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# THE IMPACT OF STUDENT PERCEPTIONS AND EXPECTATIONS ON STUDENT'S RESULTS: AN EMPIRICAL STUDY IN TEACHING THE INTRODUCTORY ACCOUNTING COURSE IN THE UNIVERSITY OF INDONESIA

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**Abstract**

*This study analyses the impact of student perceptions and expectations in teaching introductory accounting course, lecturer performance index (based on student evaluation teaching score), pre-requisite results, high school origin and status of the high school for the final results in taking the Introductory Accounting course taught in the second semester (Pengantar Akuntansi 2 or PA2) differentiated between student gender and major of study. The aim behind this study is to get feedback in order to improve teaching in PA2. With factor analysis, results indicate that there are five dominant factors that were retained for the purpose in determining student results of PA2 (expectations, topics, preparation, ethical issues and level of difficulties of the course).*

*To date, there has not been a study on the impact of student perceptions and expectations to student's final results. Different level of perception and expectations, results of PA1 and lecturer performance index significantly influence the results of PA2. Male students who expect that the subject will be difficult have less performance rather than those who expect the contrary. Male students who have high expectations that PA2 course will be useful and challenging have greater chance to pass the course successfully.*

***Keywords:*** ***Student perception, student expectation, introductory accounting course, lecturer performance index***

## I. INTRODUCTION

The University of Indonesia (UI) which occupies 3,027,524 m2 in the Depok Municipality, West Java is one of the oldest university in Indonesia. It was established on February 2, 1950, and has twelve faculties with a total of 10,819 students and 1,783 staffs during the 2005/2006 academic year. The Faculty of Economics University of Indonesia (FEUI) which is one of the thirteen faculties under the University of Indonesia was established on September 18, 1950. It was established when the Department of Social Economy was separated from Faculty of Law.

**Picture 1**
**Student Composition Deparment**

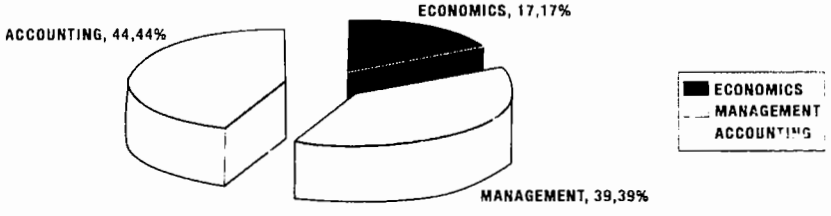


**Table 1**
**Demography of the Students and Academic Staffs –**
**Faculty of Economics University of Indonesia 2005/2006 Academic Year*)**

| Gender | % | Origin of HS | % | Status of HS | % |
|---|---|---|---|---|---|
| Male | 36.61% | Jakarta | 78.69% | State HS | 77.99% |
| Female | 63.39% | Non-Jakarta | 21.31% | Privete HS | 22.01% |
| Total | 100% | | 100% | | 100% |

HS = High School

| Department | Professors | | Lecturers | | Teaching Assitant | | Total | |
|---|---|---|---|---|---|---|---|---|
| | | % | | % | | % | | % |
| Accounting | 4 | 20% | 156 | 39% | 51 | 23% | 211 | 33% |
| Economics | 13 | 65% | 116 | 29% | 93 | 42% | 222 | 34% |
| Management | 3 | 15% | 130 | 32% | 80 | 36% | 213 | 33% |
| Total | 20 | 100% | 402 | 100% | 224 | 100% | 646 | 100% |

*) based on 427 students enrolled in 2005/2006 academic year.

FEUI has three different departments: the Department of Economics, the Department of Management, and the Department of Accounting with a total of 427 students for 2005/2006 academic year. As shown in Figure 1 and Table 1, out of the three departments the Department of Accounting has the largest number of students (44%) and the second largest number of academic staffs (33%). Student demography shows that (Table 1), female students dominated the population (57.5%), 79% students graduated from high school in Jakarta and the surrounding area, where 78% of the total population of the students graduated from the state-school. This shows that majority of the students are female who graduated from state school located mainly in Jakarta. The Department of Accounting is reputed to be one of the best, if not the best, accounting school in Indonesia. To keep this reputation the Department continuously tries to improve its teaching quality. An important part of this effort is to know how students absorb the materials taught in every subject being offered by the Department.

The purpose of this research is to study factors that determine the level of achievement of student's results in the introductory accounting course taught in the second semester (Pengantar Akuntasi 2 or PA2) 2005/2006 academic year which is compulsory to all first year students at the Faculty of Economics. There are two methodology parts to the study: the first part is a questionnaire survey targeted at students taking this subject. The questionnaire asks student perceptions and expectations of the subject with regard to content, relevance, expected difficulty and anticipated motivation. The second part is a study aimed to establish a link between student perceptions and expectations and other relevant factors regarding their influences to student's results as measured by the final grades.

The survey was conducted with students taking the introductory accounting course in the second semester of 2005/2006 academic calendar year. It involved all of the 427 students across three different departments enrolled at FEUI. Based on this questionnaire, a comparison is made using Mann-Whitney test between student perceptions and expectations by their gender and major of study (Appendix, table 7 & 8). A second comparison is made in order to discuss whether there are differences in student's results of PA2 by their gender, major of study, origin of high school (HS) and status of HS (Table 2). A final comparison is made in order to differentiate student perceptions and expectations on the ranking of the topics covered in PA2 by their major (Table 3). Table 4 presents Factor Analysis that is used to indicate the similar pattern of correlations within a set of observed variables which will be retained among thirty four questions asked during the survey. Among the thirty-four questions asked, it is expected that there will be few factors with regard to student perceptions and expectations that will be retained as controllable variables influencing the student's results. Furthermore, Appendices, table 7-12 present reliability

analysis which measures the scale of reliability of each factor that was retained.

The second part of the research study explains the link between this perception and expectation, lecturer performance index, results of previous Introductory Accounting course (PA1) as pre-requisite subject for PA2, high school origin, and status of high school to the student's results as reflected in the final results of PA2 for the whole sample and differentiated between student gender and major of study (Tables 5 and 6). The methods used for this part of the research are descriptive statistics, factor analysis, linear regression and logistic regression (logit) analyses. A link will be established between student's results as the uncontrollable variable and other factors as the controllable variables.

Five research propositions related to both of the studies were developed and explained as follows:

1. Will there be differences in student's results of PA2 differentiated between gender, major of study, high school origin (HS) and high school status?
2. Will there be differences in student perceptions and expectations on the ranking of the eight topics covered in PA2 by major of study?
3. Will there be differences in student's perceptions and expectations for PA2 between two different group of gender (male and female) and two different group of student's major of study (accounting and non-accounting)?
4. Whether lecturer performance index, pre-requisite results, origin of high school, high school status and student's perceptions and expectations in taking PA2 determined student's final results in PA2 differentiated between gender and major of the study?
5. Whether student's success or failure is determined by factors such as lecturer performance index, pre-requisite results, high school origin, high school status and student perceptions and expectations?

In order to determine student final results in taking PA2, two regression models were developed to answer the above propositions using four different forms of analyses: descriptive statistics, factor, multivariate linear regression, and logistic regression analyses. Six independent variables (continuous and categorical variables) were developed: final result of the pre-requisite subject, lecturer performance index (IPK), gender, major of study (dept), high school status (public or private), and origin of the high school. Besides these six dependent variables, another five independent variables were added to the regression models to determine the success and/or failure of PA2, these variables were the five main factors that were retained using factor analysis including factors like: expectations, topics, preparation, ethical issue and level of difficulties.

## II. THEORETICAL BACKGROUND

There are a number of theories that explain student's results at the higher education level. One theory that is of particular interest to this study is the difference in perceptions and expectations of students in taking the introductory accounting course with different gender and major of study. The second theory is the relationship between student's results as represented by the final grade and student perceptions and expectations of the subject, lecturer performance index and the prerequisite results. This study is based on several researches: the first is a research by Tickell and Lim (2004); Krishnan, Bhatala, Bhattacharya and Ritchey (1999); Geiger and Ogilby (2000); and the second research is attributed to Tennent, Becker, and Kehoe (2005); McInnis and Devlin (2002), Eskew and Faley (1988), Mool Tho (1994); Lee (1999); Hill (1998); Buckless, Lipe and Ravenscroft (1991); Burke and Murphy (2006); Craig (2006).

### II.1. Student Perceptions Ad Expectations for The Introductory Accounting Course

Tickell and Lim (2004); Geiger and Ogilby (2000) conducted a study involving accounting major students and non-accounting students taking Introductory Accounting course. The first was done in Australia and the second was done across two universities in the US. Using factor analysis, the studies concluded that there are four distinct factors in perception and expectation between these two groups of students. Their findings indicate that accounting majors perceive the course more positively than non-accounting majors although both groups had fairly positive perceptions of the course. They find that non-accounting students perceived the usefulness aspect of accounting to be more important than the technical aspect of accounting. A similar approach will be conducted on students taking Introductory Accounting at the Department of Accounting of the Faculty of Economics at the University of Indonesia. Students will be invited to express their perception on questions related to the content and relevance of the subject, and their expectation of the difficulty of the subject and what motivates them to attend the course. Perceptions and expectations of students with accounting major will then be compared to that of non-accounting measure as well between male and female students.

The method used is as follow. In the second week of the semester students will be asked to give their perception and expectation based on the course guideline that is provided to students differentiated between their gender and major of their study. The two results are then compared to see whether perception differ between the group. The goal this part of the study is to get feedbacks from students which will be

used to improve the design, structure, preparation of the study guide of the course in the future.

### II.2. The Impact of Student Perceptions and Expectations to The Level of Achievement on The Student's Results

A significant number of studies that have been conducted to address various aspects of the introductory accounting course. Studies that have examined the determinants of student performance in the introductory accounting course (Eskew and Faley 1988, Mool Tho 1994, Lee 1999 and Hill 1998). The possibility effect of gender on accounting course performance (Buckless, Lipe and Ravenscroft 1991, Burke and Murphy 2006, Craig 2006). Despite the fact that some studies have been done in determining student performance in the introductory accounting course, however, to date there are no studies that link student perception and expectation to the student final results. The working hypothesis in the study is that differences in perceptions and expectation and other factors like lecturer performance and final results of the previous study by gender and major will affect student results. Since the teaching approach at the Department of Accounting of the Faculty of Economics emphasizes on the theoretical aspect of accounting, it is expected that students with non accounting background will have lower student results and since female students are keener with number crunching, they are expected to score higher grade than male students.

## III. RESEARCH METHODOLOGY AND THE DATA DESCRIPTION

### III.1. Data Collection and Sources

The survey covers all 427 first year students across three different departments under FEUI taking Introductory Accounting Course (PA 2). There were 387 students participated in the survey for this project. 166 students submitted the questionnaires online through computer laboratory room and the rest participated through off-line survey conducted by the research team. There were some incomplete and poor quality questionnaires. In order to get optimal results, incomplete and low quality of questionnaires were dropped from the survey which makes total respondents of the survey becomes 339 students (79.39%). The questionnaires were divided into two question groups: the first group consists of question related to student profile; the second group consists of perception and expectation questions. In second question groups, students will be asked to express their view on course contents, course rel-

evance, expectations on the difficulty of the subject, student motivation and rank of each topic of the course.

## III.2. Variable Definitions

### *III.2.1. Dependent and Explanatory Variables*

This study employs several explanatory variables in order to determine student's results of PA2 as a dependent variable. This study uses controllable variables including: lecturer performance index (IPK), results of the pre-requisite subject, origin of the high school, high school status, and student perceptions and expectations in taking PA2 differentiated between student gender and major of study.

### *III.2.2. Treatment on The Missing Values*

In order to get optimal results, missing values and poor quality of questionnaires were dropped from the survey. In total there were 48 (forty eight) questionnaires out of 387 papers that were dropped from the survey which makes total respondents = 339 students.

## III.3. Four Different Forms of Analysis

### *III.3.1. Factor and Reliability Analyses*

*III.3.1.1. Factor Analysis*

Surveyed data will be processed using factor analysis which attempts to identify underlying variables or factors in order to discover the pattern of correlations within a set of observed variables. In particular, it seeks to reduce the number of variables into dominant perceptions and expectations among students across two different groups. Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables. There are 34 surveyed data (Questions 9 up to Questions 42) which will be reduced to smaller number of factors using the said analysis.

*III.3.1.2. Reliability Analysis*

Reliability analysis explains the properties of measurement scales and the items that make them up. The reliability analysis procedure calculates a number of commonly used measures of scale reliability and also provides information about the relationships between individual items in the scale. Among several factors that will be retained using factor analysis, a reliability analysis is used by applying Alpha

(Cronbach) to provide reliability between individual items in each factor. This is a model of internal consistency, based on the average inter-item correlation.

### *III.3.2. Descriptive Statistics*

Summary of findings are presented to summarize all questions related to student perceptions and expectations of PA 2 using a 5-point Likert scale (with 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree). Mann-Whitney test procedure is used both for the student perceptions and expectations and the student's results of PA2. The observations from both groups (male and female students for gender being the first group, and accounting and non-accounting students for student major of study being the second group) are combined and ranked, with the average rank assigned in the case of ties, it is expected that students perceptions and expectations and the student's results of PA2 will differ between the two groups that they belong to.

### *III.3.3. Multivariate Linear and Logistic Regression Analyses*

After investigating variables or factors that have similar pattern of correlations within a set of observed variables of student perceptions and expectations, the next step is to analyse which variables among the controllable variables dominate between different groups. Both linear and logistic regression analyses are used to determine which variables are the best predictors of student level of achievement in student's results. A logistic regression model is applied in this research to specifically examine factors influencing the probability of student success or failure in taking the subject, where a binary indicator of student failure and non-failure is used as the dependent variable. A cross sectional data is formed for this logistic regression model by creating a binary survival dependent variable assigned a value of 0 to failed students (<50 marks) and 1 to non-failed students.

## III.4. The Hypothesis Development

In order to answer the research proposition questions as explained above, several hypotheses were developed in this research study:

1. There will be differences in student's perceptions and expectations for PA2 between two different group of gender and two different group of student's major.
2. There will be differences in giving ranking eight topics discussed in PA2 between two different group of student's major of study.
3. It is expected that different level of lecturer performance (as reflected in lecturer

performance index or IPK) will influence the student's results of PA2. The higher the IPK, the higher PA2 results will be.

4. Besides that, it is expected that the higher the pre-requisite results, the better (higher) result will also be achieved for PA2.
5. This study will also test whether student's success or failure is determined by factors such as lecturer performance index, pre-requisite results, and student perceptions and expectations differentiate between gender and major of the study.

## IV. EMPIRICAL RESULTS OF THE STUDY

The discussion below describes findings from each of the approaches explained above (descriptive, factor, reliability, linear and logistic regression analyses) where summary findings are discussed ahead from other analyses.

### IV.1. Summary Findings – Descriptive Statistics

Appendix, Table 7 and 8, list all questions of perceptions and expectations and a summary of the responses (differentiated between gender and student major of study). Appendix table 7 shows valuable insights that occurred in student perceptions and expectation as shown significantly different between male and female students using Mann-Whitney test. Female students expect that by understanding the course well, this will assist them to perform better in other business courses, while the expectations were much less for male students. Higher expectation on IT involvement for this course (at 5% significance level) expressed by male students, while female students are more optimistic with their career in the accounting firm by doing this course well rather than the male students (at 10% significance level).

Summary findings of student perceptions and expectations differentiate between major of study are summarized in Appendix table 8. Students majoring in Accountancy (A) have higher expectations about the course as compared with students majoring in Non-Accounting (NA). Factors such as: usefulness of the course for other business courses, career, challenging, interesting, useful for day-to-day life, commitments and that they will learn a lot during the course. They expect that for the accounting profession, the course should primarily deals with strategic financial decision in business firms. Students majoring in Accounting have higher expectations that several accounting theories should be covered in this course.

Table 2 is presented for the purpose of investigating whether final results for PA2 differ between gender (male and female), major of study (accounting and non-accounting), origin of high school (Jakarta and non-Jakarta) and status of high

school (public and private school). Final results for PA2 were significantly (at 1% level of significance) different from three groups observed (gender, major of study, and status of the high school). Female students, students majoring in Accountancy and students graduated from private school achieved higher results and significantly different (at 1% significance level) as compared to male students, students with Non-Accounting background and students who graduated from public school.

**Table 2**
**Mean and Standard Deviation of Student's Results of PA2 - Based on Gender, Major of Study, Origin of HS and Status of HS*)**

| *PA 2 Final Results* | | *Survey* | *Mean* | *SD* | *N* |
|---|---|---|---|---|---|
| 1 | Gender | Male | 58.79 | 15.00 | 123 |
| | | Female | 64.25 | 13.28 | 216 |
| | | M-W Test | 0.0015*) | | |
| 2 | Major | Accounting | 65.49 | 12.55 | 170 |
| | | Non-Accounting | 59.03 | 14.95 | 169 |
| | | M-W Test | 0.0000*) | | |
| 3 | Origin of HS | Jakarta | 61.97 | 14.31 | 266 |
| | | Non-Jakarta | 63.35 | 13.63 | 73 |
| | | M-W Test | 0.5476 | | |
| 4 | Status of HS | Public School | 60.51 | 14.26 | 259 |
| | | Private School | 67.97 | 12.24 | 80 |
| | | M-W Test | 0.000*) | | |

*)Each group of study (gender, major, origin of high school and status of high school) is based on 339 students, who completed their questionnaires out of 387 surveyed students.

Table 3 lists summary of the student responses on the ranking the eight topics taught in PA2, by considering future career or personal needs students were asked to indicate the importance of each topic by assigning 1 for most important topic and 8 for least important topics.

1. Current Liabilities;
2. Accounting for Partnerships and Limited Liability Corporations;
3. Corporations: Organizations, Capital Stock Transactions and Dividends;
4. Corporations: Income taxes, Unusual Income Items;
5. Investment in Stock (Short-term and Long-term);
6. Bonds payable and Investment in Bonds;
7. Statement of Cash Flow; and
8. Financial Statement Analysis.

**Table 3**
**Differences in Topic Ranking Based on Major**

| Nr. | Topics | Accounting | Non-Accounting | Mann-Whitney |
|---|---|---|---|---|
| 1 | Current Liabilities | 6 | 8 | 0.969 |
| 2 | Acctg. For Partnership and Ltd. Libaility Corporations | 7 | 4 | 0.007*) |
| 3 | Corp. - Organizations, Cap'l Stock Trans. And Dividends | 2 | 1 | 0.999 |
| 4 | Corp. - Income Taxes, Unusual Income Items | 8 | 7 | 0.042*) |
| 5 | Investment in Stock (Short-Term and Long-Term) | 3 | 2 | 0.860 |
| 6 | Bonds Payable and Investment in Stocks | 5 | 5 | 0.306 |
| 7 | Statement of Cash Flow | 1 | 3 | 0.088 |
| 8 | Financial Statement Analysis | 4 | 6 | 0.051 |

Accounting students ranked Cash Flow Statement as the most important topic out of eight topics covered during the course, then comes accounting for Capital Stocks and Dividends, Investment in Stock, Financial Statement Analysis, Bonds Payable and Investment in Bonds, Current Liabilities, Accounting for Partnerships and Limited Liability Corporations and the last topic which is considered to be least important is the Income Taxes and Unusual Income Items. Non-Accounting students viewed ranking of the topics differently. NA students viewed that Organizations, Capital Stock Transactions and Dividends is the most important topic in taking the course, then followed by Investment in Stocks , Cash Flow Statement, Accounting for partnerships and limited Liability Corporations, Bonds Payable and Investment in Bonds, Financial Statement Analysis, Income Taxes and Unusual Income Items, and Current Liabilities. Significant differences on the ranking of the topics covered occurred between this group of students (at 1% significance level) for topics 2 and 4 meaning there are different views in the perceptions among these groups on the ranking of the topics covered during the course especially on partnership and income taxes topics.

## IV.2. Factor Analysis

Several factors are retained for different category of groups as mentioned earlier. Table 4 shows the component matrix of 5 dominant factors that were retained among 34 questions asked in the survey, factors like: expectations, topics to be covered during the course, preparation, ethical issues and level of difficulties of the course.

**Table 4**

**Factor Analysis** (Pattern Matrix[a])

| | Component | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Q-12 | 0.676 | | | | | | | | |
| Q-10 | 0.673 | | | | | | | | |
| Q-9 | 0.656 | | | | | | | | |
| Q-13 | 0.644 | | | | | | | | |
| Q-31 | -0.632 | | | | | | 0.33 | | |
| Q-15 | -0.579 | | | | | | 0.48 | | |
| Q-11 | 0.503 | | | | | | | | |
| Q-23 | 0.479 | | | | | | | | |
| Q-17 | 0.427 | | | | | | | | |
| Q-30 | 0.335 | | | | | | | | |
| Q-35 | 0.314 | | | | | | | 0.313 | |
| Q-21 | | 0.820 | | | | | | | |
| Q-20 | | 0.812 | | | | | | | |
| Q-22 | | 0.797 | | | | | | | |
| Q-19 | | 0.465 | | | | | | | |
| Q-37 | | | 0.831 | | | | | | |
| Q-32 | | | 0.721 | | | | | | |
| Q-36 | | | 0.639 | | | | | | |
| Q-16 | | | 0.455 | | | | | | |
| Q-41 | | | | 0.872 | | | | | |
| Q-42 | | | | 0.802 | | | | | |
| Q-40 | | | | 0.682 | | | | 0.309 | |
| Q-39 | 0.42 | | | 0.567 | | | | -0.393 | |
| Q-33 | | | | | 0.774 | | | | |
| Q-34 | | | | | 0.771 | | | | |
| Q-25 | | | | | 0.724 | | | | |
| Q-24 | | | | | 0.53 | 0.451 | | | |
| Q-27 | | | | | 0.442 | | | | 0.349 |
| Q-26 | | | | | 0.436 | | | | 0.424 |
| Q-18 | | | | | | 0.826 | | | |
| Q-14 | | | | | | | 0.818 | | |
| Q-38 | | | | | | | | 0.779 | |
| Q-29 | | | | | | | | | 0.785 |
| Q-28 | | | | | | | | | 0.635 |

Extraction Method:principal Component Analysis.
Rotation Method: Oblimin With Kaiser Normalization
A.rotation Vonverged In 22 Iteration

A reliability analysis is used by applying Alpha (Cronbach) to provide reliability between individual items in each factor stated above (as presented in Table 7-12). Appendix 3 shows that expectation being the first factor has 11 observed variables which has similar pattern of correlations among them. Question 31 was dropped in order to get a better result for the Cronbach's Alpha (from 0.569 to 0.751). As a consequence, Question 31 was also dropped in the calculation of mean of this factor for regression purposes. Similar approach is applied to factor 2 which is topics to be covered in the course. Four common observed variables were found where Question 19 was dropped in order to increase Cronbach's Alpha from 0.733 to 0.773. Question 16 was dropped from factor 3 which is preparation for similar reasons (Cronbach's Alpha increased from 0.616 to 0.646). For factor 4, ethical issues, the Cronbach's alpha will not be improved by deleting any item therefore the common variables remains in the factor, similarly for factor 5, level of difficulties of the course.

## IV.3. Linear and Logistic Regression Analyses

**Table 5**
**Empirical Results for The Determinants of Student's Results of PA2 for the Whole Sample, Male Students, Female Students, Accounting Students and Non-Accounting Students**

| PA2 | Whole Sample | Female Students | Male Students | Non-Acctg Students | Accounting Students |
|---|---|---|---|---|---|
| Constant | 41.9565 | 42.8407 | 37.7869 | -2.4920 | 54.7264 |
| | (0.0000)* | (0.0010)* | (0.0210)* | (0.8770) | (0.0000)* |
| PA1 | 0.6062 | 0.5888 | 0.6001 | 0.6833 | 0.6069 |
| | (0.0000)* | (0.0000)* | (0.0000)* | (0.0000)* | (0.0000)* |
| IPK | -5.3008 | -6.4876 | -1.6037 | 11.9830 | -17.5892 |
| | (0.0750) | (0.0780) | (0.7650) | (0.0190)* | (0.0000)* |
| HS | -1.6142 | -2.4728 | -0.1692 | -2.8828 | 0.2251 |
| | (0.2900) | (0.2130) | (0.9470) | (0.1780) | (0.9160) |
| NAS | -3.7094 | -4.3817 | -3.6293 | -4.0152 | -1.8345 |
| | (0.0130)* | (0.0240)* | (0.1410) | (0.1030) | (0.3150) |
| Expectations | 1.9593 | 1.6926 | 3.0107 | 1.9097 | 1.2332 |
| | (0.2530) | (0.4370) | (0.3140) | (0.4110) | (0.6310) |
| Topics | -0.3075 | -0.1285 | -0.6958 | 1.1796 | -2.4043 |
| | (0.7980) | (0.9330) | (0.7520) | (0.4730) | (0.1720 |
| Preparation | -0.1570 | -0.5313 | 0.1801 | -0.8863 | 1.2973 |
| | (0.8690) | (0.6850) | (0.9020) | (0.5290) | (0.3160) |
| Ethical Issues | -0.6128 | -1.0282 | -0.7746 | -1.2459 | 1.1952 |
| | (0.4660) | (0.3790) | (0.5450) | (0.3290) | (0.3530) |
| Difficulties | -2.1319 | -0.1051 | -4.7364 | -3.1113 | 1.5667 |
| | (0.1530) | (0.9570) | (0.0550) | (0.1080) | (0.5000) |

By including five retained factors of student perceptions and expectations as explanatory variables in determining the student's results of PA2, multivariate linear regression analysis was run where its empirical results are shown in Table 5. Final results of PA1 are significantly influenced the student's results of PA2 at 1% significance level for the whole sample, male, female, accounting and non-accounting students meaning that pre requisite results are important in determining the final results of PA2. Interestingly, findings show that lecturer performance index provides different results for PA2. Lecturer performance index (IPK) has negative influence significantly at 1% significance level to the success of the student results for the accounting students and positive influence to non-accounting students meaning that the better performance of the lecturer the tougher they are for accounting students and on the contrary for non-accounting students. In less significant way, lecturer performance index contributes negatively to students results for the whole sample, female and male students.

Status of high school where students graduate from (whether state or private school) influences negatively to the student's final results for the whole sample, and female students (with different level of significance) meaning that students (particularly female students) graduated from state school have less performance than students graduated from private school. Male students who expect that the subject will be difficult also have less performance rather than those who expect the contrary.

In employing a logistic regression (logit) analysis in this research to specifically examine the factors influencing the probability of student success or failure in taking the subject, a binary indicator of student failure and non-failure is used as the dependent variable. Table 6 shows empirical results of the logit analysis by examining factors influencing the probability of student success or failure in taking the subject. The logit analysis is run for the whole sample and it is differentiated between the two main groups: gender (male and female students) and major of study (accounting and non-accounting students).

Similar with the previous regression results, pre-requisite results have all significance impacts to the success in achieving the results of PA2 (at 1% significance level). Lecturer performance index (IPK) has a negative significant influence to student failure in taking PA2 particularly to accounting students meaning that the better the IPK the greater chance for accounting students to fail in the subject. Male students who have high expectations that PA2 course will be useful and challenging have greater chance to pass the course successfully (at 1% significance level).

**Table 6**
**Empirical Results for The Determinants of The Likelihood of Student Success or Failure for The Whole Sample, Male Students, Female Students, Accounting Students and Non-Accounting Students**

| PA2 | Whole Sample | Female Students | Male Students | Non-Acctg Students | Accounting Students |
|---|---|---|---|---|---|
| Constant | 0.3709 | -1.5161 | 3.7396 | -7.6710 | 4.6903 |
| | (0.8890) | (0.6880) | (0.3880) | (0.0510) | (0.2860) |
| PA1 | 0.0880 | 0.0885 | 0.0859 | 0.1086 | 0.0885 |
| | **(0.0000)*** | **(0.0000)*** | **(0.0000)*** | **(0.0000)*** | **(0.0010)*** |
| IPK | -1.1307 | -0.4053 | -1.7832 | 1.6431 | -3.9540 |
| | (0.1840) | (0.7330) | (0.2210) | (0.1710) | **(0.0060)*** |
| HS | 0.0120 | -0.3411 | 0.5121 | -0.2975 | 0.5648 |
| | (0.9760) | (0.5890) | (0.4070) | (0.5730) | (0.4250) |
| NAS | -0.6090 | -0.1011 | -1.2869 | -0.6656 | -0.3219 |
| | (0.2170) | (0.8830) | (0.0940) | (0.3860) | (0.6460) |
| Expectations | 0.2761 | -0.8932 | 1.4427 | 0.2906 | -0.0406 |
| | (0.5280) | (0.2060) | **(0.0400)*** | (0.5920) | (0.9650) |
| Topics | -0.3780 | -0.3770 | -0.7855 | -0.2601 | -0.6851 |
| | (0.2520) | (0.4290) | (0.1790) | (0.4980) | (0.2860) |
| Preparation | 0.1581 | 0.0473 | 0.2890 | 0.4535 | 0.0337 |
| | (0.5310) | (0.9060) | (0.4300) | (0.1900) | (0.9410) |
| Ethical Issues | -0.1058 | 0.3687 | -0.6018 | -0.3299 | 0.2627 |
| | (0.6480) | (0.3140) | (0.0690) | (0.3000) | (0.5640) |
| Difficulties | -0.2513 | 0.5842 | -1.0671 | -0.4355 | 0.6863 |
| | (0.4980) | (0.2910) | (0.0920) | (0.3290) | (0.4030) |
| # of Obs | 339 | 216 | 123 | 169 | 170 |
| Log Likelihod | -122.4216 | -67.0937 | -47.9276 | -68.7947 | -46.635672 |
| Prob>chi2 | 0.0000 | 0.0002 | 0.0000 | 0.0000 | 0.0022 |
| Pseudo R2 | 0.2338 | 0.1946 | 0.3300 | 0.2740 | 0.2166 |

## V. CONCLUSION

Based on the above analyses some contributive feedbacks are concluded and recommended for the better guideline, structure and curriculum in teaching and learning preparation for the subject of Introductory Accounting:

1. Since female students are less interested in the IT involvement for the course, teaching PA2 to female students should provide more attractive IT Application in order to motivate them to be more involved in the application of IT. This is in line with the previous study done by Burke and Murphy (2006); Craig (2006).
2. Male students contribute negatively to the final grade of PA2, teaching Introductory Accounting to male students should involve numbers with real examples and should be presented attractively.
3. Both Accounting and Non-Accounting Students viewed that three topics were quite important to be covered in PA2 (Accounting for Capital Stock, Investment in Stock and Statement of Cash Flow. Lecturer should give more attention when teaching these three topics and should reduce the proportion when teaching income taxes topic for Accounting students and current liabilities for Non-Accounting students. Topic on the Accounting theory should be included for students majoring in Accounting.
4. PA1 positively influence the final grade of PA2 for the whole sample, male, female, accounting and non-accounting students. This indicates that students will achieve better results in PA2 if they get higher results in PA1.
5. On the contrary, lecturer performance index contributes negatively to the final grade of PA2 for the whole sample, male, female, and accounting students. Interestingly, the results show a positive contribution for non-accounting students meaning that lecturer becomes more lenient to non-accounting students. A review should be conducted by linking IPK to student pass rate of each lecturer.
6. Developing a more consistent, and a more standardized assessment criteria is highly needed so that it can be applied by all lecturers consistently.
7. The state/public school contributes negatively for the final grade of PA2 for the whole sample, and female students meaning that students graduate from state high school have a higher chance to fail in the subject (dominated by female students). Implications to this is that attention should be paid more not only in teaching accounting subject for female students graduated from state school, but importantly equity treatments have to be applied for students with different gender in state schools.

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# APPENDIX

## Table 7

## Mean and Standard Deviation of Student Perceptions and Expectations - Based on Gender

| Item | | Survey | Mean | SD | N |
|---|---|---|---|---|---|
| 1 | This course will help me : | | | | |
| | a) With my future business courses | Male | 4,228 | 0.787 | 123 |
| | | Female | 4,403 | 0.689 | 216 |
| | | M-W Test | 0.036*) | | |
| | b) Do well in my career | Male | 4,008 | 0.825 | 123 |
| | | Female | 4,120 | 0.792 | 216 |
| | | M-W Test | 0.213 | | |
| | c) Being personally rewarding | Male | 3,829 | 0.903 | 123 |
| | | Female | 3,870 | 0.858 | 216 |
| | | M-W Test | 0.705 | | |
| 2 | I expect : | | | | |
| | a) This accounting unit will be challenging | Male | 3,545 | 0.880 | 123 |
| | | Female | 3,384 | 0.816 | 216 |
| | | M-W Test | 0.108 | | |
| | b) This accounting unit will be interesting | Male | 4,154 | 0.820 | 123 |
| | | Female | 4,130 | 0.716 | 216 |
| | | M-W Test | 0.476 | | |
| | c) This accounting unit will be useful for day-to-day life | Male | 3,992 | 0.763 | 123 |
| | | Female | 4,083 | 0.710 | 216 |
| | | M-W Test | 0.337 | | |
| | d) This course will be difficult | Male | 3,504 | 1,059 | 123 |
| | | Female | 3,616 | 0.972 | 216 |
| | | M-W Test | 0.346 | | |
| | e) This course will be boring | Male | 2,992 | 1,044 | 123 |
| | | Female | 2,843 | 0.843 | 216 |
| | | M-W Test | 0.130 | | |
| | f) To learn a lot in this class | Male | 4,073 | 0.770 | 123 |
| | | Female | 4,125 | 0.688 | 216 |
| | | M-W Test | 0.754 | | |
| | g) That the accounting unit should be compulsory for all business majors | Male | 3,455 | 1,236 | 123 |
| | | Female | 3,370 | 1,096 | 216 |
| | | M-W Test | 0.369 | | |
| | h) To spend more times on this course than my other course | Male | 3,317 | 1,058 | 123 |
| | | Female | 3,398 | 0.997 | 216 |
| | | M-W Test | 0.458 | | |
| | i) The instructor will affect my opinion of the usefulness of this course | Male | 3,780 | 1,060 | 123 |
| | | Female | 3,782 | 0.803 | 216 |
| | | M-W Test | 0.567 | | |
| 3 | The accounting profession primarily deals with : | | | | |
| | a) Strategic financial decisions in business firms | Male | 3,764 | 0.897 | 123 |
| | | Female | 3,801 | 0.697 | 216 |
| | | M-W Test | 0.875 | | |
| | b) With financial statements | Male | 4,016 | 0.746 | 123 |
| | | Female | 4,051 | 0.619 | 216 |
| | | M-W Test | 0.878 | | |
| | c) With auditing, taxation and other financial services | Male | 4,033 | 0.677 | 123 |
| | | Female | 4,037 | 0.585 | 216 |
| | | M-W Test | 0.832 | | |
| | d) Managing accounting information | Male | 3,862 | 0.717 | 123 |
| | | Female | 3,833 | 0.668 | 216 |
| | | M-W Test | 0.669 | | |
| 4 | I expect this accounting unit will : | | | | |
| | a) Involve IT Application and quantitative analysis | Male | 3,862 | 0.890 | 123 |
| | | Female | 3,630 | 0.748 | 216 |
| | | M-W Test | 0.001*) | | |
| | b) Introduce me to several accounting theories | Male | 4,008 | 0.671 | 123 |
| | | Female | 4,079 | 0.624 | 216 |
| | | M-W Test | 0.296 | | |
| 5 | I would like to take this unit to emphasize : | | | | |
| | a) Financial concepts and their implication in decision making | Male | 3,992 | 0.773 | 123 |
| | | Female | 3,894 | 0.809 | 216 |
| | | M-W Test | 0.302 | | |
| | b) Problem solving through examples and using IT software | Male | 3,659 | 0.777 | 123 |
| | | Female | 3,444 | 0.770 | 216 |
| | | M-W Test | 0.019*) | | |
| 6 | I am looking forward to this course | Male | 3,358 | 1,095 | 123 |
| | | Female | 3,398 | 0.883 | 216 |
| | | M-W Test | 0.845 | | |
| 7 | I am highly motivated to do well in this course | Male | 3,780 | 0.864 | 123 |
| | | Female | 3,898 | 0.734 | 216 |
| | | M-W Test | 0.222 | | |
| 8 | I would not take this unit if it were not required for may majors | Male | 2,520 | 1,339 | 123 |
| | | Female | 2,542 | 1,169 | 216 |
| | | M-W Test | 0.581 | | |
| 9 | I have an aptitude for math oriented unit such as accounting | Male | 3,423 | 0.923 | 123 |
| | | Female | 3,310 | 0.808 | 216 |
| | | M-W Test | 0.349 | | |

*Based on 339 students who completed the questionnaires completely consists of 123 male students and 216 female students

**Table 7**
**- Mean and standard deviation of student perceptions and expectations - based on gender (continued)**

| Item | | Survey | Mean | SD | N |
|---|---|---|---|---|---|
| 10 | I expect the material learn in this course will be useful for my career | Male | 4,203 | 0.768 | 123 |
| | in the future | Female | 4,255 | 0.651 | 216 |
| | | M-W Test | 0.798 | | |
| 11 | I expect that the materials I learn in this course will be useful for other | Male | 4,073 | 0.680 | 123 |
| | courses in my educational program | Female | 4,065 | 0.672 | 216 |
| | | M-W Test | 0.946 | | |
| 12 | I have edequate preparation for : | | | | |
| | a) Finance | Male | 3,122 | 0.937 | 123 |
| | | Female | 2,977 | 0.731 | 216 |
| | | M-W Test | 0.172 | | |
| | b) Statistics | Male | 3,211 | 1,010 | 123 |
| | | Female | 3,250 | 0.755 | 216 |
| | | M-W Test | 0.864 | | |
| | c) Mathematics | Male | 3,163 | 1,104 | 123 |
| | | Female | 3,241 | 0.794 | 216 |
| | | M-W Test | 0.858 | | |
| | d) Information Technology | Male | 2,992 | 0.988 | 123 |
| | | Female | 2,759 | 0.770 | 216 |
| | | M-W Test | 0.010*) | | |
| 13 | After graduation, I would like a career in the accounting field | Male | 2,715 | 1,296 | 123 |
| | | Female | 3,023 | 1,199 | 216 |
| | | M-W Test | 0.036*) | | |
| 14 | After graduation, I believe I have a reasonable chance of getting a job | Male | 2,846 | 1,261 | 123 |
| | that requires an accounting background | Female | 3,153 | 1,074 | 216 |
| | | M-W Test | 0.030*) | | |
| 15 | Individuals working in the accounting field are more ethical than those | Male | 2,577 | 1,194 | 123 |
| | in other fields of business | Female | 2,653 | 0.897 | 216 |
| | | M-W Test | 0.310 | | |
| 16 | individuals working in the accounting field are more ethical than | Male | 2,545 | 1,002 | 123 |
| | University Lecturer | Female | 2,505 | 0.807 | 216 |
| | | M-W Test | 0.638 | | |

## Table 8
## Mean and Standard Deviation of Student Perceptions and Expectations - Based on Student's Major

| Item | | Survey | Mean | SD | N |
|---|---|---|---|---|---|
| 1 | This course will help me | | | | |
| | a) With my future business courses | Accounting | 4.500 | 0.63 | 170 |
| | | Non-Acctg | 4.178 | 0.79 | 169 |
| | | M-W Test | 0.000*) | | |
| | b) Do well in my career | Accounting | 4.371 | 0.69 | 170 |
| | | Non-Acctg | 3.787 | 0.81 | 169 |
| | | M-W Test | 0.000*) | | |
| | c) Being personally rewarding | Accounting | 4.076 | 0.83 | 170 |
| | | Non-Acctg | 3.633 | 0.86 | 169 |
| | | M-W Test | 0.000*) | | |
| 2 | I expect: | | | | |
| | a) This accounting unit will be challenging | Accounting | 3.665 | 0.78 | 170 |
| | | Non-Acctg | 3.219 | 0.84 | 169 |
| | | M-W Test | 0.000*) | | |
| | b) This accounting unit will be interesting | Accounting | 4.247 | 0.65 | 170 |
| | | Non-Acctg | 4.030 | 0.83 | 169 |
| | | M-W Test | 0.029*) | | |
| | c) This accounting unit will be useful for day-to-day life | Accounting | 4.176 | 0.72 | 170 |
| | | Non-Acctg | 3.923 | 0.72 | 169 |
| | | M-W Test | 0.001*) | | |
| | d) This course will be difficult | Accounting | 3.529 | 0.92 | 170 |
| | | Non-Acctg | 3.621 | 1.08 | 169 |
| | | M-W Test | 0.423 | | |
| | e) This course will be boring | Accounting | 2.665 | 0.81 | 170 |
| | | Non-Acctg | 3.130 | 0.97 | 169 |
| | | M-W Test | 0.000*) | | |
| | f) To learn a lot in this class | Accounting | 4.288 | 0.64 | 170 |
| | | Non-Acctg | 3.923 | 0.75 | 169 |
| | | M-W Test | 0.000*) | | |
| | g) That the accounting unit should be compulsory for all business majors | Accounting | 3.659 | 1.02 | 170 |
| | | Non-Acctg | 3.142 | 1.22 | 169 |
| | | M-W Test | 0.000*) | | |
| | h) To spend more times on this course than my other course | Accounting | 3.782 | 0.86 | 170 |
| | | Non-Acctg | 2.953 | 1.00 | 169 |
| | | M-W Test | 0.000*) | | |
| | i) The instructor will affect my opinion of the usefulness of this course | Accounting | 3.782 | 0.89 | 170 |
| | | Non-Acctg | 3.781 | 0.92 | 169 |
| | | M-W Test | 0.731 | | |
| 3 | The accounting profession primarily deals with: | | | | |
| | a) Strategic financial decisions in business firms | Accounting | 3.935 | 0.65 | 170 |
| | | Non-Acctg | 3.639 | 0.86 | 169 |
| | | M-W Test | 0.001*) | | |
| | b) With financial statements | Accounting | 4.006 | 0.64 | 170 |
| | | Non-Acctg | 4.071 | 0.69 | 169 |
| | | M-W Test | 0.319 | | |
| | c) With auditing, taxation and other financial services | Accounting | 4.029 | 0.60 | 170 |
| | | Non-Acctg | 4.041 | 0.64 | 169 |
| | | M-W Test | 0.767 | | |
| | d) Managing accounting information | Accounting | 3.800 | 0.70 | 170 |
| | | Non-Acctg | 3.888 | 0.67 | 169 |
| | | M-W Test | 0.197 | | |
| 4 | I expect this accounting unit will | | | | |
| | a) Involve IT Application and quantitative analysis | Accounting | 3.776 | 0.78 | 170 |
| | | Non-Acctg | 3.651 | 0.83 | 169 |
| | | M-W Test | 0.193 | | |
| | b) Introduce me to several accounting theories | Accounting | 4.147 | 0.64 | 170 |
| | | Non-Acctg | 3.959 | 0.63 | 169 |
| | | M-W Test | 0.004*) | | |
| 5 | I would like to take this unit to emphasize: | | | | |
| | a) Financial concepts and their implications in decision making | Accounting | 4.047 | 0.73 | 170 |
| | | Non-Acctg | 3.811 | 0.84 | 169 |
| | | M-W Test | 0.009*) | | |
| | b) Problem solving through examples and using IT software | Accounting | 3.594 | 0.73 | 170 |
| | | Non-Acctg | 3.450 | 0.82 | 169 |
| | | M-W Test | 0.036*) | | |
| 6 | I am looking forward to this course | Accounting | 3.706 | 0.80 | 170 |
| | | Non-Acctg | 3.059 | 1.00 | 169 |
| | | M-W Test | 0.000*) | | |
| 7 | I am highly motivated to do well in this course | Accounting | 4.053 | 0.76 | 170 |
| | | Non-Acctg | 3.657 | 0.76 | 169 |
| | | M-W Test | 0.000*) | | |
| 8 | I would not take this unit if it were not required for my majors | Accounting | 2.082 | 1.01 | 170 |
| | | Non-Acctg | 2.988 | 1.27 | 169 |
| | | M-W Test | 0.000*) | | |
| 9 | I have an aptitude for math oriented unit such as accounting | Accounting | 3.435 | 0.82 | 170 |
| | | Non-Acctg | 3.266 | 0.88 | 169 |
| | | M-W Test | 0.060*) | | |
| 10 | I expect the material I learn in this course will be useful for my career in the future | Accounting | 4.429 | 0.58 | 170 |
| | | Non-Acctg | 4.041 | 0.74 | 169 |
| | | M-W Test | 0.000*) | | |
| 11 | I expect that the materials I learn in this course will be useful for other courses in my educational program | Accounting | 4.165 | 0.60 | 170 |
| | | Non-Acctg | 3.970 | 0.73 | 169 |
| | | M-W Test | 0.016*) | | |

.. Based on 339 students who completed the questionnaires completely consists of 170 Accounting students and 169 Non-Accounting students

**Table 8**
**Mean and Standard Deviation of Student Perceptions and Expectations - Based on Student's Major (Continued)**

| Item | | Survey | Mean | SD | N |
|---|---|---|---|---|---|
| 12 | I have adequate preparation for: | | | | |
| | a) Finance | Accounting | 3.129 | 0.75 | 170 |
| | | Non-Acctg | 2.929 | 0.86 | 169 |
| | | M-W Test | 0.033*) | | |
| | b) Statistics | Accounting | 3.141 | 0.84 | 170 |
| | | Non-Acctg | 3.331 | 0.86 | 169 |
| | | M-W Test | 0.025*) | | |
| | c) Mathematics | Accounting | 3.165 | 0.92 | 170 |
| | | Non-Acctg | 3.260 | 0.91 | 169 |
| | | M-W Test | 0.312 | | |
| | d) Information Technology | Accounting | 2.729 | 0.81 | 170 |
| | | Non-Acctg | 2.959 | 0.90 | 169 |
| | | M-W Test | 0.017*) | | |
| 13 | After graduation, I would like a career in the accounting field | Accounting | 3.553 | 1.06 | 170 |
| | | Non-Acctg | 2.266 | 1.07 | 169 |
| | | M-W Test | 0.000*) | | |
| 14 | After graduation, I believe I have a reasonable chance of getting a job | Accounting | 3.647 | 0.94 | 170 |
| | that requires an accounting background | Non-Acctg | 2.432 | 1.02 | 169 |
| | | M-W Test | 0.000*) | | |
| 15 | Individuals working in the accounting field are more ethical than those | Accounting | 2.947 | 0.95 | 170 |
| | in other fields of business | Non-Acctg | 2.302 | 0.97 | 169 |
| | | M-W Test | 0.000*) | | |
| 16 | Individuals working in the accounting field are more ethical than | Accounting | 2.706 | 0.80 | 170 |
| | University I ecturer | Non-Acctg | 2.331 | 0.92 | 169 |
| | | M-W Test | 0.000*) | | |

**Table 9**
**Reliability Analyses for Factor 1 – Expectations**

**Reliability Statistics**

| Cronbach's Alpha | N of Item |
|---|---|
| .569 | 11 |

**Item-Total Statistics**

| | Scale Mean if | Scale Variance if | Corrected Item-Total | Cronbach's Alpha if Item |
|---|---|---|---|---|
| Q - 9 | 34.10 | 16.206 | .492 | .498 |
| Q - 10 | 34.36 | 15.390 | .569 | .473 |
| Q - 11 | 34.58 | 15.268 | .527 | .477 |
| Q - 12 | 35.07 | 14.472 | .532 | .463 |
| Q - 13 | 35.05 | 15.045 | .489 | .480 |
| Q - 15 | 35.54 | 22.373 | -.412 | .683 |
| Q - 17 | 34.33 | 15.879 | .566 | .484 |
| Q - 23 | 34.99 | 15.550 | .508 | .484 |
| Q - 30 | 35.04 | 14.697 | .411 | .494 |
| Q - 31 | 35.90 | 24.603 | -.531 | .751 |
| Q - 35 | 35.41 | 16.680 | .345 | .524 |

**Reliability Statistics**

| Cronbach's Alpha | N of Item |
|---|---|
| .751 | 10 |

**Item-Total Statistics**

| | Scale Mean if | Scale Variance if | Corrected Item-Total | Cronbach's Alpha if Item |
|---|---|---|---|---|
| Q - 9 | 31.56 | 20.543 | .533 | .718 |
| Q - 10 | 31.82 | 19.608 | .610 | .705 |
| Q - 11 | 32.05 | 19.637 | .543 | .712 |
| Q - 12 | 32.53 | 18.220 | .614 | .697 |
| Q - 13 | 32.52 | 18.795 | .584 | .704 |
| Q - 15 | 33.01 | 28.349 | -.468 | .843 |
| Q - 17 | 31.80 | 20.257 | .593 | .711 |
| Q - 23 | 32.46 | 19.811 | .545 | .713 |
| Q - 30 | 32.50 | 18.440 | .491 | .719 |
| Q - 35 | 32.87 | 21.129 | .376 | .736 |

**Table 10**
**Reliability Analyses for Factor 2 – Topics Covered**

**Reliability Statistics**

| Cronbach's Alpha | N of Item |
|---|---|
| .733 | 4 |

**Item-Total Statistics**

| | Scale Mean if | Scale Variance if | Corrected Item-Total | Cronbach's Alpha if Item |
|---|---|---|---|---|
| Q - 21 | 11.67 | 2.612 | .609 | .630 |
| Q - 20 | 11.67 | 2.572 | .559 | .653 |
| Q - 22 | 11.86 | 2.463 | .596 | .630 |
| Q - 19 | 11.92 | 2.680 | .369 | .773 |

**Reliability Statistics**

| Cronbach's Alpha | N of Item |
|---|---|
| .773 | 3 |

**Item-Total Statistics**

| | Scale Mean if | Scale Variance if | Corrected Item-Total | Cronbach's Alpha if Item |
|---|---|---|---|---|
| Q - 20 | 7.88 | 1.314 | .602 | .702 |
| Q - 21 | 7.88 | 1.359 | .649 | .653 |
| Q - 22 | 8.07 | 1.305 | .578 | .730 |

**Table 11**
**Reliability Analyses for Factor 3 – Preparation**

**Reliability Statistics**

| Cronbach's Alpha | N of Item |
|---|---|
| .616 | 4 |

**Item-Total Statistics**

| | Scale Mean if | Scale Variance if | Corrected Item-Total | Cronbach's Alpha if Item |
|---|---|---|---|---|
| Q - 16 | 9.80 | 4.037 | .243 | .646 |
| Q - 32 | 10.30 | 3.295 | .451 | .504 |
| Q - 36 | 10.42 | 3.475 | .380 | .558 |
| Q - 37 | 10.44 | 2.940 | .519 | .443 |

**Reliability Statistic**

| Cronbach's Alpha | N of Item |
|---|---|
| .646 | 3 |

**Item-Total Statistics**

| | Scale Mean if | Scale Variance if | Corrected Item-Total | Cronbach's Alpha if Item |
|---|---|---|---|---|
| Q - 32 | 6.45 | 2.331 | .377 | .650 |
| Q - 36 | 6.56 | 2.247 | .413 | .604 |
| Q - 37 | 6.59 | 1.758 | .590 | .343 |

**Table 12**
**Reliability Analyses for Factor 4 – Ethical Issues**
**Reliability Statistic**

| Cronbach's Alpha | N of Item |
|---|---|
| .791 | 4 |

**Item-Total Statistics**

| | Scale Mean if | Scale Variance if | Corrected Item-Total | Cronbach's Alpha if Item |
|---|---|---|---|---|
| Q - 39 | 8.19 | 6.258 | .597 | .749 |
| Q - 40 | 8.06 | 6.089 | .719 | .675 |
| Q - 41 | 8.47 | 7.256 | .590 | .746 |
| Q - 42 | 8.58 | 8.091 | .527 | .777 |

**Table 13**
**Reliability Analyses for Factor 5 – Level of Difficulties**
**Reliability Statistic**

| Cronbach's Alpha | N of Item |
|---|---|
| .791 | 6 |

**Item-Total Statistics**

| | Scale Mean if | Scale Variance if | Corrected Item-Total | Cronbach's Alpha if Item |
|---|---|---|---|---|
| Q - 24 | | 6.722 | .465 | .779 |
| Q - 25 | 20.21 | 6.237 | .642 | .735 |
| Q - 26 | 20.55 | 6.527 | .467 | .781 |
| Q - 27 | 20.21 | 7.070 | .478 | .774 |
| Q - 33 | 20.02 | 6.402 | .633 | .738 |
| Q - 34 | 20.19 | 6.587 | .598 | .747 |