The Effect of Teaching Format, Students’ Ability and Cognitive Effort on Accounting Students’ Performance

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Abstract

This study examines whether factors identified in the literature as influencing students’ performance explain students’ performance in an Advanced Financial Accounting course. Three variables are chosen: teaching format, cumulative grade point average and study effort to examine their effect on students’ performance. Using questionnaire and experimental approaches on 129 students who were enrolled in Advanced Financial Accounting course in a public university in Malaysia, the results in this study indicate all three variables examined are associated with students’ performance. These results could assist academics in understanding and developing strategies that could be apply at the beginning of the course to ensure students’ performance could be improved.

Keywords: Students’ performance, Advanced Financial Accounting (AFA), Teaching Format, Cumulative Grade Point Average, Study Effort.

1. INTRODUCTION

Students’ performance reflects their ability to demonstrate the knowledge they have learnt in tests, quizzes, presentations and final examination (Barkley, 2004). It is a key factor in the selection of job employment (Benning, 1999). The importance of students’ performance is not only evident to the students but also to the universities as it is a measure the success of their education process.

Studies in the education literature have examined the factors that may influence students’ performance that include physical facilities and qualified educators, students’ attitudes, aspirations and self-awareness (Hijazi and Naqvi, 2006). Students’ performance may also
depend on other factors related to the students’ background and behaviour (Devadoss and Foltz, 1996).

Using a Malaysian public university as the setting, this study examines whether three factors, teaching format, students’ ability and effort influence students’ performance in an Advanced Financial Accounting course (AFA). This study used experimental and questionnaire survey. The results indicate that all three variables examined are significant in influencing students’ performance with students’ ability being the most significant factor.

The remainder of this paper is structured as follows. The next section provides a review of relevant literature. Section 3 discusses the hypotheses underpinning this study and section 4 outlines the research design. The results are presented in section 5. A summary and conclusion are provided in the last section.

2 LITERATURE REVIEW

2.1 Students’ Performance

Many empirical studies in the education literature have researched on factors that could influence students’ performance. Most of these studies supported the hypotheses that students’ performance could be affected by different socio-economic, psychological and environmental factors (Hijazi and Naqvi, 2006). These factors include gender (Anderson, Benjamin and Fuss, 1994; Deboer, 1994; Horne, 2000), similar learning styles between the students and instructors (Borg and Shapiro, 1996), sitting location in the class (Topping, 1994), attendance (Park and Kerr, 1990; Romer, 1993; Topping, 1994; Devadoss and Foltz, 1995; Durden and Ellis, 1995) and their previous results (Nordstrom, 1990).

Other studies have examined the effect of personal problems such as financial and emotional problems (Muhammad, 1989; Ainley, Graetz, Long and Batten, 1995), accommodation (Tsige, 2001) father’s level of education (Sabot and Wakeman-Linn, 1991; Geleto, 2007), study technique (Sansgiry et al., 2006), time spent in study (Geleto, 2007) and geographical location (Cheers, 1990) among others. However, there are few studies with contradict or mixed results such as geographical location in Chansarkar and Mishaeloudis (2001), gender in Jackstadt and Grootaert (1980), pre-requisite course as in McConnell and Sosin (1984) and time spent in studying the course (Schidmt, 1983).

The contradictory results could be attributed to the research design and sample selection. The studies conducted the examination of the factors that influence students’ performance in various fields such as in economics (Sabot and Wakeman-Linn, 1991; Durden and Ellis, 1995), chemistry (Tai, Sadler and Loehr, 2005), pharmacy (Sansgiry, Bhosle and Sail, 2006), medicine (Khan, Khattak, Mahsud, Munir, Ali and Khan, 2003), mathematics (Deboer, 1994), psychology (Thatcher, 2007) and languages (Sabot and Wakeman-Linn, 1991). Further, these studies were also conducted in various countries such as in the USA (Tai et al., 2005); Pakistan
Within the accounting education literature, there are also studies that have examined the link between factor variables and university students’ performance. The factors being examined are self efficacy (Christensen, Fogarthy and Wallace, 2002; Tho, 2007); motivation (Yamamura, Martin, Campbell, Campbell and Frakes, 2000; Chen, Maksy and Zheng, 2006), study style (Chen et al., 2006), class length (Ewer, Greer, Bridges and Lewis, 2002) and pre-requisite of another subject (Campbell and Glezen, 1989). Examining these factors is consistent with the attribution theory that defines how individuals attribute their performance to events and behavior (Weiner, 1986). For example: If students attribute their failure to stable factors such as the difficulty of a course subject, they would expect to fail in that subject in the future.

A recent study by Maksy and Zheng (2008) in the USA found target score, motivation, pre-requisite subject of accounting and GPA could influence students’ performance in AFA in a public university. Using ANOVA, Pearson and Spearman analyses, the results of their study showed the factors chosen are significant influence on the students’ performance. However, other than Maksy and Zheng’s study, there is limited number of studies on this area relating to AFA courses. This warrants for researching this issue since AFA course often involving preparation of consolidated financial statements. Due to the nature of the course, it is expected that apart from having good CGPA and putting much study effort, the way the information being delivered to the students is also important.

### 2.2 Teaching Format and Students’ Performance

One factor that has been examined in the education literature is teaching format. Teaching format refers to the way the knowledge is being delivered to the students by their lecturers. A group of studies examined students’ preferences on teaching format in their learning environment (Sugahara and Boland, 2006; Amare, 2008). These studies found that most of their respondents prefer their instructors to use PowerPoint since this teaching style often incorporates graphics, animation and/or colour (Nouri and Shahid, 2005). Of consequence, PowerPoint could lead to better improvement in students’ short term and long term memory.

Another group of studies focused on examining the effect of teaching format on students’ performance. These studies provided mixed findings. A number of studies showed that using appropriate teaching format could improve performance (such as Blalock and Montgomery, 2005). Other studies found students being taught using traditional teaching style (such as writing on the board) performed better (Bartsch and Cobern, 2003; Amare, 2006; Sugahara and Boland, 2006). Another group of studies found that teaching format does not influence students’ performance (Harknett and Cobane, 1997; Rankin and Hoaas, 2001).

Studies that have examined issues relating to teaching format were conducted in various disciplines and in various countries. A large number of these studies were conducted in the
economics discipline (Blalock and Montgomery, 2005; Chen and Tsui, 2008; Selimoglu and Arsoy, 2009). Other studies were conducted in accounting discipline (Amare, 2006; Sugahara and Boland, 2006), psychology (Apperson, Laws and Scepansky, 2008; Susskind, 2008) and environmental science and geology (Nicholson, 2002). These studies were conducted in various countries including Turkey (Selimoglu and Arsoy, 2009), Japan (Sugahara and Boland, 2006) and USA (Blalock and Montgomery, 2005; Rankin and Hoaas, 2001).

Within the accounting education literature, there are studies that have linked teaching format and students’ performance although the numbers are limited. These studies in general examined the link between teaching format and students’ preference and performance (Amare, 2006; Nouri and Shahid 2005; Sugahara and Boland 2006) as well as students’ attitude towards instructor (Nouri and Shahid, 2005). The findings are mixed with few studies found teaching style influences performance. However, these studies showed that using traditional style (such as writing on the board) performed better than using modern technology (such as PowerPoint). These studies also found that students’ preference of using PowerPoint does not necessary improve performance (Nouri and Shahid 2005), instead using traditional style improves students’ performance better than using PowerPoint (Amare, 2006). These studies, however, often used students who were enrolled in either introductory or intermediate accounting as their participants.

Other studies, however, found that teaching format does not influence students’ performance. For example: Nouri and Douglas (2005) examined the use of PowerPoint on students’ learning and attitudes. Using 74 students divided into two groups to represent traditional teaching style and PowerPoint teaching style, their results showed no significant difference between PowerPoint and traditional teaching style on students’ short-term and long-term memory.

### 2.3 Cumulative Grade Point Average (CGPA) and Students’ Performance

A number of studies have examined the effect of CGPA on students’ performance (Al-Tamimi and Al-Shayeb, 2002; Lynn and Robinson-Backmon, 2006). CGPA generally refers to calculation of the average of all your grades for all semesters and courses completed at a university. Studies that have examined this issue produced mixed results. There are studies that supported the hypothesis that CGPA is an important determinant to students’ performance (such as Bouillon and Smith, 1991; Al-Tamimi and Al-Shayeb, 2002; Lynn and Robinson-Backmon, 2006). Other studies found negative relationship between CGPA and students’ performance (Tay, 1994).

Studies that examined the link between CGPA and students’ performance were conducted in various disciplines. These studies that examined this issue are such as in finance courses (Paulsen and Gentry, 1995; Didia and Hasnat, 1998; Trine and Schellenger, 1999; Al-Tamimi and Al-Shayeb, 2002), human development (Herschberger and Augelli, 2006), computer and information technology (Peslak, 2004; Ibrahim and Rusli, 2007) and pharmacy (Charupatanapong, McCormick and Rascati, 1994).
Within the accounting disciplines, studies have also examined the relationship between CGPA and students’ performance. Most of the studies found that CGPA/GPA does not impact students’ performance (Al-Tamimi and Al-Shayeb, 2002; Lynn and Robinson-Backmon, 2006; Maksy and Zheng, 2008). Apart from Lynn and Robinson-Backmon (2006) and Maksy and Zheng (2008), studies that examined this issue often used introductory or intermediate accounting as their course setting. Study using AFA course is very limited. Researching this issue using AFA would provide contribution to the literature since the results shown using introductory or intermediate may not be generalised to AFA courses.

In Malaysia, there are a large number of studies that have examined CGPA (such as Alfan and Othman, 2005; Ibrahim and Rusli, 2007). These studies have often used CGPA as proxy to students’ performance where they considered CGPA as the average of all examinations grade for all semesters during the tenure year (Ali et al., 2009). These studies examined CGPA as a dependent variable and used other factors as the independent variables to determine the impact of these independent variables to dependent variable (CGPA). Study examining CGPA as an independent variable in a Malaysian setting has yet to be thoroughly examined. This motivates the current study to research this issue.

2.4 Study Effort and Students’ Performance

A body of the education literature has also examined the link between study effort and students’ performance. Study effort refers to the quantity or amount of studying (Schuman et al., 1985). The results of these studies are mixed. A number of studies found significant effect of study effort on students’ performance (Meltzer et al., 2001; Carbonaro, 2005). These studies found that time spent in studying such as doing homework or revising has a slight positive effect on students’ performance (Paschal, Weinstein and Walberg, 1983). For example: Pascrella and Terenzini (1991) found that the amount of time spent in studying a course was significantly related to their CGPA. Similar results were also found in McFadden and Dart (1992).

Recent studies, however, provided contrasting results. These studies showed that although there is a significant relationship between study effort and students’ performance, the more time spent on studying a course provided negative effect on students’ performance (Ackerman and Gross, 2003, Hijazi and Naqvi, 2006). For example: Using questionnaire survey on 300 college students in Pakistan, Hijazi and Naqvi (2006) found that more study hours does not necessary provide positive relationship on students’ performance. They suggested that students’ performance could be caused by other attributes such as intelligence level or method of learning.

Another body of the literature found that the amount of time spent in studying a course does not influence significantly on the students’ performance of the same course (Mouw and Khanna, 1993; Nonis, Philhours, Syamil and Hudson, 2005). For example: Nonis et al. (2005) who
examined students’ effort on 288 undergraduate marketing students found that the effect of hard work (which was interpreted by devoting more time for studies outside the class) has an immediate effect of students’ performance which was reflected in the CGPA.

In summary, the review of the literature, however, indicates that little research has investigated, in combination, the link between study effort and success in accounting courses, moreover, AFA. Such limitation warrants for further research on the link between study effort and students’ performance.

3 HYPOTHESES

One of the factors suggested in the literature that could influence students’ performance is teaching format. Hogarty, Lang and Kromrey (2003) argued that using computer-assisted teaching format such as the PowerPoint presentation is becoming more popular within a faculty and students alike and both shared the same view that this format could enhance the students’ performance (Hogarty et al., 2003). Others suggested using the traditional methods such as writing on the board seems more effective (Amare, 2006; Bartsch and Cobern, 2003).

Within the accounting education, there are studies that have examined the effect of teaching format on students’ performance. The results of these studies, however, are limited to students in introductory and intermediate accounting. Of consequence, such results could not be generalised to other courses such as the advanced financial reporting. Therefore, the following hypothesis is developed:

\[ H1: \text{There is no significant difference in students’ performance between teaching formats in AFA course.} \]

Another factor that is examined in this study is CGPA. Studies that have examined CGPA and students’ performance suggested that CGPA plays a determinant role in influencing students’ performance (Al-Tamimi and Al-Shayeb, 2002; Lynn and Robinson-Backmon, 2006). Other studies provided negative relationship where having high CGPA reduces students’ performance (Tay, 1994) or showed no relationship between CGPA and students’ performance (Lynn and Robinson-Backmon, 2006; Maksy and Zheng, 2008). Therefore, the following hypothesis is developed:

\[ H2: \text{There is no association between CGPA and students’ performance in AFA course.} \]

Study effort is also one of the factors chosen in this study. Studies that have examined the link between study effort and students’ performance also provided mixed results. A number of studies supported the contention that more study effort influences performance (such as Paschal et al., 1983). Other studies found more time spent on studying a course provided negative effect on students’ performance (Ackerman and Gross, 2003; Hijazi and Naqvi, 2006).
To the knowledge of this study, there has yet a study that examined the link between study effort and students’ performance in an AFA course in Malaysia. The results of this study could provide further evidence on whether to support or not support the contention that more time spent on studying could affect students’ performance. This lead to the following hypothesis:

\[H3: \text{There is no association between study effort and students’ performance in AFA course.}\]

In summary, a review of the literature indicates that there has yet to be a study that examines the effect of using different teaching format, CGPA and study effort on students’ performance in an AFA course within a Malaysian context. Therefore, this study aims to examine these variables in an AFA course in a Malaysian public university.

4 \hspace{1em} \textbf{RESEARCH DESIGN}

4.1 \hspace{1em} \textbf{Participants}

This study uses undergraduates accounting students who were enrolled in the course of advanced financial accounting in a public university in Malaysia. Students who were enrolled in this course in January 2010 and July 2010 are chosen. Such sample is chosen based on the argument that part of this study requires objective measure of performance, therefore using experimental design is necessitates. Of consequence, there is a need to control certain variables such as the syllabus covered in advanced financial reporting, the number of contact hours and instructor. In total, 129 students participated in the experiment and completed the questionnaire.

4.2 \hspace{1em} \textbf{Experiment Instrument}

This study uses two presentation styles: PowerPoint and writing on the board in preparation of the teaching material. The experiment instrument involves teaching material of AFA course. AFA course focuses mainly on the preparation of consolidation financial statements. One requirement that has been stipulated in registering and enrolling for advanced financial reporting course in the university is that the students must have passed their pre-requisite accounting course.

4.3 \hspace{1em} \textbf{Experiment Procedure}

The experiment was conducted over two different semesters over a period of 9 months. The students were allocated into two teaching format groups. One teaching format group was taught with the aid of PowerPoint presentations. The other teaching format group was taught without the aid of PowerPoint presentations. This is similar to Rankin and Hoaas (2001).
Two groups of students who have enrolled in two different semesters were presented with PowerPoint materials over a period of 9 months. This group is known as the PowerPoint group. Similarly, two groups of students who have enrolled in two different semesters are presented with hard-copy materials over a period of 9 months. All the groups were not informed that they are part of this study in order to maintain the students’ attitudes towards the course. The same instructor conducted the lectures of the two groups to eliminate instructor effect and to ensure that the results in this study are caused by the teaching style differences.

At the end of the 2 months period, just before students sat for their mid term examination, the students were requested to complete a questionnaire related to their attitudes and demographic profile.

4.4 Questionnaire

A questionnaire is developed in this study. The purpose of the questionnaire is to obtain response on the profile variables chosen to represent the covariates. This study assumes that the students carry their profile as it is and the same profile remains throughout their study. Table 1 summarises the factor variables in this study.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Previous studies in various bodies of literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching style</td>
<td>Blalock and Montgomery (2005); Potter and Johnstone (2006); Selimoglu and Arsoy (2009)</td>
</tr>
<tr>
<td>GPA/ CGPA</td>
<td>Didia and Hasnat (1998); Al-Tamimi and Al-Shayeb (2002); Lynn and Robinson-Backmon (2006); Maksy and Zheng (2008)</td>
</tr>
<tr>
<td>Time spent in study</td>
<td>Schidmt (1983); Hijazi and Naqvi (2006).</td>
</tr>
</tbody>
</table>

4.5 Data Measurement

Students’ performance was measured based on the students’ results of the final examination of AFA course. Students’ performance was recorded in exact value. The highest score that a student could get in their final examination is 30. Participants who scored less than 30 are considered to have not performing well. The exact value was determined by the score given by the instructor upon assessing the students’ performance in their final examination of advanced financial reporting course. Data entry and statistical analyses were performed using SPSS.
5 RESULTS

5.1 Descriptive Statistics

This section presents the descriptive statistics of the students who participated in this study. Table 2 provides the demographic statistics of the respondents in this study. Panel A shows that more than half of the respondents in this study acquired CGPA of between 2.50 to 2.99 (52.7%). Thirty three percent of the respondents have CGPA of between 3.00 to 3.49 whilst 17.1% of the respondents performed very well in their studies by having CGPA of between 3.50 to 4.00. The results indicate that most of the respondents have fairly well CGPA before enrolling into AFA course.

The respondents were requested to indicate the amount of time that they allocate to study the course. The results in panel B, Table 2 show that most of the respondents only allocated few times a month to study the course (76.0%). Only 10.9% of the respondents made their preparation more often (few times a week) in studying AFA.

Table 2. Descriptive Statistics
Panel A: Students’ CGPA

<table>
<thead>
<tr>
<th>CGPA</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 to 2.49</td>
<td>6</td>
<td>4.7</td>
</tr>
<tr>
<td>2.50 to 2.99</td>
<td>68</td>
<td>52.7</td>
</tr>
<tr>
<td>3.00 to 3.49</td>
<td>33</td>
<td>25.6</td>
</tr>
<tr>
<td>3.50 to 4.00</td>
<td>22</td>
<td>17.1</td>
</tr>
<tr>
<td>Total</td>
<td>129</td>
<td>100</td>
</tr>
</tbody>
</table>

Panel B: Students’ time spent in study

<table>
<thead>
<tr>
<th>Time spent towards mid term exam</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few times every week</td>
<td>14</td>
<td>10.9</td>
</tr>
<tr>
<td>Few times a month</td>
<td>98</td>
<td>76.0</td>
</tr>
<tr>
<td>Few times every in a semester</td>
<td>17</td>
<td>13.2</td>
</tr>
<tr>
<td>Total</td>
<td>129</td>
<td>100</td>
</tr>
</tbody>
</table>

Panel C: Students’ teaching style allocated

<table>
<thead>
<tr>
<th>Teaching style</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power-point</td>
<td>62</td>
<td>48.1</td>
</tr>
<tr>
<td>Hard-copy</td>
<td>67</td>
<td>51.9</td>
</tr>
<tr>
<td>Total</td>
<td>129</td>
<td>100</td>
</tr>
</tbody>
</table>
Finally, the respondents were allocated a teaching style to rely on during the course of the study. Panel C, table 2, shows that 48.1% of the respondents were allocated with PowerPoint material in the course of their study. On the other hand, 51.9% were allocated with hardcopy material in the course of their study.

5.2 Teaching Format and Students’ Performance

This section presents the results of hypothesis 1 in this study. Hypothesis 1 states that there is no significant difference in students’ performance between teaching formats in AFA course. Two independent T-Test was used to test hypothesis 1.

Panel A, Table 3 provides the descriptive statistics of the mean score between the PowerPoint group and the hardcopy group. The results show that on average, the hardcopy group has a mean score of 21.4881 compared to the PowerPoint group that has a mean score of 16.8516. The results indicate that those students who were taught using the hardcopy way seems to score better in their final examination compared to the students who were taught using PowerPoint.

Based on equal variances assumed, the results show that there is a significant difference between the PowerPoint group and the hardcopy group ($p=0.000$) as shown in panel C, Table 3. The results indicate that using different teaching styles to teach the students may likely produced different results in students’ performance. Therefore, hypothesis 1 is rejected.

Table 3: Teaching Format and Students’ Performance
Panel A: Descriptive statistics

<table>
<thead>
<tr>
<th>Nature of experiment</th>
<th>N</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Std. error mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerPoint</td>
<td>62</td>
<td>16.8516</td>
<td>3.95428</td>
<td>0.50219</td>
</tr>
<tr>
<td>Hardcopy</td>
<td>67</td>
<td>21.4881</td>
<td>3.61313</td>
<td>0.44141</td>
</tr>
</tbody>
</table>

Panel B: Levene’s test of equality of variance

<table>
<thead>
<tr>
<th>Dependent variable: Test</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>2.474</td>
<td>0.118</td>
</tr>
</tbody>
</table>

Panel C: T-Test for equality of means

<table>
<thead>
<tr>
<th>T</th>
<th>df</th>
<th>Sig</th>
<th>Mean difference</th>
<th>Std. error difference</th>
<th>95% confidence interval difference</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>-6.959</td>
<td>127</td>
<td>0.000</td>
<td>-4.63645</td>
<td>0.66627</td>
<td>-5.95487</td>
<td>-3.31802</td>
</tr>
</tbody>
</table>
5.3 Cumulative Grade Point Average and Students’ Performance

This section presents the results of hypothesis 2 in this study. Hypothesis 2 states that there is no relationship between CGPA and students’ performance in AFA course. ANOVA was used to test hypothesis 2.

Panel A, Table 4 provides the descriptive statistics of the mean score between CGPA groups. The results show that on average, participants with CGPA between 3.50 to 4.00 scored better in their AFA (mean score: 23.32), followed by participants with CGPA 3.00 to 3.49 having mean score of 21.3818 in their examination and participants with CGPA 2.50 to 2.99 having mean score of 17.3132. Participants with CGPA below 2.50 scored the least in their examination with mean score of 14.77. The results provide indication that students with higher CGPA are likely to score better in their final examination.

<table>
<thead>
<tr>
<th>CGPA</th>
<th>N</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Std. error mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 – 2.49</td>
<td>6</td>
<td>14.7667</td>
<td>3.56688</td>
<td>1.45617</td>
</tr>
<tr>
<td>2.50 – 2.99</td>
<td>68</td>
<td>17.3132</td>
<td>3.82626</td>
<td>0.46400</td>
</tr>
<tr>
<td>3.00 – 3.49</td>
<td>33</td>
<td>21.3818</td>
<td>3.51714</td>
<td>0.61226</td>
</tr>
<tr>
<td>3.50 – 4.00</td>
<td>22</td>
<td>23.3182</td>
<td>2.90773</td>
<td>0.61993</td>
</tr>
</tbody>
</table>

Panel B: ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean squares</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between group</td>
<td>889.737</td>
<td>3</td>
<td>296.579</td>
<td>22.914</td>
<td>0.000</td>
</tr>
<tr>
<td>Within group</td>
<td>1617.913</td>
<td>125</td>
<td>12.943</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel B, Table 4 presents the result of testing hypothesis 2. The results show that CGPA does influence students’ performance in AFA course. The results show significant relationship \((p=0.000)\) indicating that students with higher CGPA tend to perform better than students’ with lower CGPA. Therefore, hypothesis 2 is rejected.

5.4 Study Effort and Students’ Performance

This section presents the results of hypothesis 3 in this study. Hypothesis 3 states that there is no relationship between study effort and students’ performance in AFA course. ANOVA was used to test hypothesis 3.
Panel A, Table 5 provides the descriptive statistics of the mean score of participants’ study effort. The results show that on average, participants who expensed their time studying AFA few times a week performed better (mean score: 23.0286) compared to participants who expensed their time studying few times a month (mean score: 18.8173) or few times a semester (mean score: 18.7059).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Std. error mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few times a week</td>
<td>14</td>
<td>23.0286</td>
<td>2.28420</td>
<td>0.61048</td>
</tr>
<tr>
<td>Few times a month</td>
<td>98</td>
<td>18.8173</td>
<td>4.55864</td>
<td>0.46049</td>
</tr>
<tr>
<td>Few times a semester</td>
<td>17</td>
<td>18.7059</td>
<td>3.54250</td>
<td>0.85918</td>
</tr>
</tbody>
</table>

Panel B, ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean squares</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between group</td>
<td>223.252</td>
<td>2</td>
<td>111.626</td>
<td>6.157</td>
<td>0.003</td>
</tr>
<tr>
<td>Within group</td>
<td>2284.398</td>
<td>126</td>
<td>18.130</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel B, Table 5 presents the result of testing hypothesis 3. The results show that participants who expensed more time studying for AFA would likely have better performance than those who spent less time studying AFA. The results show significant relationship on the study effort and students’ performance \((p=0.003)\). Therefore, hypothesis 3 is rejected.

5.5 Further Analysis

This section presents a regression analysis to provide further analysis on the influence of teaching format, CGPA and study effort. Regression analysis would determine the percentage of explanation from the factors examined. Panel A, Table 6 presents the results of the regression analysis which shows R square of 0.395. The results indicate that these factors can explain 39.5% of the students’ performance, the rest 60.5% is explained by other factors not mentioned in the regression model developed in this study.

The results of the regression analysis show all three factors are important in influencing students’ performance. The results show that there is a significant relationship exists between teaching format and students’ performance \((r=0.010)\). The relationship is accepted with a coefficient value of 2.614 which is considerably high. The results indicate that teaching format is an important determinant to students being successful in AFA course.
The results also show that study effort could also be an important variable in determining students’ performance. The relationship between these two variables exist at $r=0.061$ which is marginally significant. The relationship is accepted with a coefficient value of 1.891. The results indicate that the more time spent in studying would likely to improve students’ performance although there is an exception where students with high intelligence may likely need not expense too much effort.

**Table 6. Factors influencing students’ performance.**

Panel A: Summary output of regression analysis

<table>
<thead>
<tr>
<th>Regression statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.629</td>
</tr>
<tr>
<td>R Square</td>
<td>0.395</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.381</td>
</tr>
<tr>
<td>Standard Error</td>
<td>3.48249</td>
</tr>
<tr>
<td>F Stat</td>
<td>27.257</td>
</tr>
</tbody>
</table>

Panel B: Coefficients

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>T-Stat</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>6.046</td>
<td>2.439</td>
<td>2.478</td>
</tr>
<tr>
<td>Teaching Format</td>
<td>2.136</td>
<td>0.817</td>
<td>2.614</td>
</tr>
<tr>
<td>CGPA</td>
<td>2.767</td>
<td>0.559</td>
<td>4.946</td>
</tr>
<tr>
<td>Study Effort</td>
<td>1.440</td>
<td>0.761</td>
<td>1.891</td>
</tr>
</tbody>
</table>

Out of the three variables, CGPA plays the most significant variable that influence students’ performance ($r=0.000$). The relationship is accepted with the coefficient value of 4.946. Therefore, students with high CGPA would likely to succeed successfully in their AFA course.

6 Conclusion

This study examines three factors that could influence students’ performance in AFA course. The three variables are teaching format, CGPA and study effort. The results show that all three variables were found to be significant factors in influencing students’ performance in AFA course. The results are consistent to previous studies where they showed that teaching format influences students’ performance and that traditional teaching format is better than computer-assisted teaching format (Amare, 2006; Nouri and Shahid 2005).

The results also show that CGPA influences students’ performance. The results are consistent to previous studies (Bouillon and Smith, 1991; Al-Tamimi and Al-Shayeb, 2002; Lynn and Robinson-Backmon, 2006) where they showed that students with high CGPA have better score.
in their performance. However, the results of this study contradict with Tay (1994). The results of this study show significant relationship between students’ time spent in studying AFA and their performance. The results support the findings in previous studies (Meltzer et al., 2001; Carbonaro, 2005).

A key finding in this study is teaching format, CGPA and study effort are factors that could influence students’ performance. The evidence in this study points to the fact students’ performance in AFA could be improved provided proper monitoring on the students by the academics are given.

This study has some limitations. First, the number of respondents participated in this study is only 129. Although this number is small, it is not so far behind from a recent study by Maksy and Zheng (2008) who have 97 respondents. Second, the sample is limited to a public university in Malaysia. Therefore, the findings may not be generalised to other public universities.

Overall, the findings of this study provide useful insights on the factors influencing students’ performance. Such results provide some assistance to the academics in understanding and developing strategies that can apply at the beginning of the course to ensure the students’ performance could be optimal.

References


