Effects of Learning Strategies in Accounting: A Case Study of a Malaysian Pre-University Student

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ABSTRACT

Research has shown that learning strategies affect a student’s academic performance. Motivated by the need to further understand the effects of learning strategies on a student’s performance in an assessment, the study adopted a case study design to provide an explanation from the perspective of a single subject of study, who was an Accounting student in a pre-university level. Data were collected from multiple sources of evidence, namely verbal interviews, the subject's work (artefacts of answer transcripts), as well as tests such as Learning Style Inventory Test and Multiple Intelligence Test. Findings indicated that the subject’s ineffective learning strategies had a major effect on his examination performance, due to a knowledge gap as a result of his inability to focus and remember important information. Minor factors contributing to his underperformance included high school-college transition challenges, inadequate sleep, absence of lecture note-taking and exam stress. The findings provide insights for future research to match a student’s learning strategies with his or her academic performance in similar contexts. The findings also imply that the mapping of students’ learning strategies to their academic performance can be a crucial tool to improve students' learning.

Keywords: Learning strategies, academic performance, accounting, pre-university

Introduction

In Malaysia, pre-university or college courses enable students to attain the qualification required to enrol into a degree programme after their high school (UniDigest, 2015). College students have a wide range of choices in selecting the subjects of their interest which will help them with their tertiary study options and even career pathways, such as the sciences, humanities, linguistics and accounting. Assessments in pre-university programmes may be conducted internally or externally to gauge students’ level of competency in achieving their intended learning outcomes, hence allowing them to enter universities to pursue higher education (Suliman et. al., 2014). Nonetheless, the transition from high school to pre-university setting can be challenging for students who may experience difficulty adjusting to a relatively new environment that could be a complex issue and is heavily influenced by individual circumstances (Venezia & Jaeger, 2013). As such, this principal researcher, a lecturer for Accounting aims to investigate the reasons behind a college student’s academic performance in Accounting.

Muhammad (a pseudonym) was one of the many students whose encounter of this transitional phase, might have affected his academic performance. Muhammad was identified as an ideal subject to conduct a case study upon, with the intention of identifying and understanding potential reasons behind the student’s academic
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achievements in Accounting, or the lack thereof. However, these factors could also be
directly and personally related to the subject of the case study, and therefore may not be
applicable to a certain extent if it were to be compared with other cases of a similar nature.

Nevertheless, certain factors which may negatively impact the student’s exam
results such as the weaknesses in employing learning strategies in his learning might have
a significant relevance, making this case study a worthwhile attempt to bring a greater
insight on the educational landscape, particularly in the context of Accounting in
Malaysian pre-university. Hence, the case study investigated the reasons behind
Muhammad’s academic performance, plus his limitations in learning strategies in order
for the teacher or other affected parties to take necessary steps in mitigating these
limitations.

Background of Study

The study was conducted in a local private college in the Klang Valley, Malaysia,
whereby pre-university programmes were offered to predominantly secondary school
leavers with Malaysian Certificate of Education (SPM). This study was conducted on one
of the pre-university programmes focusing on continuous assessments that were
conducted internally and externally over the duration of the course for approximately ten
months. Accounting, a module offered in this programme, was taught entirely in English.
Students who selected this module were required to have an SPM or equivalent
knowledge in accounting as a prerequisite. The subject learning outcomes included the
following:

- Students should be able to explain the concepts, principles, systems and
  structures that are fundamental to accounting and other financial processes.
- Students should be able to analyse the interrelationship between financial
decision and the industrial society and the environment.
- Students should be able to apply appropriate financial systems to meet
  personal and organisational needs.
- Students should be able to calculate financial information in order to prepare
  financial reports.

The assessment used for the purpose of the study was the trial examination, which
was conducted towards the end of the module, and carried half of the entire internal
assessment score. The assessment was designed as a replica of the external examination
which students were required to sit for at the end of the course. The structure and topics
tested in this assessment were identical to the external examination. The topics covered
the entire curriculum in the programme. The trial examination consisted of three sections,
namely Section 1, 2 and 3. The brief descriptions of each section are as follows:

Section 1
15 multiple choice questions on various topics within the syllabus

Section 2
4 structured questions in which students are required to demonstrate an in-depth
understanding of accounting and finance practices and principles by applying these
to the preparation, analysis, interpretation and/or evaluation of financial
information.
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Section 3
2 essay questions from which the student has to choose one, and apply their knowledge and understanding of accounting and finance practices and principles to the given situations.

Background of Student
Muhammad was born in the Klang Valley, Malaysia in 1997. His father was a risk surveyor for an insurance company, while his mother was a homemaker. Muhammad was of the Malay descent, but the family also spoke English amongst themselves, resulting in English as a dominant second language used in his daily communication. Hence, despite Malay being Muhammad’s primary language, it was clear from the interview that he could generally comprehend and converse in English fluently, thus eliminating language proficiency as a factor for his academic performance in the trial examination. Muhammad completed his primary and secondary school education at a national school where the medium of instruction was Malay. Being a Science student who only took Accounting as an elective in SPM, the researchers wanted to know the reason behind his decision to study Accounting in pre-university, and the following interview extract provide an explanation for this:

Extract 1
Q: ...What you want to do next time, as in your ambition?
A: In all honesty, I still have no idea what I am going to do.
Q: That’s fine. Do you have interests in any particular field?
A: I do have interest in accounting, but as seen from my results, I have no idea what’s happening..
Q: ….Alright, but you have thought of being an accountant before?
A: I mean, I have always enjoyed numbers, doing the specific accounts according to the given standards, like how accountants would do them. I have always found that very interesting.

Q: So you would describe yourself as a good student in Accounting in your high school?
A: Possibly yes. It’s one of my most favourite subjects.
Q: Why is that?
A: I enjoyed doing the accounts given a specific system.. I like doing things in an ordered manner.

From the extracts, it was evident that his interests in numbers and working in an orderly, organised manner led him to choose Accounting as one of his main subjects in college. However, it can also be seen that this student was hesitant to pursue his accounting interests given his academic performance in the subject, which prompted further investigation on the matter.

Based on classroom observations, Muhammad appeared as a vocal and active individual. Lee Lee (a pseudonym) from his circle of friends described him as a “witty and loud” person. However, Muhammad did not seem to have many close friends in college, which can be depicted in the interview extract below:

Extract 2
Q: Okay, how would you describe your participation in college activities?
A: Very minimal.
Q: How about friends and peers? Do you have many friends around?
A: Well, I do this to myself. I make friends, but I don’t make the habit of being in contact with them.

In class, sometimes Muhammad had difficulty staying focused during lectures involving slide presentation and content discussion by the lecturer, and was found to doze off in several occasions. In spite of that, he realised the importance of focusing during lectures, as per the following extract:

Extract 3
Q: Would that mean that lectures and class sessions, which involved lecturers talking most of the time, affect your learning?
A: In my opinion, when a lecturer talks in front, you would automatically focus on the person in front of you. Your sense of focus is to the person in front of you. If the person deliberately does not want to listen to the lecture, then that’s when the audio (learning) is affected. But when I focus, I’ll listen.

An analysis of the work (examination transcript) using a prescribed methodology of data collection in the next section, to identify the knowledge gap in Accounting, which led to Muhammad performing below par in the trial examination.

Methodology of Data Collection

As the case study was explanatory and exploratory in nature, a qualitative approach was adopted as rich descriptions were necessary in generating findings of a considerable quality (Yin, 2014). With reference to Nair & Jain (2015), a similar methodology is adopted as the case study is of a similar nature. Table 1 below illustrated the research methods in conducting this case study, which utilised interviews, artefact (i.e. student’s exam transcript), and online tests related to learning. According to Yin (2014, p. 119-120), “a major strength of case study data collection is the opportunity to use many different sources of evidence”, which will then enhance its reliability and level of quality, as “any case study finding or conclusion is likely to be more convincing and accurate if it is based on several different sources of information”. The triangulation technique employed corroborated inferences made with evidence from more than a single source to support the notion of construct validity (Creswell, 2007), as multiple sources of evidence would provide multiple perspectives and angles of the same phenomenon (Yin, 2014).

Table 1

<table>
<thead>
<tr>
<th>Source of evidence</th>
<th>LS</th>
<th>SH</th>
<th>LN</th>
<th>S</th>
<th>LF</th>
<th>KG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muhammad’s Interview (Subject of study)</td>
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<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
<td>O</td>
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<tr>
<td>Lee Lee’s Interview (Muhammad’s friend)</td>
<td>/</td>
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<td>/</td>
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<td>O</td>
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<tr>
<td>Work: Exam transcript (Muhammad’s work)</td>
<td>/</td>
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<td>/</td>
<td>/</td>
<td></td>
<td>O</td>
</tr>
<tr>
<td>Learning Style Inventory Test</td>
<td>/</td>
<td></td>
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<td></td>
<td></td>
<td>O</td>
</tr>
<tr>
<td>Multiple Intelligence Test</td>
<td>/</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: LS - Learning style, SH - Sleep habits, LN - Lecture notes, S - Stress, LF - Lack of focus, KG - Knowledge gap (/: causes, & effects)
Prior to the interviews, a protocol was developed by the researchers to guide the data collection. This was necessary in order to conduct each interview in a structured and coherent way (Kim, 2008). Plus, this would ensure that preserve the chain of evidence by tracing any findings from the initial research questions to the final case study conclusions. In doing so, the case study process can proceed with set procedures, which closely mapped the interview questions to the research question of the study, and ultimately the results (Yin, 2014). Besides, a written consent was obtained from the interviewees by explaining the nature and purpose of the study, as well as their rights as participants of the study, thus assuring their privacy and the confidentiality of information gained. To ensure that the interview sessions were conducted in an in-depth manner, effective questioning and further probing were occasionally done so that the interviewees were more inclined to elaborate on their responses, hence providing more insightful information (Cheah & Tan, 2015). The reliability of the methodology of data collection was also strengthened with the recording of interviews using an audio recorder, which were then transcribed to indicate “trivial but often crucial, pauses and overlaps” (Creswell, 2007, p.209), as well as a more accurate representation of what happened (Hammersley, 2010). The interview transcripts would then undergo multiple readings to minimise the risks of any aspects of the interviews from being overlooked or neglected.

The focus of the case study was on the factors that caused Muhammad to underperform in the trial examination. It was therefore vital for the work (written artefact) from the examination paper to be a crucial piece of the chain of evidence. The artefact was his responses in the examination transcript, which will be presented in a cropped graphic form of a scanned copy of his paper. It was essential “to establish a knowledge gap, from the work, which ties into the chain of evidence in the form of major/minor causes, and effects – to be identified – that led as a consequence to the result” of the trial examination (Nair & Jain, 2015, p.75).

The two online tests administered to further support the inference made from the interviews and artefact were Learning Style Inventory Test and Multiple Intelligence Test, whereby these learning tests are also used in a similar case study by Nair & Jain (2015). The Learning Style Inventory test was sourced from Penn State University’s website, while the Multiple Intelligence test was sourced online from the United Kingdom’s Birmingham Grid for Learning website. Muhammad was requested via a follow-up email after his interview to take the two tests at his own convenience. This was to avoid any bias from influencing the test results where his responses could be affected by the researcher’s presence (Creswell, 2007). The online tests were free of charge and would provide an indication of Muhammad’s dominant learning style and intelligences. The Learning Style Inventory test, which was a slight modification of the VARK model (Fleming & Mills, 1992) would give a clearer picture as to whether Muhammad was an auditory learner, or someone who learns well by listening; a visual learner, who refers to someone who learns best via visuals; or a tactile learner, who can be described as someone who needs to adopt a multisensory approach so as to effectively experience learning. Meanwhile, the Multiple Intelligence (Gardner, 1983) test gave an indication of Muhammad’s strengths with regard to his capabilities in relation to the set of nine intelligences, namely Verbal-Linguistic, Logical-Mathematical, Visual-Spatial, Bodily-Kinesthetic, Musical, Interpersonal, Intrapersonal, Naturalistic and Existential. Understanding his strengths amongst these modalities would give an indication as to whether the learning strategies utilised were matched to these strengths. By using multiple sources of evidence, the issue of construct validity was addressed, while the corroboration of evidences solidified the reliability in this case study. The following section presents the analysis of the data obtained and a thematic presentation of the findings.
Analysis of Data

The findings were analysed in two broad themes, which were major and minor causes leading to the consequence and results. The conclusion of the two themes will then delve into the reinforcement of inferences made and recommendation of a course of action to be made by Muhammad and the teacher. A more detailed flow of the themes can be seen towards the middle of the analysis section, which will provide in-depth understanding of the causal relationship of the chains of events that resulted in Muhammad’s underperformance in the trial exam.

This case study aimed to establish the causes which hindered Muhammad from possessing the necessary knowledge and skills required in Accounting at the pre-university course, and consequently demonstrating them in the trial examination, particularly in Section 2: Structured Questions) and Section 3: Essay Questions. The multiple sources of evidence, including interviews, the student’s examination transcript and online learning tests, were collated and analysed in terms of “reducing the data into themes through a process of coding… and finally representing the data in figures and tables” (Creswell, 2007, p. 148).

From accessing the student’s high school academic information prior to the interview with Muhammad, it was noted that the transition between high school and college life was the main cause in the student’s performance for the trial examination in Accounting. During the interview (refer to extract below), Muhammad admitted to the challenges of a college setting as compared to his high school, as he pointed out the relatively more demanding coursework involved.

Extract 4

Q:...What do you think of college life, as compared to high school?
A: It’s obviously harder, but given a certain amount of control and concentration, you should be able to adapt to it.
Q: What do you mean, harder?
A: No doubt, it may feel that class times are shorter, for example we only have like 5 subjects. So on average there’s only 4 classes per day, and the duration is only an hour 15 (minutes), we have multiple breaks in between. Yet it feels more demanding than school life because of the workload intensity, the concentration needed in classes. So to me, that’s what makes college harder than school.

Apart from the intensity in college workload, it was also prevalent that he did not have a clear support system in college, in terms of participation in extracurricular activities and having many friends to help him with his college work. Noting that the student was absent from Accounting classes several times during the semester, the researcher decided to ask Lee Lee, who usually sat next to him in class, on the reasons behind his absence:

Extract 5

Q: Do you know why Muhammad did not attend classes during ... ?
A: I heard he was sick for a while. But he did tell me that he prefers studying at home, as he does not have many friends around.

Apart from that, Muhammad also reiterated this predicament in his interview extract:
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Extract 6
Q: Okay, how would you describe your participation in college activities?
A: Very minimal.
Q: How about friends and peers? Do you have many friends around?
A: Well, I do this to myself. I make friends, but I don’t make the habit of being in contact with them.

Major Causes
With the corroborating evidence revealed above, the researcher was initially positive that the challenging transition between high school and college environment was the main factor for Muhammad’s underperformance in the assessment. Nevertheless, upon further reading into the interview transcripts and analysis of the learning test results, the major cause was later found to be Muhammad’s difficulty in remembering important information needed to answer the exam questions. The hint of this issue can be seen in the following extract:

Extract 7
Q: ...Maybe let’s look at the paper together. (refer to paper) Alright, so the question you are referring to is in Section 2. Are you saying that Section 2 is where you have a lot of problems with?
A: Yes.
Q: How about Section 3 (Essay)?
A: Essays. I have never been known as someone who memorise essays. I’ve never been able to grasp the aspects of reading multiple... theory concepts of accounts. I’ve never been known to read and grasp that.
Q: Okay, is there a reason for that?
A: I personally have no idea why I cannot grasp the information from the theory, it’s always been like that, since Form 1.
Q: Oh, you mean you’ve had this difficulty all the while?
A: Yea.

In order to further understand the concept of memory and how individual’s inability to remember occur, the researcher briefly explored a memory processing model from the psychological perspective behind the concept of memory, which can be illustrated as below (see Figure 1):

![Figure 1: The multi-store model of memory in relation to the memory processes](image)

Based on the model in Figure 1, memory is processed when an individual’s senses absorb information, by encoding, or converting into a form that the brain can store in the memory system for a period of time, and retrieval happens as information stored is located and brought into consciousness in order to complete a cognitive task (Van Iersel et. al., 2013). The Atkinson and Shiffrin’s (1968) multi-store model of memory, consisting of sensory memory, short term memory and long term memory, is integrated into the memory processing model.

With respect to this case study, the problem was connected to the flow between the encoding and the storage process, when short term memory, or limited information kept...
for a brief period, was transferred into long term memory, used to keep unlimited amount of information permanently. The consolidation theory by Squire et. al. (1993) stated that for short term memory to be consolidated successfully as a long term memory, the transfer process must not be interrupted, as the memory may be damaged or lost. When applied to the subject of the case study, it seemed that interruption may have taken place due to lack of focus, which was agreed upon in Lee Lee’s interview. Another factor for the interruption of the memory transfer would be likely to be due to noise. Muhammad mentioned in his interview that he listened to music while studying, but this may have disrupted his memory transfer as evidenced in the extract below:

Extract 8
Q: Do you think you are an audio learner?
A: Well, I cannot differentiate separate audios playing at the same time. For example, if I were to listen to someone talk while watching a movie, I cannot..
Q: Do both at the same time?
A: No, I can’t even hear both, it’s like my mind will block both sounds and all I hear will just be noise.

This encouraged the researcher to conduct further probing on Muhammad’s learning styles, which may have resulted in the impediment of his memory on examinable information to last, and the interview extract below shed light into this situation:

Extract 9
Q: Let’s talk about learning styles. How would you describe your learning habits? As in, how do you study?
A: (chuckles) My one flaw about my studying is the lack of focus and concentration. I thought the way to do work was just exercise after exercise, but then from time to time I found that it was boring. So what I did was I started doing questions while looking at notes, if I couldn’t answer I’ll refer to the notes. And I realised that it didn’t work as well. So I realised that I didn’t have like a linear learning curve. I’ve always changed styles one after another.
Q: So you have changed (learning) styles, but you still have not figured out (your learning style)?
A: Yea, I still don’t.

Upon further analysing the above excerpt of the interview with the subject of study, the researcher had an “epiphany” (Creswell, 2007, p.155), where his “assumption” (Hannock & Algozzine, 2006, p.41), or rather the initial inference on the case study’s findings, has now been discovered to not be the major cause after all. Muhammad’s learning strategies and styles or the lack thereof, on the other hand, were the main reasons for his inability to remember crucial information, which contributed to his underperformance in the examination. Although the challenges in high school-college transition may have played a role to a certain extent, the researcher’s analysis on the transcripts revealed that it was the absence of an effective learning strategy adopted by this student, which led to his below-par academic results. To corroborate this researcher’s finding regarding the major cause, a Learning Style Inventory Test was administered, and the results indicated that he was a tactile learner. A Multiple Intelligence test is also administered, and the results from the test showed that his strengths lied in Kinesthetic Intelligence. Based on Studying Style (2010), Tactile-Kinesthetic learners “absorb information best by doing, experiencing, touching, moving or being active in some way”.

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After analysing multiple sources of evidence, including the interviews and both online learning test results, the researcher was able to deduce that Muhammad’s use of ineffective learning strategies was the major cause of his difficulty in remembering important information in Accounting, and subsequently his underperformance in the trial examination. The problem was further escalated by the challenges he faced in the high-school college transition phase, but it was worth noting that this was not the major cause for his underperformance, based on the research findings.

**Minor Causes**

Aside from the major causes of his learning strategies and inability to remember important information, there were a number of minor causes that contributed to Muhammad’s learning and performance in the Accounting trial examination, similar to the ones in Nair & Jain (2015). The minor causes which the researcher managed to identify besides the high school-college transition challenges were inadequate sleep, the absence of note-taking during lectures and stress.

Muhammad admitted in his interview that he usually had insufficient sleep, which led him to sleep in class occasionally. Lee Lee concurred with this, as she said that “he only sleeps about four hours every day, that’s why he always looks sleepy in class”. Since research had shown that irregular sleeping habits can adversely affect a person’s concentration and focus (Hershner & Chervin, 2014), this might have been a contributing factor to Muhammad’s underperformance.

From the previous section, the online learning test results indicated that Muhammad was a tactile learner with Kinesthetic Intelligence. When placed in a teacher-centric learning environment such as a lecture, Muhammad would get bored easily (Fleming, 2014). Thus, the Learning Style Inventory test result suggested tactile learners to “take and keep lecture notes” in order to process information more easily and to maintain the level of attention span in class (Bixler, n.d.) However, Lee Lee, Muhammad’s friend observed that Muhammad “did not take any notes down before”. As a result, the non-existence of lecture note-taking may have also exacerbated to his difficulty in grasping the concepts and remembering important information.

In terms of stress, the researcher decided to investigate the difference in his high school and college result in Accounting, and found out that stress played a part in Muhammad’s recent underperformance, as depicted in the extract below:

**Extract 10**

Q: Now, would you know why there is a difference in your college results? Based on your Accounting results now and back then..
A: I honestly don’t know.
Q: Do you think it has something to do with stress?
A: Possibly. A friend of mine gave me a really good statement, with the programme, we have so many tests, topic tests and all, we forget how it really feel the stress of a real exam. Our minds process things differently now… For me, my mind was really conflicted after having so many exams, it’s like oh another exam, it’s fine.. there’s no sense of urgency that this is an exam, because we’ve done so much, that it’s like “meh” (nonchalance) when it’s another exam.

Interestingly, it was perceived that the programme structure, which practised continuous assessments, had watered down the stress or motivation a student will generally have when sitting for an examination. Hence, in this case, the lack of exam
stress, or rather an extrinsic motivation for a student to concentrate in studying, may have caused the underperformance of this student as well.

Therefore, in addition to the major causes of learning strategies and high school-college transition challenges, minor factors such as inadequate sleep, absence of lecture note-taking and the stress in facing an exam or the lack of it, have snowballed into a considerably marked disruption to his learning. The effects of these causes were shown in the student’s lack of focus, as well as his inability to remember information, leading to the knowledge gap on Accounting and his underperformance in the trial examination, as illustrated in Table 2.

Table 2
Causes And Effects Of Muhammad’s Underperformance In The Accounting Trial Examination

<table>
<thead>
<tr>
<th>Causes</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major:</td>
<td>Consequences:</td>
</tr>
<tr>
<td>● Learning Strategies</td>
<td>● Lack of focus</td>
</tr>
<tr>
<td>Minor:</td>
<td>● Inability to remember information</td>
</tr>
<tr>
<td>● High school-college transition challenges</td>
<td>Results:</td>
</tr>
<tr>
<td>● Inadequate sleep</td>
<td>● Knowledge gap</td>
</tr>
<tr>
<td>● Absence of lecture note-taking</td>
<td>● Underperformance in examination</td>
</tr>
<tr>
<td>● Lack of exam stress</td>
<td></td>
</tr>
</tbody>
</table>

In analysing the causes and effects of Muhammad’s underperformance, the chain of evidences was validated through data triangulation (Yin, 2014).

Conclusions and Recommendations

This case study sought to investigate factors that hindered Muhammad from possessing the knowledge required in Accounting and consequently demonstrating that knowledge in the trial examination. From the interviews conducted, the researcher was able to identify that the transition from high school to college had been challenging for the subject of the case study, and that the lack of sleep, plus the absence of lecture note-taking and exam stress are factors, albeit minor ones to his underperformance in the assessment.

The major cause to this was, however, the learning strategies used by the student, which have been constantly changing, without the student actually understanding which ones had actually been effective for him in his learning. This was further corroborated with the administration of the Learning Style Inventory Test, which classified Muhammad as a Tactile learner, and the Multiple Intelligence Test, which revealed Muhammad’s strength in the Kinesthetic category. The causal relationship proved that the unsuitable or rather ineffective learning strategies used resulted in his inability to focus, as well as to remember crucial Accounting information, based on the concept of the multi-store model of memory. As such, a knowledge gap existed, and this led to Muhammad’s underperformance in the trial examination.

The identification of the major and minor causes the resulted in Muhammad’s assessment scores, inadvertently also calls for solutions, or rather actions that he could undertake in order to tackle some of these concerns. With the knowledge of being a Tactile and Kinesthetic learner, Muhammad should strive to take notes during lectures,
which are usually one-way and passive in nature. As note-taking involves physical movements, this will enable him to increase his concentration span, thus reducing the risks of getting bored and losing focus (Fleming, 2014). Furthermore, although it is common that college students such as Muhammad tend to sleep late, with better time management and sleeping habits, Muhammad would also be more attentive during lectures, leading to an enhanced ability to remember important information. In terms of learning strategies, Muhammad may consider adopting strategies which are suitable to his learning style, including practicing exercise questions, creating summary notes on the relevant Accounting topics studied, and engaging in group study discussions to better retain his knowledge in Accounting (Studying Style, 2010).

Despite the fact that this case study was only conducted on a single subject, the findings of this study illuminate the causes that result in students’ underperformance in the context of the Malaysian college education. The findings imply the need for teachers to help students better understand the causes so that better strategies can be suggested to help them improve their learning.

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## Appendix

### Appendix 1: Learning Style Inventory Test result

<table>
<thead>
<tr>
<th>Question</th>
<th>Tactile</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. I feel the best way to remember is to picture it in your head.</td>
<td>✗</td>
</tr>
<tr>
<td>17. I learn spelling by tracing the letters with my fingers.</td>
<td>✗</td>
</tr>
<tr>
<td>18. I would rather listen to a good lecture or speech than read about the same material in a textbook.</td>
<td>✗</td>
</tr>
<tr>
<td>19. I am good at working and solving jigsaw puzzles and mazes.</td>
<td>✗</td>
</tr>
<tr>
<td>20. I play with objects in hands during learning period.</td>
<td>✗</td>
</tr>
<tr>
<td>21. I remember more by listening to the news on the radio rather than reading about it in the newspaper.</td>
<td>✗</td>
</tr>
<tr>
<td>22. I obtain information on an interesting subject by reading relevant materials.</td>
<td>✗</td>
</tr>
<tr>
<td>23. I feel very comfortable touching others, hugging, handshaking, etc.</td>
<td>✗</td>
</tr>
<tr>
<td>24. I follow oral directions better than written ones.</td>
<td>✗</td>
</tr>
</tbody>
</table>

**Your Learning Styles Inventory Results**

Based on your input, you are a(n): Tactile learner.

If you are a TACTILE learner, trace words as you are saying them. Facts that must be learned should be written several times. Keep a pad of scratch paper for this purpose. Taking and keeping lecture notes will be very important. Make study sheets.

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Appendix 2: Multiple Intelligence Test result
Appendix 3: Muhammad’s sample response on the trial examination (Section 2)

i. Net present value

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>Cost</th>
<th>Depreciation</th>
<th>Residual value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$145,600</td>
<td>($51,000)</td>
<td>($35,000)</td>
<td>$26,100</td>
</tr>
<tr>
<td>2</td>
<td>$46,200</td>
<td>($36,000)</td>
<td>($10,000)</td>
<td>$16,300</td>
</tr>
</tbody>
</table>

Sales = $145,600
Cost = ($51,000)
Depreciation = ($35,000)
Residual value = $26,100

PV = $26,100 x 3.0373
PV = $79,577.26
NPV = $79,577.26 + $9,248.62
NPV ≈ $88,826
Appendix 4: Muhammad’s sample response on the trial examination (Section 3)

(c) Using **two** examples based on the performance report prepared in (b), discuss how variance analysis can be used as a tool for Jason Traders in making decisions to improve profitability.

From the estimated sales, the budgeted value and the actual value differ by $35,000 unfavourably.

Because of variance analysis has been, Jason Traders can see that the sales are not up to par and this can improve the sales to undoubtedly improve profitability. From the $225,000 unfavourable variance,

Jason Traders next month has hired more workers than they actually planned for and are unnecessarily paying for it. By reducing the number of workers or their wages, the profitability can be improved.

(d) **Explain three** purposes of preparing budgets.

Firstly, a budget can be used to roughly allocate the use of a given amount of cash.