# THE EFFECT OF STUDY SKILLS ON THE ACADEMIC PERFORMANCE OF DIPLOMA IN ACCOUNTANCY STUDENTS OF UITM SARAWAK

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*ABSTRACT*

This study aims to examine the relationship between study skills and their effect on academic performance of Diploma in Accountancy students of Universiti Teknologi MARA Sarawak. This study covers a total of 142 selected final year students. Data were collected and analyzed using Kruskal-Wallis Test. Among the study skills, it was observed that the "Test Strategies and Test Anxiety" skill was significantly different between low performing and high performing students. Only Test Strategies and Test Anxiety skills affected students' academic performance. An emphasis should be put on test-taking strategies and anxiety management in their early years of tertiary education as this could potentially influence their academic performance.

*Keywords*: study skills; academic performance; accounting students

## 1. Introduction

Numerous studies have reported that study skills have beneficial effects on students' academic performance. Credé and Kuncel (2008) have indicated in their study that several authors agreed that study skills positively affect a student's academic success. The purpose of the present study was to investigate the relationship between university students' study skills and their academic performance. A study skill module introduced at the beginning of the Diploma program encompassing all study skills is considered necessary to prepare the students for their academic endeavours. The modules covered Time Management and Procrastination, Concentration and Memory, Study Aids and Note-Taking, Organizing and Processing Information, Motivation and Attitude, Reading and selecting the Main Idea and Writing. What was not covered in the module was Test Strategies and Test Anxiety. The study aims to identify whether the skill set impacts on the students' performance. This module was introduced in July 2017. Despite the introduction of the module, there has not been any significant improvement in overall academic performance. The results indicated no difference in teaching study skills to the students. A questionnaire consisting of eight sections was distributed to final year Diploma students. The data were analyzed using Kruskal-Wallis for two groups categorized based on their Cumulative Grade Point Average (CGPA), that is, one group with CGPA below 3.00 (low performers) while the other with CGPA of 3.00 and above (high performers). This segregation by CGPA is to identify whether there is a difference in study skills between high academic performers and low academic performers. The university's management could use this study to re-design the current study skills course to make it more effective and enable the university to meet its academic performance indicators.

## 2. Literature Review

### 2.1 *Time management and procrastination*

How the students use their time is critical for academic performance. Thibodeaux et al. (2017) noted that college students with higher academic scores tend to set academic goals, set aside time for tasks, have good study habits and monitor their academic progress. However, a student's time management can also be affected by procrastination behaviour. Academic procrastination, which involves purposely postponing academic tasks to the last minute, usually results in problems and stress in completing assignments and preparing for examinations (Hassanbeigi et al., 2011). Naturil-Alfonso et al. (2018) indicated that these behaviours of delaying academic work were evident and becoming very common amongst most university students. Their study also indicated that students would procrastinate even though a longer time frame is given to do a task, which negatively affected their grades. In the current scenario, students are increasingly distracted by online games and social media, impairing their ability to focus and process the high volume of academic information (Ocak & Boyraz, 2016). As a result, they become unaware of time lost. This distraction indicates a failure to manage time and is often linked to poorer academic outcomes for students (Park et al., 2018). Further, Yuangga and Sunarsi's (2018) study indicated that there was a simultaneous influence between procrastinating habits and low time management on student self-efficacy.

### 2.2. *Concentration and memory*

A study by Podila (2019) found that a higher percentage of male students displayed concentration and memory problems when compared to female students. According to Aboagye et al. (2020), female students used memory and concentration study skills more effectively than their male counterparts. The prevalent use of digital communication technology and social media is a constant distraction to students focusing on academic tasks. Students can be observed multi-tasking in class and responding to instant messages while listening to a lecture. Multi-tasking while performing an intellectual activity negatively impacts academic performance as it affects a student's ability to recall information (Fox et al., 2009).

### 2.3. *Study aids and note-taking*

A study by Chang and Ku (2015) showed that the performance of elementary students in note-taking and reading comprehension was significantly improved by teaching them a note-taking strategy. However, Morehead et al. (2019) found that technology influenced students' behaviour in note-taking. So, although students were taking notes in class as per previous studies, they were flexible in utilizing current technologies such as notebooks or laptops and frequently declined to take notes in online learning.

### 2.4. *Test strategies and test anxiety*

Many studies showed that test anxiety harmed academic performance (Balogun et al., 2017; Dawood et al., 2016; Ganley et al., 2021). For example, Dawood et al. (2016) indicated that students studying for lower degrees were more anxious than those who were more familiar with the test-taking process in an academic environment.

According to Balogun et al. (2017), achievement motivation significantly moderated the relationship between test anxiety and academic performance. Therefore, they proposed that appropriate psycho-educational intervention be conducted to improve academic performance. Nwokolo et al. (2018) indicated that behaviour rehearsal techniques involving study skills training and test-taking skills training effectively reduced secondary school students' test anxiety. Khalaila (2015) suggested psycho-educational intervention to improve the students' performance, such as giving more attention to motivational factors (e.g., self-concept and motivation) and reducing the negative impact of situational factors (e.g., test anxiety). A higher self-concept was directly related to more outstanding academic achievement. In contrast, test anxiety and intrinsic motivation were significant mediators in the relationship between self-concept and academic achievement.

Nawaz et al. (2021) indicated significant differences in test anxiety, mindfulness, and academic performance in terms of gender. Males have more test anxiety than females, females are higher at mindfulness than male, and there are fewer differences found in academic performance among male and female students. The study concluded that male students were more prone to undergoing test anxiety and less at being mindful, which are the negative qualities that suppress academic performance. Parveen and Rizvi (2019) also found a significant difference between males and females on test anxiety, where females have higher scores than males on test anxiety.

## 2.5. *Organizing and processing information*

A lack of information organizing skills is one of the reasons for weak academic achievements. Asikainen et al. (2013) suggested that more organized students are likely to manage their time and put effort into their work. Another critical element affecting the academic achievement of a student is information processing. Information processing is categorized into surface-level processing and deep-level processing. Chamorro-Premuzic et al. (2007) state that students who adopt a surface processing approach to learning aim at learning the minimum amount of material required to pass. In comparison, a deep processing approach learner is characterized by intrinsic motivation, engagement with the subject matter and the desire to know everything about a given topic.

## 2.6. *Motivation and attitude*

Motivation plays a vital role in learning and may explain academic performance as it induces a person or student to act and accomplish results. Bakar et al. (2010) indicated that achievement motivation was strongly related to academic performance and indicated that attitudes towards learning and personal factors play an essential role in learning in any educational setting. However, a study conducted by Das et al. (2014) found that attitude towards education and academic achievement is not statistically significant due to other prime factors such as academic anxiety, family background and socioeconomic status. They concluded that there was no significant difference between the boy's and girl's attitudes towards education and academic achievement scores. Urban et al. (2021) found that students who were extrinsically motivated to study and showed less motivation had higher levels of metacognitive awareness. They scored greater overall results in creative thinking tasks. In addition, students were more motivated to seek their goals when they were familiar with their knowledge and were better in control of their behaviour.

### 2.7. *Reading and writing drafts*

Reading is one of the most critical components of our language, and it is an essential tool for lifelong learning for all learners (Noor, 2011). It assists individuals in gaining creativity and develops their critical thinking capacities (Ögeyik & Akyay, 2009). An individual's reading habits would be reflected in how he deliberates and communicates information, whether through speech or in writing. Reading is an essential part of student's life and is relevant to their academic performance (Oriogu et al., 2017) and influences students' academic accomplishments (Kumara & Sampath Kumar, 2019). Reading should be varied and continuous because it is the basis for starting writing. It determines students' academic achievements as both reading and academic achievements are interrelated and dependent on each other (Owusu-Acheaw & Larson, 2014). There is a strong connection between reading and writing.

Effective writing is a skill that is grounded in the cognitive domain which involves learning, comprehension, application, and synthesis of new knowledge (Defazio et al., 2010). Students who were given a writing task for their reading assignment were found to have a better ability to explain what they had read compared to those who just read and memorize the information (Kim et al., 2021). Reading enhances critical thinking skills and effective communication, while writing skills are a central tool for learners to develop literacy and to express themselves in a way that could not be done in spoken language (Benitez-Correa et al., 2022). Writing is an indicator of good reading, good comprehension of knowledge, and the ability to translate in a manner applicable to the situation concerned.

### 3. Research Questions

This study aims to address the following research questions:

(1)  Is there a relationship between the study skills taught in the UED102 module on students' academic performance?
(2)  Are there other study skills that could affect students' academic performance that is not taught in the UED102 module?

### 4. Methodology

An online survey was distributed to 142 Diploma in Accountancy students. Only 92 responses were received, giving a 65% response rate. The respondents comprised 24 males and 68 females currently in the fourth and fifth semesters. Most of the respondents have undergone the UED102 study skills course in their first semester.

Table 1. The gender breakdown of respondents

| Value label | Frequency |
|---|---|
| Male | 24 |
| Female | 68 |
| Total | 92 |

The Study Skills Assessment Questionnaire developed by the Counselling Centre at the University of Houston, Texas, was adopted for this survey and used by Hassanbeigi et. al. (2011) and Didarloo and Khalkhali (2014) in their studies of university student performance. This questionnaire consists of eight sections covering time management and procrastination, concentration and memory, study aids and note-taking, test strategies and test anxiety, organizing and processing information, motivation and attitude, reading and selecting the main

idea and writing. The questionnaire includes eight items in each section and is scored using a "Four-point Likert Scale".

Table 2. Grouping of respondents

| Group | Frequency | % |
|---|---|---|
| Low Performers | 37 | 41 |
| High Performers | 54 | 59 |
| Total | 91 | 100 |

To determine whether their academic performance was affected by the study, the respondents were categorized into two groups based on their Cumulative Grade Point Average (CGPA) – those with CGPA below 3.00 (Low Performers) and those with CGPA of 3.00 and above (High Performers). The survey respondents consisted of 37 Low Performers and 54 High Performers. One respondent was removed due to missing CGPA data.

As the sample is small and not normally distributed, the data were analyzed using a non-parametric test, Kruskal-Wallis Test. The Cronbach alpha coefficient for all items is 0.92, suggesting that the items have relatively high internal consistency. A reliability coefficient of 0.70 or higher is considered acceptable in most social science research situations.

## 5. Results

The mean ranks for each category of study skills were calculated and compared between the two groups of respondents. This ranking is to determine if their study skills influenced their academic performance. Table 3 shows the mean rank of each study skill assessed for both groups of respondents. The results indicate that only "Test Strategies and Test Anxiety" ($p = 0.036$) are significantly different between the two groups. There is no significant difference in the other study skills categories between the Low and High Performers.

Table 3. Mean ranks of study skills between groups

| Study Skills | LOW PERFORMERS | HIGH PERFORMERS | |
|---|---|---|---|
| | Mean Rank | Mean Rank | *p-value* |
| Time Management and Procrastination | 46.26 | 45.82 | 0.764 |
| Concentration and Memory | 45.07 | 46.64 | 0.645 |
| Study Aids and Note-Taking | 42.42 | 48.45 | 0.328 |
| Test Strategies and Test Anxiety | 40.04 | 50.08 | 0.036 |
| Organizing and Processing Information | 44.92 | 46.74 | 0.53 |
| Motivation and Attitude | 40.46 | 49.8 | 0.289 |
| Reading and Selecting Main Idea | 45.73 | 46.19 | 0.716 |
| Writing | 47.58 | 44.92 | 0.899 |

This finding indicated that the study skills introduced in the UED102 modules have no impact on respondents' academic performance except for Test Strategies and Test Anxiety skills. This study indicated that the lack of skills in Test Strategies and Test Anxiety significantly affected their academic performance. Balogun et. al (2017) found that high levels of test anxiety were associated with lower academic performance. Although their study also showed that test anxiety negatively impacted academic performance, this was so because of achievement motivations in the individual responses, leading to a balance between test anxiety and positive academic

performance. In our study, the significant difference in this specific skill between the two student groups implies that the Low and High Performers have significantly different approaches to strategizing and preparing for an academic assessment. It demonstrated that individuals strategize and manage their anxiety differently, which influences their academic performance.

## 6. Discussion and Conclusions

According to Hassanbeigi et al. (2011), teaching study skills to university students can play a vital role in improving students' academic performance. Similar findings by Nwokolo et al. (2018) indicated that behaviour rehearsal techniques involving study skills training and test-taking skills training effectively reduced students' test anxiety. Introducing the UED102 module at the beginning of the Diploma program was seen as a method of instilling positive behaviours in the student to perform well academically. These topics should be maintained in the module as the findings in the study indicated that these skill sets did help improve the students' academic performance.

However, the findings also showed a difference between the two groups of students for test strategies and test anxiety skills that were not covered in the UED102 module.  For this study, under the section on test strategies and test anxiety, students were asked about (a) awareness of examination coverage and its grading, (b) confidence level regarding preparation for the examination, (c) anticipation of the type of question in the exam (d) comprehension of the question before attempting, (e) adherence to instruction (f) mental preparation before examination, (g) state of mind during the examination and (h) application of appropriate approaches in answering questions. The significant difference in this specific skill between the two academic groups of Low and High Performers implies that both the Low and High Performers have significantly different approaches to strategizing and preparing for an academic assessment. Stress and constraints of time due to numerous academic tasks might contribute to the inability of students to apply thinking strategies and learning skills.

Balogun et al. (2017) explained that test anxiety is a psychological condition where individuals experience extreme distress, discomfort, and anxiety in testing situations. According to their study, factors leading to test anxiety came in the form of fear of failing, constantly thinking about consequences of failure, procrastination, poor study habits, inadequate knowledge of course materials, consistent poor performance, past experiences and beliefs, and lack of confidence in one's ability. These factors, to some extent, indicated that if issues relating to test anxieties are managed, the other learned study skills would effectively play their role in better preparing the student for their scholarly endeavours. Thus, emphasis should be given to improving the existing module to enhance the students' learning ability by incorporating into the module skills that would teach the students to strategize and manage stress and anxieties correctly. Teaching students about test strategies and test anxiety skills through structured learning on strategizing and anxiety management skills may positively impact the students' academic performance. The students might be better prepared right from their early days of university education as this could potentially influence their academic performance.

## 7. Limitations and Recommendations

The findings of this study should be used with caution as the survey was conducted on one cohort taking UED102 when the module was first introduced. The questionnaire could be distributed again to other new batches of students from other programs to obtain a more

conclusive result. In addition, future research could use larger sample sizes from other programs offered by the same university.

## References

Aboagye, G. K., Amponsah, K. D., & Johnson, E. A. (2020). Cypriot Journal of Educational Sciences. *Sciences*, *15*(4), 634-650.

Asikainen, H., Parpala, A., Virtanen, V., & Lindblom-Ylänne, S. (2013). The relationship between student learning process, study success and the nature of assessment: A qualitative study. *Studies in Educational Evaluation*, *39*(4), 211-217.

Bakar, K. A., Tarmizi, R. A., Mahyuddin, R., Elias, H., Luan, W. S., & Ayub, A. F. M. (2010). Relationships between university students' achievement motivation, attitude and academic performance in Malaysia. *Procedia-Social and Behavioral Sciences*, *2*(2), 4906-4910.

Balogun, A. G., Balogun, S. K., & Onyencho, C. V. (2017). Test anxiety and academic performance among undergraduates: the moderating role of achievement motivation. *The Spanish journal of psychology*, *20*.

Benitez-Correa, C., Vargas-saritama, A., Gonzalez-Torres, P., Quinonez-Beltran, A., & Ochoa-Cueva, C. (2022). Students' Preferences and Learning Styles in Relation to Reading and Writing Strategies at Distance Higher Education. *International Journal of Learning, Teaching and Educational Research*, *21*(4).

Chamorro-Premuzic, T., Furnham, A., & Lewis, M. (2007). Personality and approaches to learning predict preference for different teaching methods. *Learning and Individual Differences*, *17*(3), 241-250.

Chang, W.-C., & Ku, Y.-M. (2015). The effects of note-taking skills instruction on elementary students' reading. *The Journal of Educational Research*, *108*(4), 278-291.

Credé, M., & Kuncel, N. R. (2008). Study habits, skills, and attitudes: The third pillar supporting collegiate academic performance. *Perspectives on psychological science*, *3*(6), 425-453.

Das, S. K., Halder, U. K., Mishra, B., & Debnath, D. (2014). Study on relationship between attitude towards education and academic achievement in secondary level minority students. *Indian Streams Research Journal*, *4*(10), 1-6.

Dawood, E., Al Ghadeer, H., Mitsu, R., Almutary, N., & Alenezi, B. (2016). Relationship between Test Anxiety and Academic Achievement among Undergraduate Nursing Students. *Journal of Education and practice*, *7*(2), 57-65.

Defazio, J., Jones, J., Tennant, F., & Hook, S. A. (2010). Academic Literacy: The Importance and Impact of Writing across the Curriculum--A Case Study. *Journal of the Scholarship of Teaching and Learning*, *10*(2), 34-47.

Didarloo, A., & Khalkhali, H. R. (2014). Assessing study skills among a sample of university students: an Iranian survey. *Journal of educational evaluation for health professions*, *11*.

Fox, A. B., Rosen, J., & Crawford, M. (2009). Distractions, distractions: does instant messaging affect college students' performance on a concurrent reading comprehension task? *CyberPsychology & Behavior*, *12*(1), 51-53.

Ganley, C. M., Conlon, R. A., McGraw, A. L., Barroso, C., & Geer, E. A. (2021). The effect of brief anxiety interventions on reported anxiety and math test performance. *Journal of Numerical Cognition*, *7*(1), 4-19.

Hassanbeigi, A., Askari, J., Nakhjavani, M., Shirkhoda, S., Barzegar, K., Mozayyan, M. R., & Fallahzadeh, H. (2011). The relationship between study skills and academic performance of university students. *Procedia-Social and Behavioral Sciences*, *30*, 1416-1424.

Khalaila, R. (2015). The relationship between academic self-concept, intrinsic motivation, test anxiety, and academic achievement among nursing students: mediating and moderating effects. *Nurse Educ Today*, *35*(3), 432-438. https://doi.org/10.1016/j.nedt.2014.11.001

Kim, S., Yang, J. W., Lim, J., Lee, S., Ihm, J., & Park, J. (2021). The impact of writing on academic performance for medical students. *BMC Medical Education*, *21*(1), 1-8.

Kumara, B., & Sampath Kumar, B. (2019). Impact of Reading habits on the Academic Achievements: A Survey. *Library Philosophy and Practice (e-journal)*, *2269*.

Morehead, K., Dunlosky, J., Rawson, K. A., Blasiman, R., & Hollis, R. B. (2019). Note-taking habits of 21st century college students: implications for student learning, memory, and achievement. *Memory*, *27*(6), 807-819.

Naturil-Alfonso, C., Peñaranda, D., Vicente, J., & Marco-Jiménez, F. (2018). Procrastination: the poor time management among university students. 4th International Conference on Higher Education Advances (HEAD'18),

Nawaz, D., Khizar, U., Aqdas, R., Shahzadi, M., & Iqbal, S. (2021). Impact of Test Anxiety and Mindfulness on Academic Performance among University Students. *Psychology and Education*, *58*(2), 10662-10673.

Noor, N. M. (2011). Reading habits and preferences of EFL postgraduates: A case study. *Indonesian Journal of Applied Linguistics*, *1*(1), 1-9.

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Nwokolo, C., Anyamene, A., Gideon, N., & Akuezuilo, J. (2018). Effects of Behavioural Rehearsal Technique on Test Anxiety Among Secondary School Students in Orlu Lga, Imo State, Nigeria. *The Journal of Social Sciences Research*, *4*(10), 134-139.

Ocak, G., & Boyraz, S. (2016). Examination of the Relation between Academic Procrastination and Time Management Skills of Undergraduate Students in Terms of Some Variables. *Journal of Education and Training Studies*, *4*(5), 76-84.

Ögeyik, M. C., & Akyay, E. (2009). Investigating reading habits and preferences of student teachers at foreign language departments. *The International Journal of Language Society and Culture*, *28*, 72-78.

Owusu-Acheaw, M., & Larson, A. G. (2014). Reading habits among students and its effect on academic performance: A study of students of Koforidua Polytechnic. *Library philosophy and practice*, 0_1.

Park, J., Yu, R., Rodriguez, F., Baker, R., Smyth, P., & Warschauer, M. (2018). Understanding Student Procrastination via Mixture Models. *International Educational Data Mining Society*.

Parveen, S., & Rizvi, S. (2019). Test anxiety and academic performance among senior secondary students. *Indian Journal of Applied Research*, *9*.

Podila, S. (2019). Concentration, Memory and Gender-A Case Study on High School Students. *International Journal of Scientific Research in Science and Technology (IJSRST), Online ISSN*, 756-760.

Thibodeaux, J., Deutsch, A., Kitsantas, A., & Winsler, A. (2017). First-year college students' time use: Relations with self-regulation and GPA. *Journal of Advanced Academics*, *28*(1), 5-27.

Urban, K., Pesout, O., Kombrza, J., & Urban, M. (2021). Metacognitively aware university students exhibit higher creativity and motivation to learn. *Thinking Skills and Creativity*, *42*, 100963.

Yuangga, K. D., & Sunarsi, D. (2018). The Influence of Procrastination and Low Time Management on Student Self Efficacy (at MA Soebono Mantofani). *PINISI Discretion Review*, *2*(1), 85-92.