Full Length Research Paper

Assessing learning approaches of Chinese local MBA students: An investigation using the Revised Two-factor Study Process Questionnaire (R-SPQ-2F)

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This study empirically investigated learning approaches of management graduate students in China. The representative sample consisted of 208 MBA students in a professional accreditation business program in careers, namely the part-time MBA program, provided by Zhejiang University (ZJU) during the 2010/2011 academic year. The instrument used to collect the study data was the Revised Two-factor Study Process Questionnaire (R-SPQ-2F), developed by Biggs et al. (2001). The data was fed into SPSS 16.0 version for analyses using t- test, correlations and ANOVA. There were no significant differences in the scores of the R-SPQ-2F questionnaire between the studied groups (gender and age groups) in the part time MBA program, ZJU. The deep approach to learning was found dominant among the participants regardless their age and gender differences. The results had an outstanding importance, with regard to some earlier studies stereotyping Chinese students as a "rote learners" using knowledge assimilation for the mastery of principles instead of critical analysis.

Key words: Chinese local MBA, learning approaches, management graduate students, deep and surface learning approaches.

INTRODUCTION

The primary aim of researchers and education experts is to promote learning, especially within academic settings where graduate students, in general, are expected to develop deep learning approach by adopting a deeper level processing, higher levels of critical thinking, and more ability to engage in self-regulated learning than less advanced students (Duff, 2003). At postgraduate level students may have the ability to independently develop creative ideas through deep learning in pertinence with their educational experience and personal development. Talking about management graduate students, they are supposed to have more positive aptitude for developing

deep approach of learning, which enhances creative thinking and supports practical methods, due to the nature of their instructional programs. Learning approaches are the strategies which learners adopt in order to succeed at learning. The term "approach" is used to signify both the learner's intention and the way in which she/he processes information (Garrison et al., 1995). Cilliers and Sternberg (2001) defined learning approaches as the processes of acquiring knowledge and skills by means of studying, instruction and experience, prior to the learning outcome. Two different processing levels of learning, namely deep and surface were identified as main learning approaches (Biggs et al., 2001; Fourie, 2003). The deep approach encompasses the relationship between investigated meanings, in the matter being studied, and relating it to other experiences and ideas with a critical approach. By contrast, the surface approach can be considered as a way of learning by rote

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relaying on memorization, in isolation from other ideas (Hassall and Joyce, 2001).The improvement of learning depends on an understanding of the student's approaches to learning, which are relevant to some environmental factors of learning, namely assessment methods, curriculum-teaching methods and the atmosphere of the institution (Ramsden, 1992). Hence a great emphasis has been put on the contextual nature of learning (Prosser and Trigwell, 1999).

In this regard, education researchers utilized qualitative methods to assess students' experience of learning and their individual approaches to tackle the tasks of their study course (Duff, 2003). Therefore, various psychometric techniques have been adopted to develop questionnaires for assessing students' approaches to studying. For instance, the Study Process Questionnaire (SPQ), developed in its original theoretical framework by Biggs (1987), encompasses three approaches to learning (surface, deep and achieving) each with a motive and strategy subscale. It has been used by a number of cross-cultural studies investigating students' approaches to learning in various countries worldwide including China (Leung et al., 2006). In another way, a number of studies indicate that a two factor model with deep and surface approaches has the best fit, rather than the initial three factor solution (Kember and Leung, 1998; Zhang, 2000). For this reason, the revised two-factor version of the study process questionnaire (R-SPQ-2F) has been initiated to be used in education settings (Biggs et al., 2001).

In the case of Chinese MBA, students are claimed to be passive recipients rather than active participants, due to teaching methods that emphasize traditional theory teaching instead of interaction between students and teachers (Fan, 2007). However, due to changes underpinned by the globalization event worldwide, particularly in China:

. . . in socio-economic and global contexts, learning and instructional paradigms, and the educational reforms which affect school organization, curriculum, and assessment methods – the stereotyped view of Chinese students as passive rote learners can be questioned further (Carol and Nirmala, 2009).

From this perspective, Chinese local MBA students are expected to engage in a deep approach to learning in order to master their course content and concept through the medium of their first language, in relevance to their own educational and cultural context. Such expectations may converge with Confucius wisdom asserting that 'a learned man is very careful and timid in every word he says; but in action, he works swiftly and is not lazy' cited in Chan (1999)'s study. Accordingly, the present study purpose is to determine Chinese local MBA students' learning approaches using the Revised two-factor Study Process Questionnaire (R-SPQ-2F). More specifically, the study attempts to answer the two following research questions:

1) What are the learning approaches of Chinese local MBA students?
2) Are there any differences between the learning approaches for Chinese local MBA students with regard to gender and age variables?

MATERIALS AND METHODS

Participants

The study was conducted in the first semester of 2010/2011 at the MBA Center of Zhejiang University in Hangzhou (China). Participants were 208 MBA Chinese students with 73 participants (35%) were second-year students and 135 respondents (65%) were first year students. With regard to their gender distribution, 73 (35%) among them were females and 135 (65%) were males. Ranging from 27 to 41 years, the respondents' age can be divided into three groupings: 137 participants (65.9%) between 27 to 31 years, 60 respondents (28.8%) aging between 32 and 36 years and 11 of them (5.3%) were having between 37 and 41 years.

Instruments

The primary data of the study were collected from the participants using a questionnaire encompassing two parts. The first part was the revised two-factor version of the Study Process Questionnaire (R-SPQ-2F) developed by Biggs et al. (2001). On this measure instrument each approach can be further broken down into two components, namely learning motive (which refers to why students learn), and learning strategy (which refers to how they learn). It comprises 20 items representing two main scales, Deep Approach (DA) and Surface Approach, (SA) with four subscales, Deep Motive (DM), Deep Strategy (DS), Surface Motive (SM), and Surface Strategy (SS). Each subscale has 5 items and each item is rating on a 5-point Likert scale ranging from 'always true of me' to 'only rarely true of me'. The second part was about the respondents' personal information such as age, gender and year of study. The questionnaire was translated, without modification of the R-SPQ-2F original version, into Chinese. It was then pre-tested for reliability and validity before administering it to the representative sample. Preference for the R-SPQ-2F was due to its good reliability coefficients and goodness of fit as indicated by various researches (Siddiqui, 2006; Gijbels et al., 2005; Goh, 2005; Biggs et al., 2001; Leung and Chan, 2001). In the present study, the reliability coefficient (Cronbach's alpha) for the total scores of the R-SPQ-2F was 0.7, a satisfactory result with regard to Nunnally and Bernstein (1994) considering an alpha coefficient over 0.70 adequate for instruments' use for general assessment. Cronbach's alpha coefficients for the two main scales and four subscales were: deep approach = 0.76, deep motive = 0.64, deep strategy = 0.65, surface approach = 0.75, surface motive = 0.63 and surface strategy = 0.62.

Data analyses

After collection of the participants' responses the data were initially fed into the Statistical Package of Social Sciences (SPSS 16.0. version) for analyses. Statistical operations were carried out to determine the means, standard deviations and correlations for all variables of the study, as well as indicating differences among target groups based on the factors of age, gender and grade (year of study).

Table 1. Pearson correlations between scales and subscales of the R-SPQ-2F.

Variable	1	2	3	4	5	6
1. DA	1					
2. DM	0.805**	1				
3. DS	0.827**	0.613**	1			
4. SA	-0.029	-0.005	-0.056	1		
5. SM	-0.037	-0.008	-0.098	0 .881**	1	
6. SS	-0.017	-0.016	-0.013	0.887**	0.607**	1

*$p < 0.05$, ** $p < 0.01$. DA = deep approach; DM = deep motive; DS = deep strategy; SA = surface approach; SM = surface motive; SS = surface strategy.

Table 2. Gender difference on learning approaches variables.

Variable	Male		Female		t-value
	Mean	SD	Mean	SD	
DA	35.14	4.03	34.63	4.49	0.83
DM	17.51	2.34	17.47	2.46	0.091
DS	17.87	2.20	17.60	2.70	0.782
SA	25.59	4.19	26.67	4.67	-1.70
SM	13.20	2.42	13.97	2.73	-2.07
SS	12.41	2.34	12.69	2.47	-0.81

$p<0.05$. DA = deep approach; DM = deep motive; DS = deep strategy; SA = surface approach; SM = surface motive; SS = surface strategy.

Procedure

Copies of the final version of the questionnaire, translated into Mandarin, with each one encompassing the two sections of items, under investigation, were separately administered to two groups (the first and second grades) of part-time MBA students, during their class time, in one session of 30 min. The respondents' participation was entirely voluntary and concerned lecturers helped by encouraging them to freely provide the requested information.

RESULTS

Correlations among main scales and sub-scales

As shown in Table 1, there is a statistically significant (** $p < 0.01$) positive relationship between, on the one hand the DA and its DM and DS subscales; on the other hand the SA and its SM and SS subscales are significantly and positively correlated to each other. However, the DA, DM and DS are negatively correlated with SA main scale and its two subscales of SM and SS.

Gender difference on learning approaches variables

T-test was used to compare the learning approach variables between gender and the results are presented in Table 2. There is no significant difference between male MBA students (N = 135) and female MBA students (N = 73) on learning approaches variables.

Age difference on learning approaches variables

One-way ANOVA was used to compare the age difference on learning approaches variables between the three age groups. The result is shown in Table 3, which reveals that none of the between age groups difference is significant.

DISCUSSION

To address its research questions, the present study investigation, into the approaches to learning of Chinese local MBA students using the R-SPQ-2F, reveals that part time MBA students at Zhejiang University, significantly, have a deep approach towards their learning. Both male and female MBA students, who were subjects of this study, have achieved high mean scores on the deep approach's main scale and subscales. On the contrary, they were reported with low mean scores on the surface approach's main scale and subscales. Furthermore, there were no significant differences between age groups on the learning approaches variables.

Though the part-time MBA students are generally struggling to fulfill their social, professional and educational duties, participants to this study were likely driven by a strong desire to obtain the MBA degree as a sine qua non for joining managerial ranks from a technical job function. Hence their high scores on the deep learning approach could be derived from their high motivation. These findings support the claims by previous researchers that future career goals and achievement motives are of great importance in motivating Chinese adult learners to adopt a deep learning approach (Cheng, 2001; Tan, 2006). Moreover, the present study results

Table 3. Age difference on learning approaches variables.

Variable	27 – 31		32 – 36		37 – 41		F-value
	Mean	SD	Mean	SD	Mean	SD	
DA	35.02	4.34	34.98	4.00	34.09	3.64	0.54
DM	17.51	2.49	17.43	2.18	17.72	1.90	1.09
DS	17.79	2.41	17.83	2.40	17.18	2.08	0.50
SA	25.64	4.30	26.40	4.50	28.63	4.71	1.36
SM	13.42	2.55	13.61	2.51	14.18	3.12	1.50
SS	12.21	2.15	12.96	2.70	13.90	2.91	1.21

reinforce the findings of Leung et al. (2006), related to the adoption of the deep approach to learning by construction engineering students in Chinese mainland universities, as a result of the survey conducted, based on a modified study process questionnaire, to investigate the learning approaches of construction engineering students in some China's universities (Hong Kong and the mainland).

As previously reported by Al Rukban et al. (2010), students learning process could be affected by the context and environment in which it takes place. Hence, this general tendency among Chinese graduate students towards deep learning approach could be justified by some related factors. First, the accreditation of Zhejiang University MBA program since 2006 (Xiaodong, 2007) could be a good indication concerning the study curriculum and teaching methods' perfection. Second, the influence of innovative information technologies on students' learning approaches through direct access to various information resources (Leung, et al., 2006; Siddiqui, 2006). Third, the commitment of Chinese senior government officials who since the last few decades have advocated for learning promotion in order to stimulate students' effective reasoning, instead of the traditional tests and course examinations encouraging the memorization of textbook facts. They were convinced that the school system should encourage students "to think more flexibly in their postgraduate careers - that is what manpower development entailed" (Martinsons and Martinsons, 1996).

Conclusion

An overview interpretation of learning approaches of both Chinese male and female MBA students who participated in this study revealed that management graduate students in China preferred a deep approach to learning. However, the present study findings can be limited because of its sample size, relatively small, and the type of its subjects belonging to one MBA program, namely the part-time MBA program.

REFERENCES

Al Rukban MO, Khalil MS, Al-Zalabani A (2010). Learning environment in medical schools adopting different educational strategies. Educ. Res. Rev., 5(3): 126-129.

Bhoomiah D (2009). Hong Kong students' approaches to learning: Cross-cultural comparisons. US-China Ed. Rev., 6: 12.

Biggs J, Kember D, Leung DYP(2001). The revised two-factor study process questionnaire: R-SPQ-2F. British J. Ed. Psychol., 71: 133-149.

Carol KKC, Nirmala R (2009). Revising the Chinese Learner: Changing Contexts, Changing Education. Dordrecht and Hong Kong: Springer and Comparative Education Research Centre.

Chan S (1999). "The Chinese learner – A question of style". Ed. Train., 41(7): 296-304.

Cheng WL (2001). SEM being more effective than multiple regression in parsimonious model testing for management development research. J. Manage. Dev., 20(7): 650-667.

Cilliers CD, Sternberg RJ (2001). Thinking styles: implications for optimizing learning and teaching in university education. South Afr. J. H. Educ., 15(1): 13-24.

DUFF A(2003). Quality of Learning on an MBA Programme: The impact of approaches to learning on academic performance. Ed. Psychol., 23(2): 123–139.

Fan Z (2007). What is the Gap between Students' Needs and Faculties' Teaching in MBA Education in China? Retrieved September 15, 2011, from www.lilydale.swinburne.edu.au/forum/documents/2007/ZHAO_Fan.pdf

Fourie CM (2003). Deep learning? What deep learning? South Afr. J. H. Ed., 17(1): 123-131.

Garrison DR, Andrews J, Magnusson K (1995). Approaches to teaching and learning in higher education. New Currents, 2.1. Retrieved September 15, 2011, from http://www.ucalgary.ca/pubs/Newsletters/Currents/Vol.2.1/approaches.html.

Gijbels D, Van De WG, Dochy F, Van Den BP (2005). The relationship between students' approaches to learning and the assessment of learning outcomes. Eur. J. Psychol. Ed., 20(4): 327-341.

Goh PSC (2005). Perceptions of Learning Environments, Learning Approaches, and Learning Outcomes: A Study of Private Higher Education Students in Malaysia from Twinning Programmes. Adelaide, University of Adelaide.

Hassall T, Joyce J (2001). Approaches to learning of management accounting students. Ed. Train., 43(3): 145-152.

Kember D, Leung DYP (1998). The dimensionality of approaches to learning: An investigation with confirmatory factor analysis on the structure of the SPQ and LPQ. Brit. J. Ed. Psychol., 68: 395-407.

Leung MY, Li J, Fang Z, Lu X, Lu M (2006). Learning approaches of construction engineering student: A comparative study between Hong Kong and Mainland China. J. Ed. B. Environ., 1(1): 112-131.

Leung DYP, Kember D (2003). The relationship between approaches to learning and reflection upon practice. Educ. Psychol., 23: 61–71.

Martinsons MA, Martinsons AB (1996). Conquering cultural constraints to cultivate Chinese management creativity and innovation. J. Manage. Dev., 15(9): 18–35.

Nunnally J, Bernstein I (1994). Psychometric Theor. McGraw-Hill, New York.

Prosser M, Trigwell K (1999). Understanding learning and teaching: the experience in higher education. Buckingham, Society for Research in Higher Education, Open University.

Prosser M, Trigwell K, Taylor P (1994). A phenomenographic study of academics' conceptions of science learning and teaching. Learn. Instruc., 4: 217- 231.

Ramsden P (1992). Learning to teach in Higher Education. London: Routeledge.

Siddiqui Z S (2006). Study approaches of students in Pakistan: the revised two-factor study process questionnaire experience. Occasional Report I, published in the proceedings of the conference on teaching and learning in higher eudcation at Singapore.

Tan PL (2006). Approaches to learning and learning values: An investigation of adult learning learners in Malaysia. Ph.D. thesis

Queensland University of Technology, Brisbane, Australia.

Tural G, Akdeniz A (2008). Examining learning approaches of science student teachers according to the class level and gender. US-China Ed. Rev., 5(12): 54–59.

Xiaodong L (2007). MBA education in Mainland China and AMBA accreditation of Zhejiang University. Paper presented at the Accreditation Forum and China Conference, Hong Kong, November 23.

Zhang LF (2000). University students' learning approaches in three cultures: An investigation of Biggs 3P model. J. Psychol., 134: 31-56.