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Are Malaysian Accountancy Students Successfully Influenced by the Teaching of Ethics?

Abstract

The Malaysian accounting profession is committed to promoting education that results in a strong ethical culture within accountants. However, some consider ethical training unproductive since trainees may have their ethical values formed pre-commencement. This paper investigates the impact of ethics instruction on final year accounting students, the future accountants of Malaysia.

85 final year accounting students were given five ethical scenarios, and asked what action they considered appropriate. They were then subject to two ethical training methodologies, a traditional lecture/tutorial process and a group assignment. After a significant gap, students were re-presented with the ethical scenarios and asked what action they now considered appropriate. In all five instances students offered a more ethical response the second time. Also, participants rated both training methods and their combined effect as effective.

Results suggest there is benefit in including ethics teaching and indeed emphasising its importance in accountancy courses, if the profession's goal of ethical practitioners is to be achieved.

Keywords: Teaching, ethics, Malaysia, accountancy students, methodology, empirical testing.

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Introduction

Both major accounting bodies in Malaysia, the Malaysian Institute of Accountants and the Malaysian Institute of Certified Public Accountants are members of the International Federation of Accountants (IFAC). IFAC's education sub-committee, The International Accounting Education Standards Board (IAESB), recently issued its 2007-09 *Strategic and Operational Plan*, which seeks to advance worldwide accounting education. One of the four major focuses of this plan is to promote accounting education which will result in:

...(c) Strong ethical culture within individual professional accountants (IAESB, 2007, p.4).

This recent development highlights yet again the importance of ethics training in accounting curricula at both University and professional levels.

Much of the accounting ethics education literature has commented upon both the *need* for ethics training for accountancy students (Piper et al, 1993; McDonald and Donleavy, 1995; Peppas and Diskin, 2001), and the *nature* of that training. The first of these issues has surely been resolved by the many corporate scandals reported in recent times (such as Enron and WorldCom in the United States and Transmile [1] in Malaysia). Some of these scandals have involved egregious ethical failures by accounting firms or individual accountants. The response of the accounting

professional bodies is typified by recent releases from IFAC (2007) and its sub-committees such as the one mentioned above.

The issue of the *nature* of ethics instruction revolves around whether ethics should be taught as a stand-alone topic (Hanson, 1987; Loeb, 1998) or whether it should be integrated throughout the entire accountancy course (Thomas, 2004; Swanson, 2005; Bodkin and Stevenson, 2007). Another suggestion has been a combined approach of a general ethics course, followed by the integration approach via case studies, and concluding with a capstone course in ethics and professionalism (Langenderfer and Rockness, 1989; Armstrong, 1993; Thomas, 2004). Also, at the individual course/subject level, is the problem of which ethical instruction methods to use, lectures, case studies, group work, computer programs, role-playing etc.

In psychological terms, possessing an ethical mind-set involves “consistent practice” of ethical principles (Gardner, 2007). Whilst an ethical orientation is first cultivated in the home, and is later influenced by peers and the standards of the surrounding community, the improper or even criminal behaviour of others can undermine it in the business context. The notion of “consistent practice” suggests that, whilst it may be true that students come to university with certain patterns of behaviour ingrained (Alam, 1999; Adams et al, 1999), it is possible to train them to work ethically, or more ethically if their ethical orientation is partially developed, and to resist the influence of others behaving unethically when at work (Hiltebeitel and Jones, 1991).

However, not all research supports the notion of ethical and moral growth over time through education. Some researchers have found that students with high positive

scores on ethical tests could also behave unethically, even though they had been exposed to ethics education and have attained higher-stage development in ethical assessment models (Ponemon, 1993; Thomas, 2004).

The purposes of this paper therefore are twofold. First, to investigate the impact of instruction in ethics on Malaysian final year accounting students, and to query whether ethics instruction can prove effective in building ethical awareness in students. Second, two specific instructional methods are selected from the wide range available, and the effects, both individually and in combination are assessed. As these students are the accountants of the future and so the future of the accounting profession in Malaysia, it is crucial to attempt to understand whether teaching ethics works for them. The vast majority will be commencing work with professional accounting firms or in industry/Government accounting jobs within the next year or so, therefore what impact does teaching ethics have on them?

The remainder of the paper is structured as follows. First, a literature review is presented which surveys prior research in the area. Four research propositions are then developed and the research design outlined. Subsequent sections analyse the findings of the study conducted, discuss the results, recognise limitations in the work, and identify areas for future research.

Literature review

Kohlberg (1969, 1981) proposed a model of ethical training which suggested that ethical and moral growth could be developed over time through education. His three-

stage model of pre-conventional, conventional and post-conventional moral development underpins most of the ethics teaching which takes place in tertiary classrooms today. The aim of this training is to promote the highest level of ethical thinking, which in turn should lead to consistently ethical behaviour. This model was further refined by Rest (1986, 1990) in his Defining Issues Test (DIT). In contrast, other researchers wish to promote 'virtue' ethics as superior to the mechanistic style of the Kohlberg stage model (Mintz, 1995; Stewart, 1997). Attempts have also been made to integrate the two approaches (Thorne, 1998).

Irrespective of which type of training model is used, practical studies evaluating actual accountancy students' ethical attitudes have on occasion revealed disappointing results. This again supports the perceived *need* for formal instruction in the area. Malaysian evidence from O'Leary and Mohamed (2006) suggests 32% of Malaysian accounting students were prepared to cheat in an exam and 13-14% were willing to accept bribes in the work place. Overseas studies have shown similar results. In a study by Cree and Baring (1991) a significant proportion of students was found to be open to an insider-trading proposition. Haswell and Jubb (1995) noted almost 50% of male and 25% of female students indicated a willingness to accept a bribe if there was no risk of being caught. O'Leary and Cotter (2000) found that 58% of Irish students and 23% of Australian students were willing to participate in fraud. Similar findings were attained by O'Leary and Radich (2001), whereby 26% of Australian students were willing to defraud the taxation office and 21% to defraud shareholders. Only the risk of being caught appeared to reduce unethical tendencies, not the nature of the act.

As regards the *nature* of ethical instruction, proponents of the single subject approach see the discrete ethics subject as providing a clearer focus for ethics training, as well as the basis for a more profound rationale for the training in students' minds, and for the emphasis on a framework for students to use in subsequent practice when faced with an ethical issue (Leung and Cooper, 1994). This has the appearance of a mechanistic approach to ethics education, and may suggest that ethics issues are limited to one area in practice (Low et al, 2006; Boyce, 2006).

Most researchers favour integration as the superior mode of introducing students to ethical training, on the basis that it provides for a wider variety of ethical experiences in the course of the training, which more properly reflects the variety of ethical situations an accountant might meet in practice (Bampton and Cowton, 2002). In addition, Alam (1999) found that the majority of accounting teachers surveyed favoured the integration approach, or the combined approach of an ethics subject and integration through the rest of the course.

Why should ethics be so difficult to teach effectively in accounting and why does even 'best practice' ethics teaching not persist in students' minds when they progress to the profession? Daly (1997) offers two reasons. First, he argues that ethics education is too issue-driven. Ethics only becomes newsworthy every time there is a flurry of business failures and accounting scandals, and universities are then required to respond to that in their accounting courses by either professional bodies or funding sources. Hence, approaches to teaching ethics are fragmentary or poorly planned with inadequate materials and ill-prepared teachers.

Second, teaching methods are reactionary. Ethics teaching methodologies are often by case studies, which merely assist students to recognise ethical dilemmas in a short-term and ad hoc way, and respond to them as instructed. This rules-based approach has been criticised as inadequate in developing ethical judgement (Waddock, 2005; Michael, 2006).

It has been suggested that if ethics training in accounting is possible, there must be agreement about the broader goals of ethics education in accounting, as well as relevance to students, and other stakeholders, a properly conducted debriefing stage in the training, and well-designed assessment. (Geary and Sims, 1994; Brinkmann and Sims, 2001). In the US, the National Association of State Boards of Accountancy (NASBA) and the American Accounting Association (AAA) conducted a survey of ethics education in tertiary business schools in 2004 and found that 46% of colleges offered a separate course in ethics and of those colleges, 68% of their business schools allowed access to that course. Only 18% of the business schools offered the course in their accounting departments, however (Mastracchio, 2005).

A survey of accounting academics conducted by Beggs and Dean (2007) found that accounting faculty were relatively unmoved by recent corporate scandals, attributing them to management failure rather than accounting failures. In this context, the latest 'ethics crisis' was not something new and could not be addressed by ethics education. This view seems to ignore the fact that these scandals were mostly failures of audit procedures and standards (Bean and Bernardi, 2007). Beggs and Dean suggest various ways to address this attitude, including more positive support for ethics teaching, more interaction with stakeholders in business, and a rethinking of business

school culture. This survey showed a more negative outcome than that conducted by Adkins and Radtke (2004) which pointed to a more self-satisfied viewpoint from faculty members, and a more positive support for ethics education by students, though this may have been a reflection of the survey being conducted prior to the full fall-out from the WorldCom, Tyco, Adelphia and Martha Stewart scandals.

As to goals of ethics education in accounting, Loeb (1988) offered seven possible goals which have been widely discussed. Loeb (1991) has also linked these goals with assessment, but can suggest nothing more than:

reliance probably should be placed on the more familiar evaluation techniques e.g. test, papers, student evaluations of faculty... However, as accounting faculty members become more comfortable in ...the teaching of ethics, more innovative evaluation techniques might be considered.' (1991, p.82).

Boyce (2006) and Low et al (2006) discuss the goals of ethics education in the context of a critique of business school culture. Ethics may be able to be taught, but in what context and can the outcomes be long lasting?

Hypothesis and research design

The above review is just a synopsis of some of the extant literature in the area. It would appear, as summarised by Bampton and Maclagan (2005), that what is required is research which shows that goals, content (rules and stages or moral philosophy), methodology (stand-alone courses or integrated courses), pedagogy (experiential or

non-experiential), and long term impact can all be linked. This paper focuses on the first and fourth topics and therefore attempts to ascertain whether ethics instruction can, in the first instance, impact positively on future accountants and if so, which instructional methods, lectures (non-experiential) or group assignment (experiential) are effective.

Based on the above analyses and findings of past research, it can be observed differing views surround even the core question of whether ethics is considered a critical component of accounting education. Even if answered in the affirmative, different views then exist as to the nature of ethical instruction that should be adopted. Results of past surveys of accounting students appear to reflect the lack of consensus on these two issues, in that behaving ethically does not seem vital to students' attitudes to working in the accounting profession. Moreover, the only motivation for students to act ethically appeared to be if the risk of getting caught existed. This tends to suggest either the amount of time being devoted to it is inadequate or the methods being used are ineffective.

Based upon the actions of IFAC, as mentioned in the introduction, the accountancy profession appears intent on enhancing ethical instruction for accountancy trainees. This paper therefore sets four research questions (RQ) as follows:

RQ1: Does teaching ethics to Malaysian final year accounting students have any impact on their ethical decision-making?

RQ2: Is the traditional **lecture and tutorial approach** an effective tool in increasing Malaysian accounting students' focus on accounting ethical issues?

RQ3: Is the **group assignment** an effective tool in increasing Malaysian accounting students' focus on accounting ethical issues?

RQ4: Does the combined use of two ethical teaching methods impact positively on Malaysian accounting students' attitudes to accounting ethical issues?

Research Method

Sample

Two final year undergraduate accounting classes from two consecutive semesters, studying the subject *Business Ethics and Corporate Governance* took part in the survey. Enrolled numbers for the two classes totalled approximately 105 students. From these students, 85 completed the survey instrument in their first lecture (50 in the earlier semester and 35 in the later semester). When the survey instrument was completed again in week 6 (refer to the *Procedures* section below) 85 valid responses were again received. This is how the final numbers as per Table 1 were arrived at. The median age bracket for these final year students was 19-21 years and the gender split was 56% female, 44% male.

Survey Instrument

For the purpose of collecting data, five ethical vignettes were used as an instrument within the survey. This instrument allows ethical problems to be placed in a reasonably realistic context and directs the focus on to a particular area of interest. Ethical vignettes provide significant advantages over other research instruments when investigating ethical principles and ethical behaviour (Cavanaugh and Fritzche, 1985). Within the accounting field, numerous studies in accounting ethics have used ethical vignettes (Douglas *et al.*, 2001; Patterson, 2001). The ethical vignettes in this study

similarly describe possible ethical dilemmas that may arise in an accountant's working environment.

The five ethical vignettes are all accounting-related vignettes and were developed with the specific students from this study in mind. (Refer to Appendix 1 for a copy of the first vignette from the survey instrument). All the vignettes portray a scenario in which a recently graduated accountant has spent six months in his/her first job and is faced with an ethical dilemma. As all participants were expecting to commence full time employment in the coming year, this added to the validity of the study. The following describes the five vignettes:

Vignette 1 - describes a situation where an assistant accountant working in a chemical company is offered a once-off payment by the Chief Accountant to keep silent regarding improper accounting practices.

Vignette 2 - depicts a scenario where an accounting clerk working in a confectionary company witnesses a respected senior colleague stealing a box of chocolates.

Vignette 3 - describes a situation in which the assistant accountant, is being presented with the opportunity to falsify his/her resume application for a job.

Vignette 4 - illustrates a scenario in which a trainee accountant is being pressured to inflate travel expenses for reimbursement.

Vignette 5 - depicts a situation whereby a trainee accountant is being pressured to make necessary adjustments to a client's accounts, in order for a bank loan to be approved.

At the end of each of the five scenarios, students were asked to select one response from five alternatives (Appendix 1). Although the five responses in each of the scenarios are tailored to the particular ethical dilemma, the first response in all scenarios always represented the response to act *highly unethically*; the second response to act *unethically*; the third response to act *neutral*; the fourth response to act *ethically*; and the fifth response to act *highly ethically*. The *highly ethical* response involved going beyond just doing the right thing. It entailed becoming a whistleblower on the perpetrator(s) of the unethical behaviour.

Procedures

The survey instruments (SIs) were distributed as follows. At the very first lecture in a final year Bachelor of Accountancy (Hons) subject *Business Ethics and Corporate Governance*, a copy of the SI was distributed to each individual. They were advised to complete them individually and hand them up during the lecture break. They were told the following three factors to consider when completing the SI. First, it did not form part of the assessment procedures for the subject, second, there were no right or wrong answers and third, they were to answer according to how they genuinely felt at the time. Completion of the survey instrument took approximately 20 minutes. This distribution, over two consecutive semesters yielded 50 and 35 usable responses, equating to the 85 *pre* instruction responses.

The first lecture consisted of a one-hour introduction to the topic of Business Ethics in general and then a one-hour lecture discussing the impact of ethics on the practice of auditing. The latter included an introduction to the Code of Ethics of the two major professional accounting bodies in Malaysia namely the Malaysian Institute of

Accountants (MIA) and the Malaysian Institute of Certified Public Accountants (MICPA), a discussion of ethical theory and examples of unethical accounting practices. The students were set readings from their text and questions on ethics to be answered in the following week's tutorial. This lecture/tutorial combination comprised ethics instruction method number 1.

In the second week of the course the students were given a one-hour lecture on how to solve an ethical dilemma using a six-step model (the *Stakeholder Impact Analysis* (SIA) approach to ethical decision making) explained in their textbook. In the third week of the course students were given a group assignment. They were instructed to form groups of 3 students and present a full written assignment (6 pages approximately) answer to two ethical dilemmas, a confidentiality dilemma and an independence issue. They were given two weeks to complete the assignment. This group written assignment comprised ethics instruction method number 2. All formal ethics instruction on the Business Ethics component of the syllabus ceased at this point.

A three-week "cooling off" period then ensued. During this three-week period topics relating to the Corporate Governance component of the syllabus were discussed and studied and no reference was made in classes to any ethical content or implications. The purpose of this was to hopefully clear the students' minds of focussing too intently on the ethical components of anything they were studying.

In week six of the semester, after the students had handed up their earlier assignment, the students were given the same survey instrument they had received in week 1. This

was a total surprise to them since they had not been told they would be doing it again, when doing it in week 1. Again it was stressed to them that it did not form part of the assessment procedures for the subject, that there were no right or wrong answers and they were to answer according to how they genuinely felt at the time. These distributions (over two consecutive semesters) yielded the 85 *post* instruction responses [2] assessed as per Table 1.

The last page of the SI then asked them to separately rank the impact of the individual teaching methods, the lecture/tutorial approach and the group assignment approach, on a nine-point scale. They were then asked to rank the combined impact of the two methods, again on a nine-point scale. The bottom end of the scale represented a response stating the ethical instruction methods had made them inclined to act more unethically than previously, the mid-point (5) represented a response stating the ethical instruction methods had no effect on their ethical attitudes. Finally, the top of the scale represented a response stating the ethical instruction methods had made them inclined to act more ethically.

Results

Table 1 provides a summary of the mean responses to the five vignettes *pre* and *post* the instruction methods.

In all five instances the mean score was higher for each scenario after the instruction methods. Also, all responses are *statistically* significantly different as evidenced in the table. This would tend to suggest that after considering the importance of ethics in accounting, the students considered a more ethical response to an ethical vignette than

had they not been exposed to the importance of the topic. Hence, strong support was found for a positive response to RQ1.

Insert Table 1 Here

When asked about the effectiveness or otherwise of the two instructional methods, participants rated both methods as effective and the combined effect of the two as even more effective than any individual method. Table 2 lists the results of these tests. The mid-point of the nine-point scale (5) was set up as a dummy response indicating zero impact on attitudes. The respondents then rated the individual effects and the combined overall effect as significantly greater than the mid-point. Hence it would appear as if RQs 2-4 can be answered in the affirmative.

Insert Table 2 Here

Discussion

Considering RQ1 it would appear as if there is indeed a place for ethics education in Malaysian accountancy courses. Inclusion of ethical components may not be simply altruistic. They appear to have had a positive impact on the students in this study. Every attempt was made to protect the validity of the study, subject to the limitations noted below. The answers to the survey instrument were not part of the assessment procedures for the subject. It was continually stressed to students their responses were to be what they considered they would do, not what they considered should be done. There was no benefit of any kind for a student to give any answer other than the one they considered relevant. A significant time period was allowed to lapse between when the students were being instructed in ethics and when they completed the SI for the second time.

The researchers had anticipated the ethical instruction methods would not have had any impact on ethical attitudes. As per the literature review above, it was considered final year accounting students, most of whom have had significant “real world” experience with part time work etc. by the time they get to their final year, would have their ethical values thoroughly formed. As earlier studies - some referred to in the literature review - have established, ethical attitudes are significantly affected by individual factors (such as demographic, cultural, religious and psychological) and situational factors (such as organisational culture). Most of these influences impact significantly on individuals well before they reach the final year of their university degree.

It was anticipated the final year accounting students' ethical attitudes would have been strongly developed and a few weeks of instruction would be unlikely to impact them to a significant degree. The results tended to suggest otherwise however. Ethical behaviour in an accounting context was positively impacted upon in all five scenarios. This would tend to suggest there is benefit in including ethics teaching and indeed emphasising its importance in accountancy courses.

Considering RQs 2-4, Table 2 would tend to suggest both instruction methods had a positive impact on students' ethical attitudes. Due to the basic nature of the measuring procedure it would appear dubious to say, just because method number two had a higher mean difference, that it was a better method. Additional research in this area – discussed below – would appear necessary before that definitive conclusion could be reached. However both were assessed as having a positive impact. Interestingly, the combined effect had a greater impact than any of the individual items. This would tend to suggest a slow continuum of relevant instruction may be a more effective method of getting the ethics message across than any intensive instruction technique(s).

It is also interesting to note that the most effective method of improving ethical attitudes – bearing in mind the measurement limitation mentioned above – appeared to occur when students considered ethical issues with their peers, rather than any instruction from an outside “expert” (via lecture) in the area. This raises the question of whether or not ethics is one of those areas best studied with peers as opposed to independent expert facilitators. Again this is referred to below as a potential future area for research.

Summary and Conclusion

One of the greatest challenges facing the Malaysian accounting profession today is maintaining exemplary ethical standards. The International Monetary Fund (IMF) (2007) issues various comparative tables which demonstrate differences between nations and their economies. In the most recent *World Economic Outlook* (IMF, 2007) which divides the world into two major groups, namely advanced economies, and other emerging markets and developing countries, Malaysia's classification is still in the latter category. This is despite predicted growth in GDP of 5.8 to 5.6% for the next 2 years. Hence external perception of a good place to do business is critical.

Ethical scales are more difficult to encounter, but Transparency International (2007) gathers information from which it constructs a Corruption Perceptions Index (CPI) and a Bribe Payers Index (BPI). The lower the ranking number, the more ethical the country is perceived to be. Hence the "advanced economy" countries are perceived as less likely to accept corrupt payments and offer bribes than the "emerging markets" nations. Malaysia is currently ranked 43rd on the CPI and 25th on the BPI (Transparency International, 2007). Whereas this is an improvement on previous ratings, the perception is still not ideal. Hence focus on ethical matters is critical to the improved reputation of the country as a place to transact business.

It follows therefore that the challenge for accounting academics is how to get the ethical message across to accountancy students, the practitioners of tomorrow. This study examines whether or not ethical instruction, employing a range of techniques, is effective within an accountancy course. Results would tend to suggest, ethical instruction can indeed impact positively on accountancy students' ethical attitudes. A

combination of teaching techniques yielded significantly positive results in the main. Additional research in this area (i.e. are some techniques more effective than others) would therefore appear justified and is mentioned below.

Limitations

There are two main limitations to this research study. Firstly, the relatively small sample size may not be considered representative of the overall population that is the final year accountancy student population of Malaysia, although there are no reasons to believe that the students who participated from this university are any different from students at any other universities. However, the generalisability of the results to the final year accountancy students of other universities is unclear. Secondly, in terms of the responses to the ethical vignettes, whether the responses are true reflections of what the participants would actually do in a real situation is a factor which will remain unknown. Whereas there are no reasons to believe that students would react differently to the ethical vignettes than to a real life situation, the findings of this research study must however be read in light of these limitations.

Future Research

The results of this study tend to suggest teaching ethics can be effective but which methods are effective? Indeed a combination of methods may achieve more than any one individual method, no matter how effective that individual method appears. It would appear beneficial therefore to continue research into this area. Specifically, future research could focus on: better ways of measuring ethical attitudes and changes

therein; better methods of comparing the various methods and evaluating differences; and even developing new methods of teaching ethics.

Endnotes

[1] For a full discussion of this case refer to “Transmile’s Audit Committee Quits”.
www.theedgedaily.com

[2] In order to maximise full attendance for classes during the sixth week of the semester, when it was proposed to distribute the post instruction questionnaires, a quiz was scheduled for that week and the SI was distributed immediately upon conclusion of the quiz. This approach of having ‘captive respondents’ is more feasible in a branch campus, where student numbers are more manageable.

Appendix 1 – Example of Ethical Vignette (Extracted from Survey Instrument)

ETHICAL SCENARIO # 1

1. You have completed your business degree and have spent six months in your first job, as assistant accountant in a chemical company involved in various research and development projects. Projects that have high probabilities of earning sufficient future revenue to cover costs are capitalised. You find out that one particular research and development project, already capitalised, has serious doubts regarding its ability to generate sufficient future revenue. You confront your superior, the chief accountant, who reluctantly admits to this fact. You soon learn the chief accountant's bonus is performance-related based on the company's annual profit, so you become suspicious of his motives for not writing-off this and other doubtful projects. The chief accountant becomes concerned this matter troubles you and offers you an annual payment of RM10,000 - 25% of your annual salary - for your silence. .

Please circle one option:

Would you:

- (1) Accept the offer and keep silent?
- (2) Accept the offer for one year, but insist it finish then?
- (3) Decline the offer and tell no one?
- (4) Decline the offer and encourage your boss to confess to the directors (but inform him you won't pursue the matter if he doesn't)?
- (5) Decline the offer and report to the directors of the company?

Tables

Table 1 – Comparison of Means Pre and Post Ethics Teaching Methods							
		N	Mean	Std. Dev'n	t	df	Sig. (2-tailed)
Scenario 1	Pre	85	2.8706	1.162	-7.301	168	.000****
	Post	85	4.0471	.924	-7.301	159.88	.000****
Scenario 2	Pre	85	3.0118	1.017	-7.077	168	.000****
	Post	85	4.0471	.885	-7.077	164.83	.000****
Scenario 3	Pre	85	2.4588	.780	-4.957	168	.000****
	Post	85	3.1294	.973	-4.957	160.38	.000****
Scenario 4	Pre	85	2.6471	.909	-5.207	168	.000****
	Post	85	3.4706	1.140	-5.207	160.06	.000****
Scenario 5	Pre	85	2.8000	1.055	-6.949	168	.000****
	Post	85	3.9059	1.019	-6.949	167.79	.000****

**** = significant at .001.

Table 2 - Accountancy Students Assessment of Effectiveness of Ethics Teaching						
Method	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
(Dummy Variable – zero effect)	84	5.00	.000			
Lecture/Tutorial	84	6.27	1.450	8.047	83	.000****
Group Assignment	84	6.97	1.353	13.386	83	.000****
Overall combined effect	84	7.38	1.051	20.748	83	.000****

**** = significant at .001.

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