Teaching methodology for professional programmes in ODL: An exploratory study of the Management Programme of IGNOU

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Abstract

ODL system since its inception has gone a long way in terms of imparting education to the learners through different modes of teaching. Many professional and skill based programmes like MBA, MCA, etc. are being offered by various open distance learning institutes throughout the globe. Most of these programmes across the globe are offered online. The reason to this is the increased competition in higher education, which has stressed upon a need to look beyond the traditional mode of teaching. IGNOU also offers such programmes but most of them still have the Self Learning Materials (SLMs) as the main source of imparting education to the learners. Most of the studies, which have been done, are based on web-based learning. Shen etal (2008) have tried to explore the need to enhance skills of Application Software via Web-Enabled Problem-Based Learning and Self-Regulated Learning. This study was basically related to the computer software education in vocational schools. In another study Merrill & Gilbert (2008) stressed upon the need for peer interaction in a problem based learning (PBL) instructional form.

The need of the hour is to study the effectiveness of the SLMs used for professional programmes. An effort has been made in this paper to explore the efficacy of SLMs for Management Programme and what measures can be taken up to develop course materials with more of problem based learning instructional forms. The research methodology is based on primary as well as secondary data. A random survey has been conducted. The feedback and suggestions have been taken from the learners who have passed out the programme in 2009. The concentration of this paper is more on the PBL as a teaching methodology for professional programme. This is an exploratory study and will try to highlight the use of SLMs in an innovative form.

INTRODUCTION

Distance learning requires a certain level of personal commitment and discipline as compared to the conventional full time programmes. On a positive side, distance learners benefit from flexible study hours and working at their own speed. The flexibility means that MBA students could complete the programme in two and-a-half or three-and-a-half years, for example, depending on their circumstances (Coomber, 2009). This is very much applicable in IGNOU where MBA is termed to be one of the most popular programmes at the national as well as international level. This was one reason for selecting the programme to study the effectiveness of a certain kind of teaching methodology. Here, we are concentrating on PBL as the teaching methodology for the professional programmes.

There are two types of learning viz a viz problem centred instruction and problem based instruction i.e problem based learning (PBL). Problem-centered instruction is contrasted with

problem-based instruction. Many types of problem-based instruction have minimal guidance and often consist of giving a group of students a problem, providing resources that can be used to solve the problem, and then having the learners collaborate in finding a solution whereas problem-centered instruction provides a carefully sequenced progression of problems(Merrill & Gilbert, 2008). Since the concentration of the paper is on PBL, the discussion will be restricted to PBL only.

PROBLEM-BASED LEARNING

To be precise Problem-based learning (PBL) is a teaching methodology that may engage students in authentic learning activities by using challenging problems in practice as a starting point with a stimulus, and focus for learning .PBL promotes student learning based on the need to solve problems. It not only emphasizes the learning in the subject area, but also provides opportunities for students to practice and apply knowledge and learned skills. The paper tries to explore these areas of PBL in the Indian context. The study has been taken up for the management programme using self instructional materials (SLMs) in IGNOU. Management programme was chosen as it was felt that most of the studies regarding PBL are either concentrated in the area of medicine or computers. Apart from this most of the studies has been done keeping in mind the online programmes. The subsequent sections try to explore the concept of PBL based on various studies done and the data analysis of the study done. A very interesting fact about the business education is that it uses case based methods, simulation techniques, role playing, brain storming etc. in its conventional MBA programmes. These techniques do form the basis of PBL.The SLMs do provide such learning techniques which are embedded in the material itself as in case of IGNOU material. But the question now is that whether such in built activities enhance the learning ability of the learners or such techniques should be used in form of PBL.

CONCEPT OF PROBLEM BASED LEARNING

According to the information available on Wikipedia   **Problem-based learning** (PBL) is a student-centered instructional strategy in which students collaboratively solve problems and reflect on their experiences. It was pioneered and used extensively at McMaster University, Hamilton, Ontario, Canada.

Problem based learning (PBL) has originated from the progressive movement led by John Dewey, who believed that teacher's method of teaching should influence student in such a way that it encourages creativity and investigative abilities within him. According to McMaster model propagated by Barrows (1980) Problem based learning can be expressed under the following three stages :-
- expression of problem statement
- identifying the relevant information
- interaction and application of the knowledge acquired towards solving the problem.
In recent times a number of researchers have claimed that Problem based learning (PBL) has been increasingly considered in all modes of education PBL assists students in knowledge construction, reasoning skills (Albanese 1993).
- It integrates reasoning along with professional, academic and scientific knowledge and imparts skills facilitating students in learning process (Dunlap, 2005).
- PBL aims at problem solving and self directed learning by creating a favourable impact on acquiring knowledge and skill (Norman & Schmidt, 1992; Albanese, 1993; Berkson, 1993; Vernon & Blake, 1993; Colliver, 2000).
- It has been observed that students in PBL learning groups score higher grades vis-a-vis control group students pursuing Mathematics, Physics and computer Science (Polanco, Calderón, and Delgado 2004).
- PBL assists students in acquiring key competencies in both information and professional systems of education.

- PBL has worked well both with small and large teams and it is a flexible approach which works well with collaborative groups. Even in web-based learning environment the effects of PBL on student performance is high (Chanlin and Chan, 2004).
- The students indulge in self analysis by application of their learning towards problem solving, analyzing the learning acquired and evaluating the effectiveness of the strategy employed.
- The student learns in real world environment and is accountable for his/her learning (Hmelo-Silver, 2004).
- The learner becomes more and more cognitively aware and is prepared for lifelong learning through self directed learning (Dunlap, 2005) .

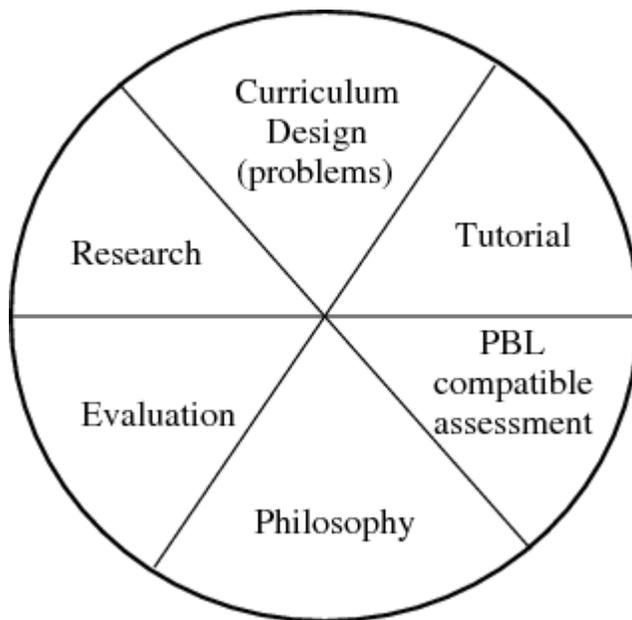Barrett (2005) has described PBL in form of a wheel as depicted in figure 1.

Figure-1: Problem-based learning a total approach to learning: Turning the wheel of PBL

Source: *What is problem-based learning? Terry Barrett , 2005*

Problem-based learning has been the one of the most important developments in the university professional education (Boud and Feletti 1977). It started with medical education in North America and has spread across the globe and across most disciplines. One of the major features of the use of problems in problem-based learning is that learners are deliberately presented with the problem at the start of the learning process. This is like getting the challenge of preparing something out of nothing (Barrett,2005).

Barrett (2005) has also discussed the reasons of using PBL. These are as follows:

- Acquiring subject matter knowledge
- Motivating learning
- Facilitating learner retention
- Developing learner thinking skills
- Developing the personality development of learners
- Fostering professional development

- Encouraging learners to integrate knowledge from different subjects, disciplines and sources
- Linking theory and practice
- Developing a sense of belonging and friendship
- Having fun
- Responding to research evidence on the benefits of PBL
- Increasing competitiveness in the higher education market

In short it can be said that PBL can increase the level of understanding and development of learners.

METHODS

The present study has been taken up to test the efficacy of PBL as the teaching mode for the professional programmes. The study is directed towards the management programme of IGNOU. The objectives of the study are as follows:

1. To understand the concept of problem based learning as a teaching methodology;
2. To study the effectiveness of PBL as an innovative mode of instruction for the Management Programme of IGNOU.

Hypotheses

H_o – PBL does not have any impact on effectiveness of the programme and thus the level of learning.

H_1 - PBL has an effect on the effectiveness of the programme and thus the level of learning.

H_0 – PBL does not increase the overall development of the learner.

H_1 – PBL increases the overall development of the learner.

Sample

The study is based on the primary as well as secondary data. The primary data has been collected by administering the questionnaire to the students of Management Programme who completed the programme in 2009. The questionnaire consisted of open as well as close ended questions and was divided into three parts. The first part consisted of general information, the second part consisted of questions regarding the general perception about the counseling sessions and the third part focused on PBL.

Sample size

As per the convocation report of IGNOU (2009) 968 students passed out with MBA degree. In all 2878 students passed with various management diplomas. In this study we have considered only those learners who have completed all the modules and thus obtained the MBA degree. The sample size for the study was taken as 150. Only those students were taken whose valid e-mail IDs were available.Web survey was used to administer the questionnaire to the students. Out of 150 students, only 47 responded. 05 responses were rejected due to inappropriate answers. Only 42 responses were considered. The sample used for the study is random, convenience and non probability sampling.

Tools

MS-excel worksheet was used to feed the raw data and chi square test was used with the help of SPSS package. The test was applied on the third part of the questionnaire, which consisted of questions related to PBL.

DATA ANALYSIS AND INTERPRETATION

- Based on the general information about the respondents, around 80% of respondents were males and were in the age group of 25-40. Majority of the respondents were employed and from the urban background.
- Regarding the perception about the counseling sessions, majority of the respondents felt that the counseling sessions held at the study centre are good.
- When asked about the knowledge about PBL, majority said that they know about PBL. Out of 42 responses, 36 believed that PBL should be used as a teaching methodology both in SLM and counseling sessions fairly well. Six of them thought that online mode can also be used.
- The following analysis is for the last part of the questionnaire. The frequency charts for different questions are given followed by the chi square values.

Impressions of the respondents for questions numbers ranging from 11 to 14

		Q11	Q12	Q13	Q14
N	Valid	42	42	42	42
	Missing	0	0	0	0

Q11: PBL method used as a teaching mode will increase the effectiveness of the programme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	20	47.6	47.6	47.6
	B	22	52.4	52.4	100.0
	Total	42	100.0	100.0	

a:to a large extrent   b:Fairly well

Q12 :PBL method will increase the level of learning.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	16	38.1	38.1	38.1
	B	26	61.9	61.9	100.0
	Total	42	100.0	100.0	

a:to a large extrent   b:Fairly well

Q13:PBL method will increase the analytical ability of the learner

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	24	57.1	57.1	57.1
	B	18	42.9	42.9	100.0
	Total	42	100.0	100.0	

a:to a large extrent   b:Fairly well

Q14:PBL method of learning will help in the overall development of the learner.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	19	45.2	45.2	45.2
	B	23	54.8	54.8	100.0
	Total	42	100.0	100.0	

a:to a large extrent   b:Fairly well

- A crosstab was developed to find out the level of relationship between question 11 with questions 12, 13, and 14. This was done specifically as all the questions are interrelated.

Crosstab

			PBL method used as a teaching mode will increase the effectiveness of the programme		Total
			To a large extent	Fairly well	
PBL method will increase the level of learning	To a large extent	Count	11	5	16
		Expected Count	7.6	8.4	16.0
	Fairly well	Count	9	17	26
		Expected Count	12.4	13.6	26.0
Total		Count	20	22	42

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.627(b)	1	.031

Chi square tabulated at 0.05 and 1 degree of freedom (df) is 3.84 and for 0.25 it is 5.024 (the value has been obtained from table giving values of chi square), while the Chi-square calculated value is 4.627, which falls between 3.84 and 5.024. This implies that we will accept our null hypothesis and say that PBL makes learning more effective at 97% level of significance.

Crosstab

			PBL method used as a teaching mode will increase the effectiveness of the programme		Total
			a	b	
PBL method will increase the analytical ability of the learner	a	Count	14	10	24
		Expected Count	11.4	12.6	24.0
	b	Count	6	12	18
		Expected Count	8.6	9.4	18.0
Total		Count	20	22	42

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**2.577**(b)	1	.108

The result is not significant as the value is less than .05. Therefore it can be interpreted that PBL method does not increase the analytical ability of the learners.

Crosstab

	PBL method used as a teaching mode will increase the	Total

		effectiveness of the programme		
		a	b	
PBL method of learning will help in the overall development of the learner.	a Count	14	5	19
	Expected Count	9.0	10.0	19.0
	b Count	6	17	23
	Expected Count	11.0	12.0	23.0
Total	Count	20	22	42

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**9.450**(b)	1	.002

The value of chi square lies between .01 and .001 i.e 6.64 and 10.83 respectively. The result is higly significant and endorses the fact that PBL method of learning will help in the overall development of the learner.

CHALLENGES OF PROBLEM-BASED LEARNING

A literature review done by Nazir & Zabit (2010) shows many problems of PBL. In this case it can be called as challenges because the application of PBL has still to prove its worth especially in business education. The successful implementation of PBL does not come easily as it requires efforts of both the learner as well as the teacher. Some of the challenges which are prominent in PBL can be listed as follows:

- While using PBL technique the role of teacher changes;
- Learners need to be convinced about the efficacy of PBL as this may result in the role conflict of the learners;
- Implementation of PBL as innovative mode of teaching may call for insensitive behaviour of fellow colleagues;
- Maintaining the role of a leader on part of the teachers becomes challenging in this case as the differences in philosophy and problem solving approach may arise between the learners;
- Difficulty in developing the problem solving skills of a teacher;
- The last but not the least challenging aspect of PBL can be finding the possible solutions based on critical thinking.

These may be some of the challenges for the teachers to implement the PBL in their course materials but they can be overcome using more innovative ways to handle the situation.

CONCLUSION

Teachers can increasingly use the PBL approach for development of self regulated learning as this is a task based approach. It focuses on self directed learning by giving students the option of selecting what, why, where, when and how to work. A large number of studies have supported the benefits of PBL, though there has been little research on PBL approaches within business education. In the same way, the advantages of this approach are well documented especially in the medical, engineering, and sciences education, but there is a lack of research into its use in business education.(Nazir &Zabit,2010). Problem-based learning is not a mere technique or a fashionable fad. It is a total approach which is applicable to higher education. It involves designing a curriculum whose core is a set of problems (Barret, 2010).Based on pilot study concerned with design and development of online resources it has been concluded that PBL traditionally regarded as campus based approach can be adapted in open and distance learning (Mike Mclinden et al,2006). Taplin, (2000) has concluded that it is possible and perhaps desirable to implement PBL in on line learning both in conventional and distance education. A case- based learning instructional environment model has been developed to solve students real world problem and has been further developed as online case based learning environment (Choi & Lee, 2008). Conversion of paper text to online format has also been suggested along with inter-activity through external hyperlinks, open ended and multiple choice questions (Burgess, et al, 2005). The potential to develop learning by learners using PBL has still not been exploited in higher education(Savin-Baden 2000).

The present study supports the results of the previous studies done. This means that PBL is applicable both to the conventional as well as the distance learning modes. The studies reflected on the fact that the learners are quite aware about the concept of PBL in an informal manner but are not aware about its exact meaning. The results also showed that PBL increase the overall development and learning attributes of the learners but do not enhance the analytical abilities of the learners to a large extent. This is because the analytical ability of learners is inherent in nature. It can be concluded from the study that PBL can be an effective mode of teaching methodology in distance learning especially for management programme.

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