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A Comparative Study on Self Regulated Learning Strategy between Accounting and Business Students

Kajian Perbandingan Strategi Pembelajaran Pengaturan Kendiri antara Pelajar Perakaunan dan Perniagaan

SHARIFAH BUNIAMIN

ABSTRACT

This study aims to support students and educators in developing a good learning strategy as it is perceived as one of the elements that influence one's academic success. It was conducted to identify the differences in self-regulated learning strategy between accounting and business students. In particular, the research examines the effects of demographic factors on learning strategy for both groups . There are four selected strategies in self-regulated learning strategy namely, rehearsal, organisational, time and study environment management and peer learning. The data is obtained using questionnaire survey that is based on the Motivated Strategies for Learning Questionnaire (MSLQ). The samples consist of 196 accounting and business students in Universiti Tenaga Nasional (UNITEN). The findings revealed that there is a significant difference in time management, organisational and peer learning between accounting and business students. Furthermore, a significant difference was found in organisational strategies between male and female group of business studentsas well as peer learning strategies between urban and rural group for both accounting and business students. However, no significant differences were found in all self-regulated learning strategies between foundation and transfer credits group for both accounting and business students.

Keywords: learning strategy, self-regulated learning, accounting students, business students

ABSTRAK

Kajian ini bertujuan untuk menyokong pelajar dan pendidik dalam membangunkan strategi pembelajaran yang baik kerana ia dianggap sebagai salah satu elemen yang mempengaruhi kejayaan akademik pelajar. Secara khusus, kajian ini mengenal pasti perbezaan dalam strategi pembelajaran pengaturan kendiri antara pelajar perakaunan dan perniagaan. Penyelidikan ini juga meneliti pengaruh faktor demografi ke atas strategi pembelajaran bagi pelajar perakaunan dan perniagaan. Terdapat empat strategi pembelajaran pengaturan kendiri yang dipilih iaitu latihan, organisasi, pengurusan masa dan persekitaran belajar serta rakan belajar. Data diperolehi menggunakan kaedah soal selidik yang menggunakan Soal Selidik Strategi Motivasi untuk Pembelajaran (MSLQ). Sampel terdiri daripada 196 pelajar perakaunan dan perniagaan di Universiti Tenaga Nasional (UNITEN). Hasil kajian menunjukkan terdapat perbezaan yang signifikan dalam pengurusan masa, organisasi dan rakan belajar antara pelajar perakaunan dan perniagaan. Kajian ini juga mendapati perbezaan yang signifikan dalam strategi organisasi antara kumpulan pelajar perniagaan lelaki dan perempuan. Terdapat juga perbezaan yang signifikan dalam strategi rakan belajar antara kumpulan bandar dan luar bandar untuk kedua pelajar perakaunan dan perniagaan. Walau bagaimana pun, tiada perbezaan yang signifikan ditemui bagi semua strategi pembelajaran pengaturan kendiri antara pelajar asas dan pelajar pindahan kredit untuk kumpulan pelajar perakaunan dan perniagaan.

Kata kunci: strategi pembelajaran, pembelajaran pengaturan kendiri, pelajar perakaunan, pelajar perniagaan

INTRODUCTION

Approaches to learning are among the factors that may influence students' academic achievement and previous studies have found the variation in the ways in which students approach their learning. This study focus mainly on Self Regulated Learning (SRL) strategy. Self regulated students participate proactively in the learning process emotionally, motivationally and cognitively. These students have their self-activated intentions and self directed efforts in order to gain knowledge and skills by using specific strategies (Nota et al. 2004).

Self-regulated learning is an integrated learning process, which occurs when individuals attempt to adjust the characteristics of their own behaviour, motivation, and cognition to best suit their own learning. Pintrich (1999) describes self-regulated learning as an active, constructive process whereby learners set goals for their learning plan actions and monitor, regulate and control their cognition, motivation as well as behaviour.

An important aspect of self-regulated learning theory is that students learning and motivation are interdependent. Their learning strategy enable them to be self-aware, knowledgeable, and decisive in implementing their learning strategy. In term of motivation, they possess high self-efficacy, self-attribution and intrinsic task interest. Their self-motivation is also evident in their continuing tendency to set a higher learning goal for themselves when they achieve the ealier goals (Zimmerman 1990). At that level, self-regulated learners are not only self-directed but are self-motivated as well.

Pintrich, Smith, Garcia & McKeachie (1991) have come up with a manual on the use of the Motivated Strategies for Learning Questionnaire (MSLQ) which categorised self-regulated learning into two main strategies. The first one is cognitive and matacognitive strategies which include rehearsal, elaboration, organisation, critical thinking and metacognitive self-regulation. The second strategy is resource management strategies which includes time and study environment, effort regulation, peer learning and help seeking.

On the other hand, Zimmerman and Martinez-Pons (1986) identified 14 commonly used academic self-regulated learning strategies which include: self-evaluation, organising and transforming, goal setting and planning, seeking information, keeping record and monitoring, environmental structuring, self consequences, rehearsing and memorising, seeking peer assistance, seeking teacher assistance, seeking adult assistance, reviewing tests, reviewing notes and reviewing texts. They used a structured interview called self-regulated learning interview schedule (SRLIS) in order to assess these strategies implemented.

Ballantine, Duff and Larres (2008) examines three learning approaches of accounting and business students. The first approach is deep approach that entails looking for meaning in the matter being studied and critically relating it to other experiences and ideas. The next one is surface approach, which is characterised by a reliance on rote-learning, passive memorisation and academic anxiety. While the last approach is strategic approach, where the students seek to maximise their academic performance by effective study organization and analysis of previous examination papers to predict questions. The study reported that no statistically significant difference in adopting the three type of leaning approaches between accounting and business students.

In contrast, Lucas and Meyer (2005) found that there were variations in approach to learning between students who specialise in accounting and those who do not. Using Reflections on Learning Inventory (RoLI) they found that business students score higher in fact-based learning, memorising before understanding and thinking independently.

Additionally, a study by Duff (2004) focuses on cognitive learning styles in accounting education which considers the relationship between personality, learning, memory and academic achievement. Smith (2001) presents an overview of self-regulated learning and highlights its relevance to accounting education in promoting the development of lifelong learning skills in order to mold the accounting professional to be someone who uses independent learning skills that is decision making, problem solving and self-management.

Eide, Geiger and Schwartz (2001) assessed the usefulness of Canfield Learning Styles Inventory in accounting education. This instrument consists of 30 statements related to students' preference of learning styles. Among the items used are

peers, organisation, goal setting and competition. The study found little support for the use of Canfield Learning Styles Inventory in accounting education.

It is important for educators to facilitate and provide an effective teaching as well as learning environment that will support future learning and eventually a successful career. Previous researches utilize different research methods to identify variation in students learning strategy, particularly among accounting students. A study on self-regulated learning by Smith (2001) analyzed the implications of self-regulated learning for accounting educators and researchers but did not include students perspective. On the contrary, Ballantine et al. (2008) analyzed accounting students' approaches to learning where the approach focused on two approaches namely deep approach and surface approach. While the study by Duff (2004) investigates the role of cognitive learning styles in accounting education. Thus, this study aims to fill in the gap by examining the differences in learning strategy adopted by accounting and business students.

The motivation of this study is to support students and educators in developing a good learning strategy. Rebele et al. (1998) in their study concluded that a continuation of efforts to explain the learning techniques of accounting students is needed in order to find valid instruments that accounting and business educators can rely on to improve the learning process. Hence, the study attempts to fulfill the following objectives:

1. To investigate the differences in learning strategy between accounting and business students.
2. To examine the effects of demographic factors on learning strategy for accounting and business students.

METHODOLOGY

The data was collected from UNITEN's accounting and business final year students for the academic year 2009/2010. The final year students were selected because they have been exposed to most core subjects in accounting and business and experienced variety of learning environments. Furthermore, they have been equipped and developed with advance conceptual level learning as they progress through their studies. The study utilises a questionnaire which were distributed in class. 196 questionnaires were distributed (i.e 98 for each group) and all the questionnaires were returned and deemed as usable.

The questionnaire was adopted and adapted from Motivated Strategies for Learning Questionnaires (MSLQ) originally developed by Pintrich et al. (1991). This instrument is one of the most frequently used (see for example Wolters, Yu & Pintrich, 1996; Mousoulides & Philippou 2005). The questionnaire consist of Part A and B. Table 1 summarises each part of the questionnaire and the measurement used.

TABLE 1. Structure of the Questionnaire

Part	Measurement
A	Respondents' backgound
B	Students' Learning Strategy
i. Item 1,3,13,18	i. Rehearsal
ii. Item 5,7,14,16	ii. Organisational
iii. Item 2,4,6,8,15,17,19	iii. Time and Study Environment
iv. Item 9,10,11,12	v. Peer learning

Responses are recorded on a 7-point scale with extreme points labelled 'not at all true of me' (1) and 'very true of me' (7). The academic performance is measured using the latest Cumulative Grade Point Average (CGPA). This measurement is widely use to measure academic performance and as such it is considered as an appropriate and reliable instrument. A good academic performance implies self-mastery and demonstration of students' ability. CGPA is chosen, for several reasons: (1) grades are clearly the most common indicator of academic performance, (2) CGPA is instrumental for graduation and can be considered a meaningful measure of students' performance, (3) students are generally aware of their CGPA since they receive regular feedback throughout their study, (4) most of the literature is based on measurement of CGPA/GPA for students'academic performance.

There are four students' learning strategies selected for this study namely; Rehearsal, Organisational, Time and Study Environment and Peer Learning. Rehearsal strategy involves reciting

items or saying aloud in reading, highlighting and underlining text (Pintrich et al. 1991). This strategy can help the students to grab and focus on important points from reading the text. Furthermore, it can help students to retain the information in their memory. This strategy is assumed to influence the students' attention and encoding process, therefore it will lead to good academic performance.

Organisational strategy is a deeper processing strategy which includes activities such as selecting the main idea after reading text, outlining text or reading material as well as using variety of specific techniques for selecting and organising the ideas such as sketching a network and mapping the important ideas (Pintrich 1999). These activities show that the students are actively involved in the task and should result in better performance.

Time management includes activities such as scheduling, planning and managing one's study time. Study environment management refers to the setting where the students do their class work. Students must be able to manage and regulate their time and their study environments so that they can adapt as well as change according to their environment. Self-regulated learners select, structure and create environments that optimise learning (Zimmerman & Martinez-Pons 1986). In addition, Zimmerman et al. (1994) found that time management helps students to regulates learning time properly and indirectly this may improve their academic performance.

Communication and discussion with peers can help a student to clarify and elaborate more on reading materials. Peer learning strategy includes activities of collaboration, communication and discussion with peers during the process of learning (Pintrich et al. 1991). The activities can help students to clarify and elaborate more on learning materials. These activities normally found in cooperative learning as students will interact with their peers within group. Smith and Spindle (2007) found that accounting students selected groups that provide an effective cooperative learning and this affected their academic performance. Studies on accounting students also indicated that cooperative learning has the potential to increase students' satisfaction and interaction (Norman et al. 2004).

Hypothesis Development

Studies revealed that students' learning strategy is closely related with the degree they are pursuing (Ballantine et al. 2008). There are a number of studies that have identified differences in students' learning strategy across degree programs. A Lucas and Meyer (2005) indicated that accounting students score high on enjoyment and relevance activities, while business students score high in worry, exam focus, numbers and lack of focus factors. On the other hand, Booth, Luckett and Mladenovic (1999) investigated students learning strategy namely deep and surface approaches. They found that accounting students have higher scores for surface approach and lower for deep approach than students in arts, education and science program. This study is supported by Eley (1992) which revealed that accounting students score higher on surface approach and lower for deep approach than science and English literature students. In order to indentify the existence of differences in SRL between accounting and business students, the following hypotheses are addressed:

H_{1a} *There is a significant difference in rehearsal activity between accounting and business students.*

H_{1b} *There is a significant difference in organisational activity between accounting and business students.*

H_{1c} *There is a significant difference in time and study environment management between accounting and business students.*

H_{1d} *There is a significant difference in peer learning strategy between accounting and business students.*

In addition, the study also aim to determine the differences in self-regulated learning between various demographic factors (for example gender, prior educational background, hometown and level of CGPA). Studies revealed that there are mix findings regarding students' learning strategy based on demographic factors. Mutchler, Turner and Williams (1987) reported that female students outperformed male students in upper division accounting courses. Lucas and Meyer (2005) reported that the learning approach between male and female students differed. While, Ballatine et

al. (2008) did not find any significant differences in deep, surface and strategic approaches between male and female students. In a study by Tho (1999) on urban-rural status of students, he found that there is no influence on subsequent accounting performance. On the contrary, prior accounting knowledge has been found to be an important determinant of students' performance in accounting courses (Turner et al. 1997). Hence, the following hypotheses were made;

H_{2a} *There is a significant difference in learning strategy between male and female students.*

H_{2b} *There is a significant difference in learning strategy between urban and rural students.*

H_{2c} *There is a significant difference in learning strategy between students with high and low CGPA.*

H_{2d} *There is a significant difference in learning strategy between foundation and transfers credit students.*

Results and Discussion

One hundred and ninety six questionnaires were distributed and collected from accounting and business students. The questionnares were distributed in class with the instructors' supervision in order to make sure that the students answer all the questions. The instructor managed to recollect all the distributed questionnaires and all the questionnaires were deemed usable for further analysis.

Table 2 presents the descriptive findings in terms of gender, hometown, prior educational background and Cumulative Grade Point of Average (CGPA). Based on the data, majority of the respondents from both groups are female, that is 75.5% and 78% for accounting and business groups, respectively. Most of the students (78.6% for accounting and 85.7% for business group) are from urban area. In addition, 69.4% of the accounting students are from foundation admission group while 68.4% of the business students are from transfer credit admission groups. For CGPA, 54.1% of the accounting students are in high CGPA group. While for business students, 50% of the students are in the high CGPA's group.

Table 3 revealed that 59.2% accounting students believed that they have enough learning time which is more than business students (49%). From the qusetionnaires it was found that majority of the students for both group do not have a proper learning schedule. Only 32.7% of the accounting students and 25.5% of business students utilised a proper learning schedule. In addition, there only

TABLE 2. Descriptive Results

Group		Accounting		Business	
Demographic Factors		Frequency	Percent	Frequency	Percent
Gender	Male	24	24.5	20	20.4
	Female	74	75.5	78	79.6
Hometown	Urban	77	78.6	84	85.7
	Rural	21	21.4	14	14.3
Prior educational background	Foundation	68	69.4	31	31.6
	Transfer Credit	30	30.6	67	68.4
CGPA	High	53	54.1	49	50.0
	Low	45	45.9	49	50.0

TABLE 3. Learning Time and Schedule

Group		Accounting		Business	
		Frequency	Percent	Frequency	Percent
Learning time	Yes	58	59.2	48	49.0
	No	40	40.8	50	51.0
Learning schedule	Yes	32	32.7	25	25.5
	No	66	67.3	73	74.5

18% accounting and 17% business students who utilized their study schedule effectively.

The reliability tests were carried out to determine the consistency of the answers given by respondents in answering the questionnaires. The results show that there is a high degree of agreement with regards to specific independent variables tested in this study. The Cronbach Alpha for all variables are within the magnitude of 0.7-0.8 except for organisation which only score 0.6. According to Field (2007), the acceptable magnitude for the Cronbach Alpha is 0.7 to 0.8. Therefore, there is a high consistency among respondents in answering the questionnaires.

On the other hand, the significance level of less than 0.05 indicates non-normality (Field 2007). Results from Kolmogorov-Sminorv (K-S) test reveaedl that the significant level of all variables are less than 0.05 which indicates non-normality, except for Time which shows significant level more than 0.05 which indicates normal distribution. Hence, the non parametric statistical analysis is more appropriate to be used. The Mann-Whitney test is used in order to achieve the objectives of the study which is to examine the differences in SRL between accounting and business students and also between various demographic factors. The test is a non-parametric test which is considered appropriate as the data is considered non-normal distribution.

Table 4 presents the differences in SRL between accounting and business students. There are significant differences in time management, organisation and peer learning between accounting and business students. Accounting students score higher than business students in all SRL activities. The results indicated that accounting students practice the SRL activities more than business students.

The possible explanation is because of the nature of the accounting and business program. Accounting program is classified as a professional field which is structured according to the professional body such as Malaysian Institute of Accountants (MIA) and Associations of Chartered Certified Accountants (ACCA). The structure of accounting program is more stringent compared to the business program. More over, the accounting program is designed for a duration of four years with 140 credit hours compared to 3 years with 120 credit hours for business program. Moreover, the strategy of organising is designed to help students and it is proven to be more effective in learning technical subjects (Nota et al. 2004). These differences in both programs might influence the students' learning strategy.

TABLE 4. Differences in SRL between Accounting and Business Students

SRL	Group	N	Mean Rank	p-value
Rehearsal	Accounting	98	101.88	.201
	Business	98	95.12	
Time	Accounting	98	105.83	0.035*
	Business	98	91.17	
Organisation	Accounting	98	105.99	0.032*
	Business	98	91.01	
Peer	Accounting	98	106.47	0.024*
	Business	98	90.53	

*Significant at 0.05 level

This finding is consistent with previous studies (Lucas & Meyer 2005; Booth et al. 1999; and Eley 1992) which found significant difference in learning approach between accounting and business students. Lucas and Meyer (2005) identified several causes as being potentially important in learning accounting and may differentiate it with other non-accounting fields. Among the causes are the nature of accounting subject as it involves mathematic, numbers, technique and formulae; the difficulty of learning accounting and the relevance in personal, work related and business sense. In contrast, Ballatine et al. (2008) revealed no statistically significant differences in learning approaches between accounting and business students.

Table 5 depicts the effects of demographic factors (for example gender, hometown, admission group and CGPA) on accounting and business students. The results revealed that, there is a significant difference in organisation strategies between male and female group of business students. The female students score higher than male students. This finding is consistent with a previous research by Lucas and Meyer (2005), which found significant differences in surface and deep learning strategy between male and female accounting and business students. However, this finding contradicts Ballatine et al. (2008) which

TABLE 5. Differences in SRL Based on Demographic Factors

	Group		Accounting		Business	
Demographic Factors	SRL		Mean Rank	p-value	Mean Rank	p-value
Gender	Rehearsal	Male	51.04	0.381	42.70	0.116
		Female	49.00		51.24	
	Time	Male	44.54	0.164	41.28	0.074
		Female	51.11		51.61	
	Organisation	Male	43.65	0.123	34.05	0.003*
		Female	51.40		53.46	
	Peer	Male	45.98	0.243	54.98	0.168
		Female	50.64		48.10	
Hometown	Rehearsal	Urban	51.13	0.139	50.36	0.233
		Rural	43.52		44.32	
	Time	Urban	51.58	0.083	50.19	0.280
		Rural	41.86		45.36	
	Organisation	Urban	51.13	0.139	49.34	0.447
		Rural	43.52		50.46	
	Peer	Urban	52.94	0.010*	47.08	0.019*
		Rural	36.88		64.04	
Prior educational background	Rehearsal	Foundation	48.37	0.277	44.10	0.100
		Transfer Credit	52.07		52.00	
	Time	Foundation	47.08	0.103	48.10	0.371
		Transfer Credit	54.98		50.15	
	Organisation	Foundation	48.46	0.293	42.60	0.051
		Transfer Credit	51.87		52.69	
	Peer	Foundation	49.54	0.492	46.94	0.273
		Transfer Credit	49.40		50.69	
CGPA	Rehearsal	High	55.71	0.009*	50.72	0.335
		Low	42.19		48.28	
	Time	High	52.09	0.164	50.91	0.313
		Low	46.44		48.09	
	Organisation	High	56.34	0.005*	47.68	0.264
		Low	41.44		51.32	
	Peer	High	50.39	0.369	47.52	0.246
		Low	48.46		51.48	

*Significant at 0.05 level

claimed that there is no significant difference in deep, surface and strategic approach between male and female students.

In addition, the findings indicated that there is a significant difference in peer learning strategies between urban and rural group for both groups. Accounting students from urban area scored higher than rural students. This may be explained by the difference of students' prior study environment between rural and urban groups. The students from the urban may have wider exposure in social life and study environment so that they are more comfortable to communicate and collaborate with their peers in the learning process. In contrast, business students from rural hometown score higher than urban students. It would be interesting to have further investigation for this contrast finding.

Furthermore, significant differences were also found in rehearsal and organisation strategies between high and low CGPA of accounting students. Students with high CGPA score higher in both, rehearsal and organisation than students with low CGPA. However, there is no significant differences in all SRL strategies between foundation and transfer credits group for both accounting and business students.

Conclusion

The main objective of this study is to investigate the differences in learning strategy between accounting and business students. In addition, the study also examines the effects of demographic factors on learning strategy for accounting and business students. The study reveals that there is a significant differences in time management, organisational and peer learning between accounting and business students. The findings indicated that accounting students score higher than business students in all SRL strategies. This learning strategy could be trained and the instructors should be well trained so as to be able to teach the skills and may create effective environments in which students can learn to regulate their learning process (Mousoulides & Phillipou 2005).

The study found a significant difference in organisational strategies between male and female business students. The female students score higher than male students. There is also a significant difference in peer learning strategies between urban and rural groups for both accounting and business students. Accounting students from urban hometown score higher than rural students. However, business students from rural hometown score higher than urban students. The findings revealed that students with high CGPA score higher in both, rehearsal and organisational than students with low CGPA. Meanwhile, no significant differences were found in all SRL strategies between foundation and transfer credits group for both accounting and business students.

There are various factor influencing students' learning strategy. However, this study only focused on self-regulated learning strategy due to several limitations. Future study should explore other learning strategies such as deep, surface and strategic learning strategy. It is important to note that the generalisability of the results may be limited to the accounting and business final year students in UNITEN. Future research should consider a wider group of accounting and business students in order to facilitate a reliable generalisation for the respective population.

In summary, this study has provided valuable information for educators and also the university in order to promote effective learning strategy in its conquest to produce excellent students in line with UNITEN's motto 'UNITEN Generates Professionals'. The findings helps to clarify whether self regulation is a causally related to program and demographic factors as well as provide information in order to improve the application of teaching strategies in accounting and business. In addition, the implication for teaching is that instructors should engage in a supportive learning climate in order to enhance students' learning experiences and successful learning outcome. Finally, this study may lead to the implementation of improved practices in training programs design and stimulate further research into the areas of self-regulated learning.

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Sharifah Buniamin
Jabatan Perakaunan
Kolej Pengurusan Bisnes & Perakaunan
Universiti Tenaga Nasional
26700 Bandar Muadzam Shah, Pahang, Malaysia

Correspondent Author: sharifah@uniten.edu.my
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