

# EXPLORING THE PREFERENCE IN LEARNING APPROACH AMONG THE HONG KONG UNIVERSITY STUDENTS: CASE STUDY, PROBLEM-BASED OR TRADITIONAL TEXTBOOK QUESTION

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## ABSTRACT

*This paper discusses the exploratory findings of students' preferences in different learning approaches: case study, loosely-defined problem-based learning or textbook problems and questions for undergraduate students taking the subject Bank Credit Management in the Hong Kong Polytechnic University. The impacts of students' previous learning experiences on their learning approach preferences are also identified.*

## INTRODUCTION

Problem-based learning is one of the most effective methods for preparing independent life-long learners (Boud, 1985; Newble & Clarke, 1986). The learners have to actively construct the knowledge themselves which make them more involved in the learning process (Cobb, 1994; Driver et al., 1994). Problem-based learning was found very effective in fostering increased knowledge retention (Norman & Schmidt, 1992), facilitating student learning through activation and elaboration of prior knowledge (Schmidt et al., 1989), acquiring more self-directed learning skills (Glaser, 1991; Blumberg & Michael, 1992), increasing intrinsic interest in subject matter (Barrows & Tamblyn, 1980; Schmidt, 1983; De Volder et al., 1986), developing group skills and working with colleagues (Biggs, 1999) and enhancing the ability of students to integrate knowledge into the solution of problems in different context. Examples of application of problem-based learning in different disciplines can be referred to the literature in problem-based learning (e.g. Barrows, 1985; Patel et al., 1991; Chan & Siaw, 1999; Miller & Lee, 1999; Chan & Lai, 1999).

The Hong Kong Polytechnic University adopted the problem-based learning approach for many years, starting from the School of Nursing. Gradually, the problem-based learning approach was used by other Faculties. The Faculty of Business started to use the problem-based learning approach four years ago. Previously, the seminar activities in the Faculty were confined to traditional textbook end-of-

chapter problems and questions. In adopting the problem-based learning approach, there are differences among different subjects in which some use the generic problem-based learning while others use a more structured case study approach. In fact, there are various types of problem-based learning approaches (Barrows, 1986). Some are more structured and some are less, depending on the degree the problem is structured and the extent of teacher direction. The case study method belongs to the more defined and structured problem-base learning approach and it is applied to a wide range of teaching styles and objectives (Gray and Constable, 1983; Dooley and Skinner, 1977). In the business faculty, case method is widely used in teaching various business subjects (Reynolds, 1977; Alexander et al., 1986; Mintzberg et al., 1995; Thompson & Strickland, 1999). The case study method helps to simulate the reality of the manager's jobs (Jauch and Glueck, 1988); to provide an opportunity to analyze the strategic issues of specific organisations in depth and often to provide solutions (Johnson and Scholes, 1993); and to help substitute for on-the-job experience and force students to come up with pragmatic managerial action plans to deal with the issues at hand (Thompson and Strickland, 1999).

Along with the above literature, the case study approach used in the subject Bank Credit Management is similar to problem-based learning in that it is more students oriented. Students were given the responsibility for solving a (not fully) loosely-structured problem, which is different from doing the end-of-chapter questions in a textbook. The emphasis was on training the students to acquire problem solving skills rather than memorizing any specific pieces of information. However, there were some differences between the said case study approach and generic problem-based learning. Although the decision in the credit case study can be open-ended, the nature of the problem in the case is clearly defined, i.e. to make a decision on a credit request from a borrower. The techniques applied in credit analysis will therefore be more confined than as in the cases of loosely defined problem-based learning.

It is found that there are many difficulties faced in problem-based learning because of the characteristics of the

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students as well as the nature of the subject content (Tang, 1997). Similarly, there are also limitations in the case study approach. The limitations can be attributed to limited time, information, and resources available to the students (Chang et al., 2001). Traditional lecture and seminar were found to be teacher-centered while students were passive in learning that might hinder their creativity in applying learned knowledge to new situation (Tobin, 1993). Since there are advantages and disadvantages of these approaches, the results varied in different disciplines. Consequently, this study intends to explore the students' preferences in the learning approach for the subject Bank Credit Management.

### AIM OF STUDY AND DATA COLLECTION

This study attempts to investigate students' experience in learning credit analysis using case study approach in Bank Credit Management and compare students' preference on case study to problem-based learning. Bank Credit Management is an elective subject in the first semester taken by either the B.A. (Hons) in Business Studies (BABS) or the B.A. (Hons) in Finance Services (BAFS) undergraduates. In the first semester of 2003/04, twenty-nine students took the subject, of whom eighteen came from BABS and eleven came from BAFS. These two groups of students come with different backgrounds, especially in relation to the problem-based learning experience. The BABS students have gone through the problem-based learning process before in other subjects while the BAFS students have never had such experience. A 13-item survey questionnaire was used (Appendix 1). It comprised of four sections, namely, briefing and materials, learning process and outcome, effectiveness of the case study group, and credit case study

versus problem-based learning. A seven-point Likert scale was used – (7) very strongly agree, (6) strongly agree, (5) agree, (4) neutral, (3) disagree, (2) strongly disagree, (1) very strongly disagree. Twenty nine questionnaires were distributed to students at the end of the semester. Twenty five usable questionnaires were returned (16 BABS and 9 BAFS), a return rate of 86.2%.

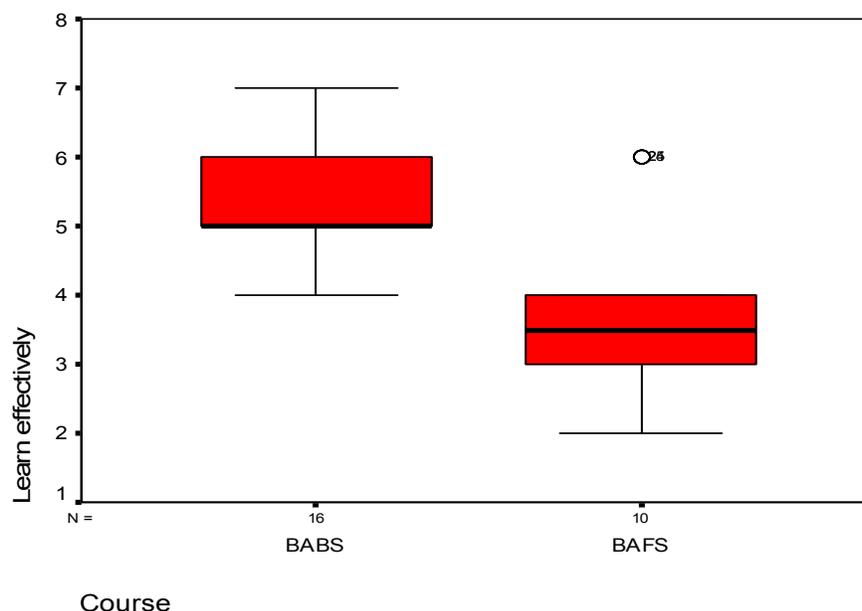
### RESULTS AND DISCUSSIONS

The scores of different questions in the questionnaire were analyzed by measuring their mean ( $\bar{x}$ ) and standard deviation (SD). Box-plot analysis was also used to depict the differences in response between the BABS and the BAFS students. The box-plot figures were generated by the SPSS application and are shown in figures 1 to 4. Generally speaking, respondents agreed that briefing and materials provided before the start of the credit case analysis are sufficient ( $\bar{x} = 4.74$ ;  $SD = 1.29$ ). More BABS students agreed ( $\bar{x} = 5.29$ ;  $SD = 0.92$ ) that they prepared for the case analysis than the BAFS students ( $\bar{x} = 3.80$ ;  $SD = 1.32$ ).

Both BABS and BAFS students felt that the case was difficult to solve. BABS students believed they learned effectively in the process of solving the credit cases ( $\bar{x} = 5.41$ ;  $SD = 1.06$ ); whereas BAFS students did not ( $\bar{x} = 3.80$ ;  $SD = 1.32$ ) show the same extent. The difference is shown in the box-plot of Figure 1.

BABS students have prior problem-based learning experience while BAFS students do not. The difference in response on learning effectiveness with case study approach from BABS and BAFS students shows that when students have previous experiences of self-learning and problem

Figure 1: Students' response on learning effectiveness with case study approach



-solving, they feel they can learn effectively with case study approach.

When asked if students enjoyed the credit case study more than doing the structured seminar questions, BABS students did enjoy more ( $\bar{x} = 4.82$ ;  $SD = 1.07$ ), but it was not the case for BAFS student ( $\bar{x} = 3.70$ ;  $SD = 1.70$ ). This is shown in the box-plot of Figure 2.

This shows that students who have learned the problem-solving skills and techniques from the problem-based learning will more enjoy the case study approach. Meanwhile, students who have not acquired the problem-

based learning experience may feel the case study approach difficult and less enjoyable.

When asked if they can apply what they learned in Bank Credit Management and in other subjects in doing the credit case, both BABS and BAFS students agreed, with a median of 5.00. This is shown in the box-plot of Figure 3. The result is the same for the question if they found the approach in analyzing a credit case should be the same even though the answer can be open-ended (median = 5.00). This is shown in the box-plot of Figure 4.

Figure 2: Box-plot of Student's preference: case study or structured seminar

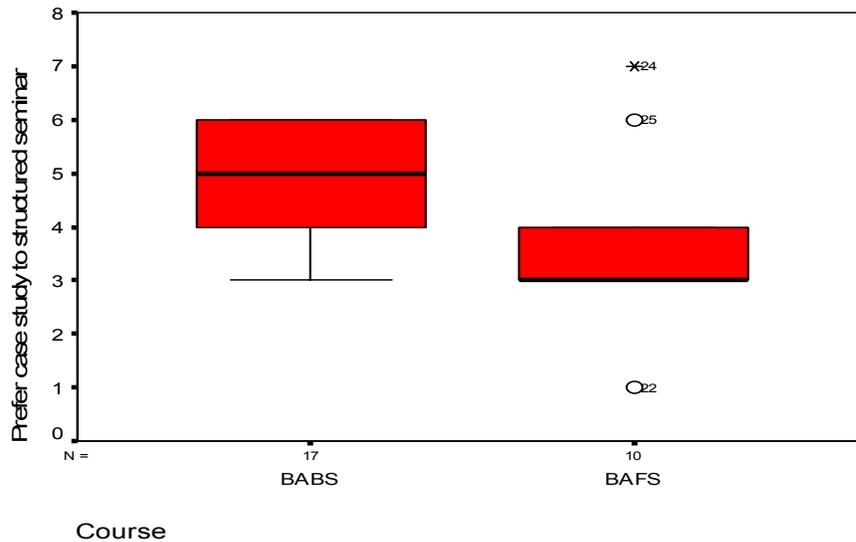


Figure 3: Box-plot of students' perceived ability of applying their knowledge learned in BCM and other subjects in doing the credit case

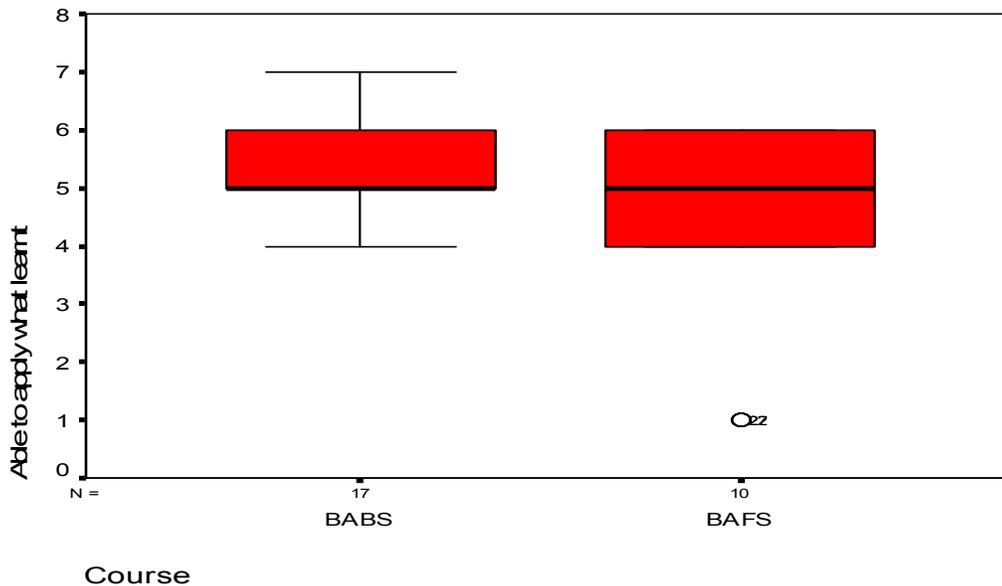
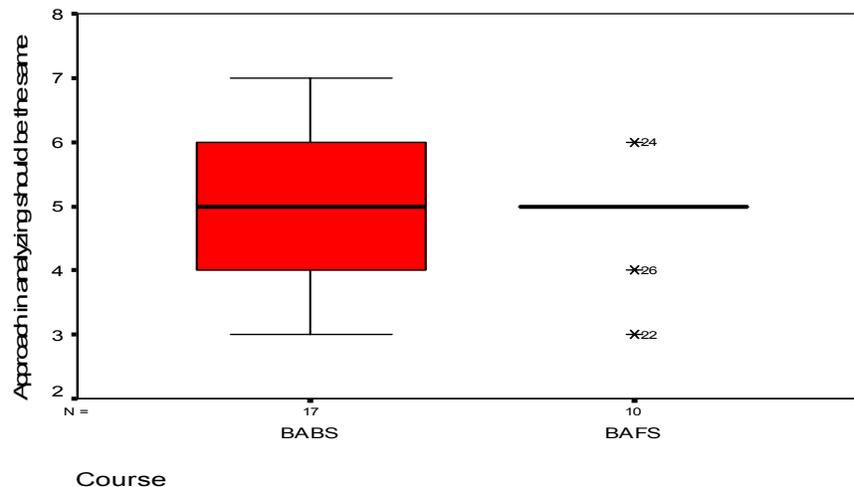


Figure 4: Box-plot of students' response of approach in analyzing case



Respondents found their case group worked well together (overall  $\bar{x}$  = 5.44; SD = 0.93; BABS  $\bar{x}$  = 5.53, BAFS  $\bar{x}$  = 5.30). All members made useful contribution (overall  $\bar{x}$  = 5.30; SD = 1.10; BABS  $\bar{x}$  = 5.35, BAFS  $\bar{x}$  = 5.20). Meetings outside classroom were productive and effective (overall  $\bar{x}$  = 4.81) and students prefer to work on the case in groups rather than alone (overall  $\bar{x}$  = 2.89, BABS  $\bar{x}$  = 2.76 and BAFS  $\bar{x}$  = 3.10). The results show that respondents were satisfied with working the case in groups which they found more productive and effective.

When the BABS students, who have the problem-based learning experience, were asked to indicate their preference of case study to problem-based learning, over 70% respondents prefer case study to loosely-defined problem-based learning approach. The BABS students reflected that they learned more effectively through credit case study than the problem-based learning.

### IMPLICATIONS

Contemporary perspectives on teaching and learning emphasize the 'active' role taken by a learner. Both case study and problem-based learning are in line with this philosophy. This study shows students can be trained to be 'active' agent and can be trained to construct knowledge and be a life-long learner through case study or problem-based learning. Students who have previous problem-based learning experience prefer case study approach to problem-based learning and they enjoy more in the case study than students without problem-based learning experience. On one hand, it shows that once the students grasp the skill in learning and solving problems independently, they can apply it in other situations and get more enjoyment in the learning process. On the other hand, it shows that Hong Kong students still prefer a learning approach with

structured guidance to a completely loosely defined problem-based learning. However, prior learning experience in problem-based learning is helpful to facilitate students' future learning in similar approach such as case study. Satisfactory responses to group work in this survey also confirm with Biggs's (1999) findings that problem-based learning or case study approach can develop communication and interaction skills within the group members.

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APPENDIX 1  
FEEDBACK ON THE CREDIT CASE STUDY PROCESS

*Please use the following scales to answer the questions below:*

<b>Very Strongly Disagree</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Very Strongly Agree</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

BRIEFING AND MATERIALS

1. The lecture notes, the assigned readings, and the discussions in lectures were sufficient for me to carry out the credit case analysis.

THE LEARNING PROCESS AND OUTCOME

2. The credit case was easy to solve.
3. I enjoyed the credit case study more than doing the structured seminar questions.
4. In doing the credit case, I can apply what I have learned in BCM as well as in other subjects.
5. I learned effectively in the process of solving the credit cases.
6. I find the answers for the credit cases can be varied but the approach in analyzing a case should be the same.

EFFECTIVENESS OF THE CASE GROUP

7. My CASE group worked well together.
8. Our meetings outside the classroom were productive and effective.
9. All members of my group made useful contributions.
10. I prefer to work on the case alone rather than in a group.

CREDIT CASE STUDY VS PROBLEM-BASED LEARNING

11. I do Problem-based learning (PBL) in other subjects. (Please circle yes or no.)

Yes.                      Continue on Q12.

No.                        Stop.    You have completed the questionnaire.

12. I find that credit case study is the same as PBL.
13. Comparing PBL, I can learn more effectively through credit case study.