The impact of business school students' extracurricular activities on learning approach and academic performance

Yiu Kong Chan
University of Hong Kong, Hong Kong

Abstract

The relationship of learning approach and extracurricular activities to students' academic performance is examined in a sample of business school's students in Hong Kong. The theoretical model is based on Biggs' 3P theory of learning. 247 full-time university students completed the Revised Two-Factor Study Processes Questionnaire (R-SPQ-2F) to measure their learning approach. Results show that students with a high level of involvement in extracurricular activities are associated with a deep learning approach. Deep approach and academic performance is interrelated. Implications of these findings are discussed in relation to teaching and learning.

Keywords: learning approach; extracurricular activities; academic performance.

Introduction

There has been a steady increase in research on the impact of learning approach on academic performance over the past two decades (Watkins, 2001; Zeegers, 2001; Diseth, 2003; Hay, 2007; Trigwell et al., 2013; Chan, 2014). Gibbs (2010) examines the literature along three aspects of the interaction of our learning system: (1) presage – personal or situational variable before the learning takes place (learning environment, personality), (2) process – learning approach (ability to engage students, feedback quality), (3) product – learning outcomes (academic performance, employability). The presage and process variables are influenced by external conditions which may affect student learning performance.

Biggs' Presage-Process-Product (3P) model (1993) suggested that students undertake deep or surface learning approaches which are influenced by the corresponding motive and strategy at tertiary level. The model, developed originally by Dunkin and Biddle (1974), showed classroom learning as a multivariate integrated system of a mixture of presage, process and product. The model proposes that personal and situational factors (presage) affect students' learning approach (process) which influences the learning outcomes (product).

Presage components consist of two kinds of factors. Student individual characteristics presage factors brought to the learning situation include prior knowledge, gender, age, academic standard and personality. Teaching presage factors include the teacher's personal characteristics and institutional factors such as teaching methods, course assessment, workload and curriculum content. Learning approaches are the process factors. The difference between deep and surface learning approach has long been debated in the literature (Marton and Saljo, 1976; Biggs, 1993; Watkins, 2001). The characteristics of deep approach include the ability to study different perspectives of the learning material, to relate knowledge to prior acquired information, to search for a meaning and a connecting point between the material and personal, to adopt metacognitive skills and to develop other solutions from an inquisitive critical view. The characteristics of surface approach describe students' tendency to acquire the material without asking in-depth questions, to focus on rote-learning and reproduction of knowledge with little attempt to integrate information, to relate to minimal aspects of material, and to be concerned with the time required to finish the learning task (Biggs, 1993). The learning outcomes which students achieve from the learning process are the product factors. Prior studies have documented a positive relationship between deep approach and academic performance (Zeegers, 2001; Diseth, 2003; Fenollar et al., 2007; Phan, 2010; Chan, 2014). However, empirical results are inconclusive. A number of studies do not support a link between learning approach and academic performance (Dupeyrat and Marine, 2005; Diseth and Kobbeltvedt, 2010; Trigwell et al., 2013).

Participation of extracurricular activities is one of the presage variables in the 3P model. Feldman and Matjasko (2005) suggest that participation of extracurricular activities can enhance students' personal development, social capital, self-esteem and bonding with the school. Hunt (2005) and Zhang (2000) argue that a positive relationship between extracurricular activities and academic performance occurs because students' intrinsic

motivation in learning can be enhanced through hands-on experience. However, the empirical results are inconclusive. Gilman et al. (2003) and Wood et al. (2011) suggest a positive influence of peer-group association through participation of extracurricular activities on academic performance. Studies by Huang and Chang (2004) and Leung et al. (2011) do not support a positive link between extracurricular activities and academic performance.

The purpose of this study is to investigate the relationships between extracurricular activities, learning approach and academic outcomes among Hong Kong Chinese university students. The theoretical framework is based on Biggs' 3P model which proposes that student characteristics (presage) have an impact on the learning approaches (process) (Biggs, 1994). Involvement in extracurricular activities generates an impact on learning approach and academic performance (Watkins, 1998; Zhang, 2000).

Research objectives

The aim of this research is to investigate the relationship of extracurricular activities (presage), learning approach (process) and their effect on academic performance (product) by using Biggs' 3P model among Hong Kong students. The study will focus on Hong Kong Chinese degree students to extend Biggs' findings to a different population, whereby the presage variable, the process variable and the product variable are interrelated. There has been less written about the empirical test of the 3P model on Hong Kong Chinese business degree students. The present study tries to fill that gap at a time of rapid development of higher education in Hong Kong. It is hypothesised that differences in extracurricular activities affect learning approaches which in turn influence learning outcomes. The main research questions examined may be expressed as follows:

1. Does deep learning approach associate with greater involvement in extracurricular activities?

2. Is there a relationship between extracurricular activities and academic performance?

3. Is there a relationship between deep learning approach and academic performance?

Research method

Participants

Participants in this study are 247 business degree students (58% females and 42% males) from a university in Hong Kong. Ages range from 20 to 26 years with an average of 23. All students finished their secondary school in Hong Kong with Chinese as their mother tongue.

Measures

The present study employed the Revised Two-Factor Study Process Questionnaire (R-SPQ-2F) to measure surface and deep learning approach. Confirmatory factor analysis illustrated a reliable measurement by using Hong Kong tertiary students (Biggs et al., 2001). The R-SPQ-2F contained 20 questions to measure deep and surface approach scales each with ten items. A five-point Likert scale from 'always true of me' which was reflected by 5 and 'only rarely true of me' which was anchored by 1. For example, statements of surface approach include: 'I learn some things by rote, going over and over them until I know them by heart even though I do not understand them'; 'I find it is not helpful to study topics in depth. It confuses and wastes time, when all you need is a passing acquaintance with topics'; and 'I find the best way to pass examinations is to try to remember answers to likely questions'. Deep approach is examined by the following statements: 'I find that I have to do enough work on a topic so that I can form my own conclusions before I am satisfied'; 'I work hard at my studies because I find the material interesting'; and 'I make a point of looking at most of the suggested readings that go with the lectures'. Two measures of surface and deep approach were extracted within a range of grades from 1 to 5. The higher the grade, the more use is made of the approach for each student.

An extracurricular activity scale was used to rate how often students took part in ten sports and 12 school-based student clubs by assigning a score for each item using a 5-point scale ranging from 1 (not at all) to 5 (very often). The extracurricular activity was grouped

into three categories including sports, performance in music or dance and student clubs, such as chess, debate or community services. A weighted average of these three items of each student was calculated by assigning a 5-point scale ranging from 1 (not at all) to 5 (very active) in involvement of extracurricular activities.

Grade Point Average (GPA) was used to measure academic outcomes. The course GPA is a weighted average of the GPAs for all compulsory subjects, which is measured on a scale from A (excellent) to F (fail). The GPAs were transformed to numbers for data analysis with higher numbers pointing to better grades (A = 5, B = 4, C = 3, D = 2, F = 1).

Procedure

A convenience sampling method was used. The questionnaires, instructions and assurances regarding the confidentiality of all data collected were given to students after class time. All students volunteered to participate in the survey. Questionnaires were administered at the end of the academic year and students' academic results were obtained from professors with the school's approval.

Results

Hypothesis one proposes that there is a relationship between extracurricular activities and learning approach of students (Deep Learning Approach (DLA) and Surface Learning Approach (SLA)). Cross-tabs with chi-squared tests were adopted to examine differences in learning approaches and extracurricular activities. Students were identified as two groups based on their involvement in extracurricular activities (high or low level). The R-SPQ-2F score was examined to classify deep learning approach and surface learning approach. The results of the chi-square analysis are presented in the following table.

Table 1. Differences in learning approaches of students and extracurricular activities.

Learning approach	DLA	SLA	Row totals
High	137	21	158
Low	53	36	89
Column totals	190	57	247

The results showed that the number of students who are active in extracurricular activities are significantly higher than students who are not active in extracurricular activities on the deep learning approach, χ^2 (1, N = 130) = 12.481, p < 0.001. This suggests that Hong Kong Chinese students with a high level of extracurricular activity involvement are more likely to use the deep approach.

Table 2. Table of coefficients (dependent variable: Grade Point Average).

Variables	Beta	SE	t
Extracurricular activities	.058	.131	.67
Learning approach	.41**	.162	3.91

F (2, 129) = 5.524**

R^2 = .13   *Adjusted R^2 = .12*

** p < 0.05

Hypothesis two suggests a positive relationship between extracurricular activities and academic performance. Hypothesis three proposes a positive relationship between deep learning approach and academic performance. Regression analysis was performed in which the R-SPQ-2F score (learning approaches) and extracurricular activities are served as the dependent variables, and the GPA score (academic performance) as the independent variable. The results are presented in Table 2. The results of the regression analysis indicated that learning approaches were positively related to academic performance at p < 0.05 or beyond which explained 12% of the variance (measured by R^2). It supported the hypothesised role of learning approaches in influencing academic performance. However, the results did not support a positive relationship between

extracurricular activities and academic performance in this study.

Discussion

By using the 3P framework, the study explored the relationship among extracurricular activities, learning approach and academic performance of Hong Kong business degree students. Three research questions were examined: first, the impact of extracurricular activities on learning approach; second, the influence of extracurricular activities on academic performance; third, the relationship between deep learning approach and academic performance. The findings of this study show a positive link between extracurricular activities and deep learning approach. They also indicate a positive impact of deep learning approach on academic performance. The results support prior studies (Zhang, 2000; Fenollar et al., 2007; Diseth, 2011; Trigwell et al., 2013; Chan, 2014).

A link between extracurricular activities and deep learning approach is found. It is common for higher education institutions to encourage students to participate in various types of extracurricular activities in Hong Kong. It is recognised that extracurricular activities play a key role in whole-person education. Higher education institutions should put more resources in place to encourage participation of school-based extracurricular activities and offer recognition to active participants. Questions remain as to how higher institutions might enhance students' learning from the formalisation of extracurricular activity and which types of extracurricular activities are useful for students. Further studies are required to explore the relationship between various types of extracurricular activities and deep approach.

The positive relationship between deep approach and academic outcomes may be caused by a variety of factors. First, the assessments of finance students appear to reward the deep approach. Students who use the deep approach may not match the specific demands of the assessment in other disciplines. Byrne and Willis (1997) argue that public school examinations in Ireland promote the surface approach. Biggs (1994) and Sternberg (1997) argue that the assessment format has a strong impact on how students approach their study. Second, learning approaches can be affected by variables such as heavy course work, didactic teaching method, or over-lecturing in Hong Kong (Gow et al., 1996).

From a practical perspective, the present study shows that lecturers should be aware of the impact of learning approach on academic performance. The present findings revealed that it is needed to teach students some basic learning strategies to enable them to perform better academically. This enhancement in learning strategies is only a necessary condition, not a sufficient condition, for improving students' academic performance. Raising students' awareness of learning approaches is an integral part of effective teaching.

Conclusion

There are two major limitations to this study that construed its results indicative rather than conclusive. First, this study is bounded by the sample size. More studies could be taken in different countries and comparison could be considered with different learning contexts and major studies with larger sample sizes. In the light of inconclusive previous findings, the generalisation of the relationship between deep approach and academic performance is in need of further studies for sub-degree students. Second, it would be useful to adopt qualitative research to reveal insights into the relationship between extracurricular activities, deep learning approach and academic outcomes in higher education.

This study contributed to the enrichment of the empirical research in the relationship between extracurricular activities, learning approach and academic outcomes in Hong Kong students. Although the findings do not generalise a causal relationship between extracurricular activities and deep learning approach, lecturers and school counsellors should encourage students to join school-based extracurricular activities. Future studies could include other presage variables such as personality and socio-economic status. In light of inconsistent prior findings, the generalisability of the relationship between extracurricular activities and learning approach is in need of further research.

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Author details

Yiu Kong Chan is Senior Programme Director of the College of Business and Finance in the University of Hong Kong School of Professional and Continuing Education. His research interest is in the area of lifelong education and educational psychology.