

ACCOUNTING FOR NON-ACCOUNTING STUDENTS: WHAT AFFECTS THEIR PERFORMANCE?

Suhaiza Ismail

Department of Accounting, Kulliyyah of Economics and Management, IIUM
Email: suhaiza@iiu.edu.my

Nurkamariah Kasim

Department of Accounting, Kulliyyah of Economics and Management, IIUM

ABSTRACT

This study aims to examine the factors affecting the examination performance of non-accounting students in completing an accounting course, that is, Management Accounting. A questionnaire survey was administered to a total of 147 non-accounting students who enrolled in a Management Accounting course for a semester. The factors considered are gender, prior academic performance, year of study and learning approaches adopted which include deep, surface and strategic approaches. Using multiple regression analysis, the results reveal that prior academic performance and year of study have a positive significant impact on performance while the surface approach of learning has a negative significant impact on the performance of the students. This present study mainly focused on the overall performance of the students and did not investigate the effect of the factors on the performance of the various assessment components in Management accounting course. The findings imply that the Management Accounting course should be offered to higher level non-accounting students. In addition, for completing the course with good results, the surface approach to learning should be avoided. The present study is unique as it considers the students performance in a subject that is not the main discipline of the students (i.e., accounting course for non-accounting students).

Keywords: *Gender, learning approach, non-accounting students, performance, prior academic performance, year of study.*

1. INTRODUCTION

Accounting subjects are not exclusively meant for students who are majoring in an accounting program. Other academic disciplines, such as Business, Economics, Engineering and Information Technology, sometimes require their students to complete certain accounting courses throughout their program either as compulsory or elective courses. Prior studies have revealed that non-accounting students perceive the subject of accounting as irrelevant to their discipline and difficult to grasp. Consequently, a number of non-accounting students did not perform well in the accounting courses (Malgwi, 2006; Illias *et al.*, 2009).

Biggs (1985) outlined a model of the student learning process, which comprises three distinct stages: presage, process and product. The presage stage refers to the characteristics of students such as prior experience and performance whilst the process stage refers to the approaches to learning the subject. Ultimately, the product is reflected in the outcome or performance of the students in the subject matter. Inspired by the phenomena and based on Biggs' model, the present study aims to investigate the factors including the characteristics of students and their approaches to learning (i.e., presage and process) that may influence the academic performance (product) of the non-accounting students in the management accounting course.

The unique contribution of the paper is that it covers the three stages of the student learning process by offering evidence on the factors affecting the academic performance of the students. The present study is also distinct from prior studies (for example, Koh and Koh, 1999; and Duff, 2004) as it considers the students performance in a subject that is not the main discipline of the students (i.e., accounting course for non-accounting students). The remainder of the paper is structured as follows. The next section offers a review of relevant literature and proposes the hypotheses for this study. Then, the following section describes the research method and procedures used in this study. The subsequent section discusses the results of the study and the final section contains implications, limitations of the study and suggestions for future research.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Approaches to Learning and Methods for Assessing the Approaches: ASI, RASI and ASSIST

Prior research on learning has reported that several approaches to learning have been adopted by learners. Marton and Saljo (1976) discovered two common ways of learning—deep and surface approaches. Later, Ramsden (1979) identified another approach to learning, which is called the strategic approach or achieving approach (Sharma, 1997; Booth *et al.*, 1999; Jackling, 2005; and Furnham *et al.*, 2009).

The deep approach can be defined as a way of understanding knowledge learnt by connecting it to personal experience (Svensson, 1977). According to Entwistle & Ramsden (1983) and Tait & Entwistle (1996), the deep approach is associated with intrinsic motivation whereby students learn for the sake of the knowledge and for self-development. In contrast, students adopting a surface approach prefer to memorise the facts instead of

understanding the detail (Svensson, 1977; and Abraham *et al.*, 2006). The surface approach is related to outcome goals where students study mainly for fulfilling the requirement of their qualifications (Entwistle and Ramsden, 1983; Tait & Entwistle, 1996; and Cassidy and Eachus, 2000).

The strategic approach refers to a way of studying with the intention of obtaining the highest possible grades (Tait and Entwistle, 1996; Booth *et al.*, 1999; Duff, 1999; and Abraham *et al.*, 2006). Booth *et al.* (1999) claimed that students who adopt a strategic approach manage their time to study with the main intention of obtaining higher grades despite not really understanding the subject matter learnt. Table 1 below summarizes the characteristics of the three approaches to learning:

Table 1: The Concept of three Approaches to Learning

Deep Approach	Surface Approach	Strategic Approach
Intention to understand	Memorizing the information needed for assessment	Intention to obtain highest possible grades
Interested in the subject or course	Finding it hard to make sense	Putting in effort to excel
Relating the ideas and concepts to personal experience	Having problems relating concepts	Organizing the study efficiently
Examining the evidence and logic to understand the content	Anxiety about coping with the demands of the course	Managing time efficiently

Source: Duff (1999) adapted from Entwistle (1987)

In measuring the approaches of student learning, Entwistle *et al.*, (1979) developed an instrument called the Approaches to Studying Inventory (ASI). The ASI instrument contains 64 items, which are subdivided into 16 scales that represent one of the three approaches. Later, in 1995, the Revised Approaches to Studying Inventory (RASI), which is a modified version of ASI, was proposed by Entwistle and Tait (1995). This revised ASI has 44 self-report inventory items and 15 scales. Cassidy (2004) reported that there are six approaches to learning identified in the RASI, which are the three common approaches plus lack of direction, academic self-confidence and Meta cognitive awareness of studying.

Tait *et al.* (1998) introduced a simplification of the ASI instrument – the Approaches to Study Skills Inventory for Students (ASSIST). ASSIST provides a broader range of indices of study behavior, skills and strategies, and describes the sub-scale titles in a more 'user friendly' manner. Similar to ASI, ASSIST measures students learning approaches on three main scales: deep, surface and strategic, however, the items in the instrument were reduced to 52 items and 13 scales. ASSIST has been used in a large number of recent studies (see for instance: Entwistle *et al.*, 2000; Bryne *et al.*, 2002; Fransman, 2003; Bryne and Willis, 2008; Dwyer and Sudweeks, 2007; Speth *et al.*, 2007; Ballantine *et al.*, 2008; Bryne *et al.*, 2009; Ward, 2011; and Wickramasinghe and Samarasekera, 2011).

2.2 Learning Approach and Academic Performance

Previous studies that investigated the relationship between the learning approach and performance have reported mixed conclusions. Bryne *et al.* (2002) examined this relationship on a sample of 110 students in a management accounting module. The authors found that the deep approach and strategic approach are positively significantly associated with high academic performance while the surface approach is significantly associated with poor performance. Paver and Gammie (2005) also examined the relationship between the approach to learning and academic performance but adopted RASI to assess the learning approach. Similar to Bryne *et al.* (2002), they found a significant positive association between the deep and strategic approach with performance but reported no significant relationship between the surface approach and performance.

In an earlier study, Booth *et al.* (1999), and Cassidy and Eachus (2000) reported that the deep approach is not significantly reflected in the academic performance but that there is evidence of a negative association between the surface approach and achievement. In addition, Cassidy and Eachus (2000) also discovered that academic performance has a negative relationship with the strategic approach. Davidson (2002) and Duff *et al.* (2004) found no significant relationship between total examination performance and all approaches to learning. However, when Davidson (2002) further scrutinised the relationship between the approaches to learning and performance on different types of examination questions, a significant positive relationship was claimed for the relationship between the deep approach and performance on complex examination questions. Based on the above discussion of prior literature, despite the mixed findings in the relationship between different approaches to learning and academic performance, the majority of the studies discovered a positive relationship between the deep and strategic approaches to learning and academic performance and a negative relationship for the surface approach. Therefore, the following hypotheses are postulated:

H1: The deep approach to learning has a positive significant impact on performance

H2: The surface approach to learning has a negative impact on performance

H3: The strategic approach to learning has a positive significant impact on performance

2.3 Gender and Academic Performance

Prior studies that investigated the differences in the academic performance of male and female students have reported inconclusive evidence. Mutchler *et al.* (1987) investigated the performance of female and male students in higher level accounting courses and claimed to have found that female students achieved significantly higher grades than the male students. Similarly, Tyson (1989) claimed that female students performed significantly better than the male students in his study on 200 students who were taking introductory accounting courses. In contrast, Koh and Koh (1999) and Okafor and Egbon (2011) found that male students outperformed their female counterparts. Buckless *et al.* (1991) and Gist *et al.* (1996) found that gender has no significant impact on academic performance. Due to mixed evidence from

prior studies on the effect of gender on academic performance, the following hypothesis is proposed:

H4: Gender has no significant effect on academic performance.

2.4 Prior Performance and Academic Performance

Prior work on the association between prior academic achievement and academic performance reported a positive relationship between the two variables (Clark and Sweetney, 1985; Dockweiler and Willis, 1984; Doran *et al.*, 1991; Eskew and Faley, 1988; Ingram and Peterson, 1987; Ward *et al.*, 1993; Gist *et al.*, 1996; and Koh and Koh, 1999). In contrast, Bartlett *et al.* (1993) found no significant relationship between prior academic achievement and current academic performance. Based on the evidence reported in the majority of the prior studies, the following hypothesis is proposed:

H5: Prior academic achievement is positively associated with academic performance in a Management Accounting course.

2.5 Level of Study and Academic Performance

In the context of the present study, a management accounting course is offered as a compulsory subject to the non-accounting students in order to complete their degree. However, the students have the freedom to take the course at any stage of their study provided that they have fulfilled the prerequisite subjects. Therefore, it is expected that taking the subject at different levels of study will have an impact on the performance of the students in the course due to the different exposure and skills that students acquire at different stages of their study program.

To the best knowledge of the researchers, no prior study has considered level of study as a factor to affect academic performance. However, prior literature has investigated the effect of age on academic performance and reported that younger students tend to perform better than the older students (Dockweiler and Willis, 1984; and Koh and Koh, 1999). In contrast, Bartlett *et al.* (1993) claimed to have found a negative relationship between age and performance. Based on the discussion, the following hypothesis is postulated:

H6: There is a positive association between the level of study and academic performance.

3 RESEARCH METHOD

3.1 Respondents and Data Collection

The respondents for this study are the students who were taking the Management Accounting course in Semester 2, 2010/2011. The course is specifically designed for non-accounting

students, particularly students who are pursuing a degree in Business Administration or Economics. The survey was distributed during formal lecture time in the final week of the semester and the students were given approximately 15 minutes to respond to the survey. The total number of students registered for the course in that semester was 156. However, on the day the survey was conducted, 146 students were present and took part in the survey, which signifies 93.6 per cent of the total students who were taking the subject during the semester.

3.2 Questionnaire Instrument

The questionnaire for this study consists of two parts. Part A of the questionnaire requires the respondent to complete the background information, which includes information on year of study, gender and student identification number. Part B of the questionnaire seeks to measure the respondents' approaches to studying. The present study adopted the Approaches and Study Skills Inventory for Students (ASSIST) developed by Tait *et al.* (1998) to measure the learning approaches adopted by respondents in completing the Management Accounting course.

3.3 Academic Performance and Prior academic Achievement

For the purpose of this study, the overall performance of the students in the Management Accounting course is considered, which comprises two assessment elements – continuous assessment mark and final examination result. In addition, as this present study also examines the effect of students' prior performance in other subjects on Management Accounting performance, the cumulative grade point average (CGPA) of the students for the previous semester was also retrieved. These results were obtained from the university's student result database.

3.4 Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) software. Basically, a descriptive analysis of the mean score and standard deviation were computed for the Likert-scale questions on the three approaches to learning the Management Accounting course. In testing the hypotheses, multiple regression models were developed and tested. The dependent variable of the model is represented by the overall result of the students, while the independent variables comprise year of study, gender, surface approach, deep approach, strategic approach, prior academic performance.

The regression models are as follows:

Model 1

$$\text{Academic Performance} = \beta_0 + \beta_1\text{Deep} + \beta_2\text{Strategic} + \beta_3\text{Surface} + \beta_4\text{Gender} + \beta_5\text{Prior Performance} + \beta_6 \text{Year of study} + \varepsilon$$

Where:

Deep: Mean score of relevant ASSIST items for deep approach of learning measured on a 5-point Likert scale where 1= Disagree; 5= Agree.

Surface: Mean score of relevant ASSIST items for surface approach of learning measured on a 5-point Likert scale where 1= Disagree; 5= Agree

Strategic: Mean score of relevant ASSIST items for Strategic approach of learning measured on a 5-point Likert scale where 1= Disagree; 5= Agree

Gender: 1= Male; 2 = Female

Prior Performance: Prior semester cumulative grade point average (CGPA) measured on a continuous variable ranging from 0 to 4.

Year of study: 1= Year 1; 2 = Year 2; 3= Year 3; 4 = Year 4.

4 FINDINGS AND ANALYSIS

4.1 Descriptive Statistics

Continuous Variables	Min	Max	Mean	SD	Skewness	Kurtosis
Academic performance	28	77	54.55	8.38	0.174	0.226
Deep approach	2.56	4.81	3.71	0.48	-0.099	-0.099
Surface approach	2.25	4.63	3.51	0.47	-0.002	-0.288
Strategic approach	2.45	4.9	3.59	0.48	0.217	0.324
Prior performance /CGPA	2	3.84	2.95	1.65	0.144	0.355
categorical variable		Frequency		Percentage		
		Gender				
Female		108		73.5		
Male		39		26.5		
		Year of Study				
Year 2		6		4.1		
Year 3		68		46.3		
Year 4		73		49.7		

The descriptive statistics on continues variables presented in table 2 indicate that the mean scores for each deep, surface, and strategic approach are more or less the same even though the deep approach as has slightly higher score. This applies that, on average, there is no clear indication towards one particular approach to learning adopted by the respondents. In relation to the CGPA, the mean score was 2.95, which indicates that, on average, the students are performing quite well. The skewness and kurtosis for all eight variables are between -1.96 and +1.96 and between -3 and +3, respectively, which indicate that the scores are normally

distributed (Gujarati, 2003; p. 147), and, therefore, allows for the parametric techniques of analysis to be undertaken. As shown in Table 1, the majority of the students were female, 73.5 per cent, while males made up the balance of 26.5 per cent. In addition, the vast majority of the students were in the third and final year of the study.

4.2 Factors Affecting Academic Performance

Table 3: Regression Results

Factors affecting performance	Academic performance	
	Coefficient	t-test
Deep	34.694	3.686***
Strategic	1.367	0.856
Surface	-2.336	-1.841*
Gender	0.8	0.566
CGPA	8.619	6.864***
Year of study	3.914	3.504***
Adjusted R ²	0.263	
f-statistics	9.674***	
N	147	

Note: *** significant at 1%, ** significant at 5%, * significant 10 %

The descriptive statistics on continuous variables presented in Table 2 indicate that the mean scores for each deep, surface and strategic approach are more or less the same even though the deep approach has a slightly higher score. This implies that, on average, there is no clear inclination towards one particular Table 3 shows the results of the regression model where the dependent variable is the academic performance. The six independent variables (i.e., deep approach, surface approach, strategic approach, gender, prior performance and year of study) are able to explain 26.3 percent of the variation in the academic performance. Prior performance and level of study are positive and significantly affected the students' performance in the Management accounting course at the 1 per cent level while surface approach to learning negatively affected the academic performance at the 10 per cent level. Hence, hypotheses 2, 5 and 6 are supported.

The results indicate that the better the prior academic performance of the students the better the result the students obtained for the Management Accounting course. The finding is consistent with the evidence reported by Clark and Sweetney (1985), Dockweiler and Willis (1984), Doran *et al.* (1991), Eskew and Faley (1988), Ingram and Peterson (1987), Ward *et al.* (1993) and Koh and Koh (1999). The result also shows that if the student enrolled for the Management Accounting module at the higher level of their degree program, their performance in the subject is better.

As shown in Table 2, gender has no significant impact on the academic performance of the students in the Management Accounting course. Therefore, hypothesis 4 is supported. This finding lends support to the evidence reported in earlier studies, such as Buckless *et al.* (1991), and Gist *et al.* (1996). In relation to the effect of learning approach on academic

performance, the result shows that adopting surface approach in learning resulted in lower academic performance. This finding is consistent with the result reported by Booth *et al.* (1999), and Bryne *et al.* (2002). For other approaches to learning (i.e. deep and strategic), the results show no significant effect on academic performance, hence, hypotheses 1 and 3 are rejected. In relation to the insignificant relationship between learning approaches and performance, Sadler-Smith (1996) justified that the performance of the students may have reflected the students' actual approaches to learning, while by using a questionnaire to measure the approaches to learning, the outcome is mainly based on the students' perception, which may be different from their actual approach to learning.

5 IMPLICATIONS, LIMITATIONS, SUGGESTIONS FOR FUTURE RESEARCH AND CONCLUSION

This present study investigated the factors affecting the performance in a management accounting course for non-accounting students. The factors examined were year of study, prior academic performance, gender and approaches to learning, which include deep, surface and strategic. The findings revealed that prior academic performance, year of study and surface approach to learning have a significant effect on the academic performance of the management accounting course whereby good prior academic standing and taking the subject at the later stage of the study program led to better academic results while adopting a surface approach to learning the subject caused poor performance.

The results imply that it is possible for students who are not majoring in an accounting program to obtain a high score in the accounting subject if they are academically good in other courses. The results also suggest that the students should sit for the management accounting subject during the later stages of their degree program, as that may help them to perform better in the subject. To prevent the students from enrolling in this subject during the early stages of their program, the faculty members need to reconsider the prerequisite subjects for management accounting course so that higher level subjects are the prerequisites.

In relation to approaches to learning, although there is no evidence that deep and strategic approaches will lead to better performance, the findings revealed that the surface approach to learning would lead to poor performance in the management accounting course. This indicates that the management accounting syllabus and examination involve a higher level of learning and not mainly fact memorizing. Hence, in helping the students to perform well in the subject, besides discouraging students from adopting a surface approach to learning, the lecturers need to inculcate analytical and critical thinking skills in the students in order to be able to critically analyze the requirement of the examination questions, particularly for the management accounting subject. In acquiring the problem solving skills, students need to become acquainted with problem solving techniques by practicing more problem based questions.

There are several limitations to this study that need to be pointed out to ensure fair interpretation of the findings. First, the respondents of this study are mainly students who took the course in one particular academic semester. Different batches of students normally carry certain unique characteristics and different average performance. Hence, future studies may want to consider several batches of students who are taking the subject in different semesters to see whether the results are consistent. Second, the survey technique used to elicit students'

approaches to learning may not have reflected the actual approach adopted by the students. Therefore, using other methods such as interviews and experiments may provide better and more reliable input concerning the learning approaches adopted by the students. Third, this present study mainly considered the overall performance of the students in the subject. Investigating the effect of the factors on the performance of the various assessment components in the Management Accounting course may offer other interesting and important findings. However, with due consideration to these limitations, the evidence offered in this study may, to some extent, contribute to the literature on the performance of non-accounting students who are taking accounting subjects.

REFERENCES

- Abraham, R. R., Kamath, A., Upadhyaya, S and Ramnarayan, K. "Learning Approaches to Physiology of Undergraduates in an Indian Medical School", *Medical Education*, vol. 40, 2006, pp. 916-923.
- Ballantine, J. A., Duff, A and Larres, P.M. "Accounting and Business Students Approaches to Learning: A Longitudinal Study", *Journal of Accounting Education*, Vol. 26 No. 4, 2008, pp. 188-201.
- Bartlett, B., Peel, M. J and Pendlebury, M. "From Fresher to Finalist: a Three Year Analysis of Student Performance on an Accounting Degree program", *Accounting Education*, Vol. 2 No. 2, 1993 pp. 111-122.
- Biggs, J.B. "The Role of Meta-Learning in Study Processes", *British Journal of Educational Psychology*, Vol. 55, 1985, pp. 185–212.
- Booth, P., Luckett, P. and Mladenovic, R. "The quality of Learning in Accounting Education: The Impact of Approaches to Learning on Academic Performance", *Accounting Education*, Vol. 8, 1999, pp. 277-300.
- Buckless, F. A., Lipe, M.G and Ravenscroft, S.P. "Do Gender Effects on Accounting Course Performance Persist after Controlling for General Academic Aptitude?" *Issues in Accounting Education*, Vol. 6 No. 2, fall, 1991.
- Byrne, M., Flood, M. and Willis, P. "The Relationship between Learning Approaches and Learning Outcomes: A Study of Irish Accounting Students", *Accounting Education: An International Journal*, Vol. 11 No.1, 2002, pp. 27-42.
- Byrne, B. and Willis, P. "An Exploration of Tertiary Accounting Students' Prior Approaches to Learning Accounting", *International Journal of Management Education*, Vol. 7 No. 3, 2008, pp. 35-46.
- Byrne, M., Flood, B., and Willis, P. "An Inter- Institutional Exploration of The Learning Approaches of Students Studying Accounting", *International Journal Of Teaching And Learning In Higher Education*, Vol. 20 No.2, 2009, pp. 155-167.
- Cassidy, S and Eachus, P. "Learning Style, Academic Belief Systems, Self-Report Student Proficiency and Academic Achievement in Higher Education", *Educational Psychology*, Vol. 20 No.3, 2000.
- Cassidy, S. "Learning Styles: An Overview of Theories, Models and Measures", *Educational Psychology*, Vol. 24 No.4, 2004, pp. 419-444.
- Clark, R. L and Sweeney, R. B "Admission to Accounting Programs: Using a Discriminate Model as a

- Classification Procedure”, *The Accounting Review*, Vol. 60 No.2, 1985, pp. 508-525.
- Davidson, R.A. “Relationship of Study Approach and Exam Performance”, *Journal of Accounting Education*, Vol. 20 No. 1, 2002, pp.29-44.
- Dockweiler, R.C., and Willis, C.G. “On the Use of Entry Requirements for Undergraduate Accounting Programs”, *The Accounting Review*, Vol. 59 No. 3, 1984, pp. 496-504.
- Doran, B.M., Bouillon, M. and Smith, C.G. “Determinants of Student Performance in Accounting Principles I and II”, *Issues in Accounting Education*, Vol. 6 No.1, Spring, 1991, pp. 74-84.
- Duff, A. “Access Policy and Approaches to Learning”, *Accounting Education*, Vol. 8 No. 2, 1999, pp. 99-110.
- Duff, A. “Understanding Academic Performance and Progression of First-Year Accounting and Business Economics Undergraduates: The Role of Approaches to Learning and Prior Academic Achievement”, *Accounting Education*, Vol. 13 No. 40, 2004, pp. 409-430.
- Duff, A., Boyle, E. and Dunleavy, J. F. “The Relationship between Personality, Approach to Learning and Academic Performance”, *Personality and Individual Differences*, Vol. 36, 2004, pp. 1907–1920.
- Dwyer, D. J. and Sudweeks, F. “Informing Students Using Virtual Microscopes And Their Impact On Students’ Approach To Learning”, *Informing Science Journal*, Vol. 10, 2007, pp.61-70.
- Entwistle, N. J., Hanley, M. and Hounsell, D. “Identifying Distinctive Approaches to Studying”, *Higher Education*, Vol. 8, 1979, pp. 365-380.
- Entwistle, N. J. “A Model of The Teacher-Learning Process”, In *Student Learning: Research In Education And Cognitive Psychology*, J. T. E. Richardson, M. W. Eysenck and d. Warren Piper (eds), Milton Keynes: Shre and Open University Press, 1987, pp. 13-28.
- Entwistle, N.J., and Ramsden,P., *Understanding Student Learning*, London:CroomHelm, 1983.
- Entwistle, N.J., and Tait, H. *The Revised Approaches to Studying Inventory*, Edinburgh: Centre for Research on Learning and Instruction, University of Edinburgh, 1995.
- Entwistle, N.J., Tait, H. and McCune. V. “Patterns of Response to An Approaches to Studying Inventory Across Contrasting Groups and Contexts”, *European Journal of the Psychology of Education*, Vol. 15 No.1, 2000, pp. 33-48.
- Eskew, R.K and Faley, R. H. “Some Determinants of Student Performance in the First College Level Financial Accounting Course”, *the Accounting Review*, Vol. 63 No.1, 1988, pp. 137-147
- Fransman, H. J. “Students' Conceptions of Learning: Using the ASSIST Instrument”, *South African Journal of Higher Education*, Vol. 17 No.3, 2003, pp. 178-183.
- Furnham, A., Monsen, J., and Ahmetoglu, G. “Typical Intellectual Engagement, Big Five Personality Traits, Approaches to Learning and Cognitive Ability Predictors of Academic Performance”, *British Journal of Educational Psychology*, Vol. 79, 2009, pp.769-782.
- Gist, W.E., Goedde, H., and Ward, B. H. “The Influence of Mathematical Skills and Other Factors on minority Student Performance in Principles of Accounting”, *Issues in Accounting Education*, Vol. 11 No.1, Spring, 1996, pp. 49-60.

- Illias, I., Yaso, M.R., Abd Rahman, R and Abd Razak, M. Z. "The Study of Students' Perception Towards Principle of Accounting (pa): A Survey Among Business Students", *IB EJ*, vol. 2 no.1, 2009.
- Ingram, R.W. and Peterson, R. J. "An Evaluation of AICPA Tests for Predicting the Performance of Accounting Majors", *The Accounting Review*, Vol. 63 No.1, 1987, pp. 215-223.
- Jackling, "Perceptions of the Learning Context and Learning Approaches: Implications for Quality Learning Outcomes in Accounting", *Accounting Education: An International Journal*, Vol. 14 No.3, 2005, pp. 271-291.
- Koh,, M.Y., and Koh, H. C. "The Determinants of Performance in An Accountancy Degree Program", *Accounting Education*, Vol. 8 No.1, 1999, pp. 13-29.
- Malgwi, A . C . "Discerning Accounting and Non-Accounting Students' Perceptions in the First Course in Accounting as a Proxy for Separate Course Delivery", *Global Perspectives on Accounting Education*, Vol. 3, 2006, pp.67-91.
- Marton and Saljo, "On Qualitative Differences in Learning: Outcome and Process", *British Journal of Educational Psychology*, Vol. 46, 1976, pp. 4-11.
- Mutchler, J.F.,Turner, J.H and Williams, D.D. "The Performance of Female Versus Male Accounting Students", *Issues in Accounting Education*, Spring, 1987, pp. 103-111.
- Okafor, C.A., and Engbon, O. "Academic performance of Male Versus Female Accounting Undergraduate students: Evidence from Nigeria", *Higher Education Studies*, Vol.1 No.1, 2011.
- Paver, B., and Gamme, E."Constructed Gender, Approach to Learning and Academic Performance", *Accounting Education: an International Journal*, Vol. 14 No. 4, 2005, pp. 427-444.
- Ramsden, P. "Student Learning and Perceptions of the Academic Environment", *Higher Education*, Vol. 8, 1979, pp. 411-427.
- Sharma,D. "Accounting students learning conceptions, approaches to learning, and the influence of the learning-teaching context on approaches to learning", *Accounting Education: an International Journal*, vol. 6 no. 2, 1997, pp. 125-146.
- Speth, C.A., Namuth, C.M., and Lee, D.J., "Using the ASSIST Short Form for Evaluating an Information Technology Application: Validity and Reliability Issues", *Informing Science Journal*, Vol. 10, 2007, pp. 107-119.
- Svensson,L., "On Qualitative Differences in Learning: III–Study Skills and Learning", *British Journal of Educational Psychology*, Vol. 47, 1977, pp. 233-234.
- Tait, H and Entwistle, N.J. "Identifying Students at Risk through Ineffective Study Strategies", *Higher Education*, Vol. 31, 1996, pp. 99-118.
- Tait, H., Entwistle, N.J and McCune, V."ASSIST: a reconceptualisation of the Approaches to Studying Inventory" in *Improving students as learners*, C. Rust (ed.) Oxford: Oxford Brookes University, The Oxford Centre for Staff and Learning Development, 1998.
- Tyson, T. "Grade Performance in Introductory Accounting Courses: Why Female Students Outperform Males", *Issues in Accounting Education*, Vol. 4 no. 1, Spring, 1989, pp. 53-60

Ward, S.P., Ward, D.R., Wilson, T.E., and Deck, A.B. "Further Evidence on the Relationship Between ACT Scores and Accounting Performance of Black Students", *Issues in Accounting Education*, Vol. 8 no. 2, Fall, 1993, pp. 239-247.

Ward, P.J. "First Year Medical Students' Approaches to Study and Their Outcomes in a Gross Anatomy Course", *Clinical Anatomy*, Vol. 24, 2011, pp. 120-127.

Wickramasinghe, D.P. and Samarasekera, D.N "Factors Influencing the Approaches to Studying of Preclinical and Clinical Students and Postgraduate Trainees", *BMC Medical Education*, Vol. 11 No. 22, 2011.

