1.71

Motivation; Meaning, Process and Theory of Motivation

t-value = 1.98

Communication; Meaning, Process and Principles of Effective Communication

t-value = 1.68

Communication Network

t-value = 2.33

Controlling; Meaning and Process

t-value = 1.99

DISCUSSION OF RESULTS

The objectives of the present study were to compare the effectiveness of self-learning modules and conventional mode of teaching (lesson plans) on the academic achievement of undergraduate students in Business Management and to compare the retention level among undergraduate students in Business Management when taught through self-learning modules and conventional mode of teaching (lesson plans). Findings of the study revealed that the students exposed to self-learning modules achieved higher in the specified units of Business Management than those exposed to conventional mode of teaching and retained higher in the specified units of Business Management than those exposed to conventional mode of teaching. Greager and Murray also found that the Modules helped the students to learn as well as provided better chances to the students to interact with the teacher because it reduced the routine instruction time. Kohal found that the students taught through Mastery Teaching Strategies attained more Geographic concept than the students taught through Non-mastery Teaching Strategy. So Mastery Strategy proved more superior to Non-mastery Strategy in teaching Geographic concepts. These results are also in conformity with the study conducted by Arora and Singh indicating that the students would prefer Self Learning Modules as an additional method of learning but not a replacement for lectures and text-books. Students recommended that SLM experiment should continue and suggested an SLM library for self study.

EDUCATIONAL IMPLICATIONS

FOR ADMINISTRATORS

U. G. C. should encourage Experimental Researches and the researchers in true manner should be provided the required facilities so that quality research could take place. Researchers should be motivated to develop quality self-learning material.

FOR TEACHERS

Teachers should use self-learning modules to meet the challenge of individual differences. With the help of self-learning modules, effective learning environment can be created in the classroom. Provision of intrinsic reward creates good feeling among the students and they become active learners.

FOR STUDENTS

Knowledge through Self Learning Modules helps to inculcate self-study habits and self-confidence among students which are very much essential for enhancing learning. They become independent thinkers.

CONCLUSION

Self Learning Modules create an effective learning environment for the learners to learn. These contain the answers of all possible queries, confusions and questions that may come in the mind of the learner at the time of learning. These also provide immediate feedback on the performance of the students. These also help to maintain high interest level and sufficient motivation for the learners. These Self Learning Modules have enriched features such as Self-explanatory, Self-contained, Self-directed, Self-motivating and Self-evaluating which help to cater to the needs of all types of learners.

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Assessing learning can profoundly shape the educational experiences of students. One of the challenges of effective assessment is to ensure that there is a close alignment between the learning goals, the teaching and learning activities aimed at meeting learning goals and the assessment tasks used to assess whether learning goals have been met. Current best practice includes assessment which is aligned to learning goals which focus not only on content knowledge but also on process and capabilities. Grades are awarded to students based on the level of performance they have achieved. Authentic assessment. Assessment tasks which test whether a learner is able to demonstrate their learning outcomes in a situation which is as close as possible to a real world context. Student retention and the Omaha public schools: Performance and challenge. Paper prepared for the Omaha minority conditions and research conference, Nebraska. Google Scholar. Lio, M. C., Chiou, J. R., & Hu, J. L. (2006). Causal effects of academic self-concept on academic achievement: Structural equation models of longitudinal data. *Journal of Educational Psychology*, 89(1), 41-54. Google Scholar. Melnick, D. H. (1992). The adult male undergraduate student experience: Real men do return school. *Journal of Higher Continuing Education*, 47(2), 15-24. Google Scholar. Wigfield, A., & Karpathian, M. (1991). Who am I and what can I do? Children's self-concept and motivation in achievement situations. Students completed the Study Process Questionnaire to assess their learning styles and the Attitudes to Psychiatry Scale at the beginning and end of the attachment. Students completed 2 end-of-attachment examinations, a multiple-choice paper and a viva. RESULTS The PBL curriculum resulted in significantly better examination performance than did the traditional teaching curriculum, both for multiple-choice questions and the viva. The change from traditional didactic teaching to problem-based methods in psychiatry will increase the overall effectiveness of teaching. Compared to students receiving the traditional curriculum, students receiving the new psychiatry curriculum will show: 1 improved academic performance in a clinical viva examination