

Evaluating the level of meeting working requirements of graduated accounting student by using Important-Performance Analysis (IPA)

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Abstract: This paper focuses on a study of the level of working-satisfaction of graduated accounting students required by the employers. In this study, we used Important-Performance Analysis (IPA) methodology to measure the importance of the accountants' competences and ability to meet the working-requirements from a manager's perspective. Based on previous studies, these necessary competences are divided into three main groups: knowledge, skills and ethical attitudes. Questionnaires have been designed on the basis of a 5-point Linkert scale to evaluate the importance and the satisfaction of businesses with their accountants based on these competences. the research team applied IPA to the survey results in order to analyse which competences need to improve based on 4 main areas: concentrate here; keep up the good work; low priority and possible overkill. The competences in the area concerned do not meet the the employers' requirements and Vietnamese Universities should allocate resources to improve these competences.

Keywords: accountant competences, accounting education, Important-Performance Analysis.

Introduction

An ACCA Education Forum was held in Vietnam in 2010 by the Ministry of Education and Training in collaboration with the Association of Chartered Certified Accountants (United Kingdom) under the theme "Working effectively to improve the quality of human resources in finance and accounting meeting the requirements of a digital society". Many delegates and experts attending the forum stated that the quality of personnel in the field of accounting is very low. Accountants have graduated from accounting courses, but most of their competences do not meet the requirements of their job because of a lack of the necessary knowledge and skills, for example, consolidated accounting, management accounting, international accounting standards. Many businesses expressed their concern about the quality of graduated accounting students. They said that students achieve plenty of knowledge but they lack the real-world knowledge needed for their future career. Their personal and social skills are very limited and do not meet the requirements of the labour market.

The above problems show that there is a huge gap between teaching in Vietnamese universities and the requirements of the human resource market. Vietnamese universities have not paid attention to society's needs, they are providing education services by "what they have" but they are not based on "what society needs".

Nowadays, students who have graduated from Vietnam universities do not keep up with the demands of the economy and society. From that point of view, Vietnamese universities need to know what society needs for their teaching and training. Graduates' knowledge and skills which are required by employers are what Vietnamese universities need to know exactly when they design and apply their courses to coach their students to meet the needs of the economy and society both at present and in the future.

Necessary competences for accountants

On the basis of previous research, we have systematized the the necessary competences for an accounting career in many countries around the world. We have studied papers published by organizations such as the American Institute of Certified Public Accountants (AICPA), the American Accounting Association (AAA), the Association of Chartered Certified Accountants (ACCA), the Canadian Institute of Chartered Accountants (CICA), The South African Institute of Chartered Accountants (SAICA), the Japanese Institute of Certified Public Accountants (JICPA), the Association of Certified Public Accountants of Australia (CPA Australia), the

international Federation of accountants (IFAC) as well as international research about the knowledge and skills required to be a professional accountant. In addition, we have also conducted focus group discussions and in-depth interviews with experts in the field of accounting. Based on this qualitative study, the research team has developed the modified necessary competences frameworks for accountants:

Table 1: The modified necessary competences frameworks for Vietnamese accountants

Accounting knowledge	Personal and Social skills	Attitudes and Behaviours
Financial Accounting	Information Systems	Integrity
Managerial Accounting	Foreign Languages	Objectivity
Taxation	(English)	Independence
Auditing	Calculations	Information confidence
Financial and Financial	Group work	Conservative
Management	Communication	Professional behaviour
Laws	Problem solving/Decision	Discipline
Business and Management	making	Diligence
	Negotiation	Dynamic
	Analytical skills and critical	Progressive/Learning
	thinking	Responsibility
	Leadership	
	Time management	
	Relationship management	

(Duc et al, 2015)

Important-Performance Analysis (IPA) methodology

The IPA is a market research method, involving the analysis of customer attitudes toward a product or service. IPA has been widely used in marketing research and many different services such as automobile, food, housing, health care, hospitality, tourism, public services (such as e-government mail) and tertiary education (Sethna, 1982; Hawes & Rao, 1985; Cunningham & Gaeth, 1989; Dolinsky, 1991; Martilla & James, 1977; Alexitch et al., 2004; Go & Zhang, 2008; Silva & Fernandes, 2010). [1] IPA has proven to be an efficient analytical tool to implement and it has been used in many different fields by researchers and managers. IPA is a tool to promote the development of effective marketing programs, because it helps to interpret the meaning of data and enhance the usefulness of strategic decisions (Silva & Fernandes, 2010). [2]

The IPA methodology can be conducted through a 2-axes diagram (Figure 1). One axis of the diagram shows importance and the other axis represents the level of characteristics/attributes of the product/service performances. The two axes of the IPA diagram made up of four regions corresponding to the characteristics of each region are as follows:

Region I (high level of importance/ low level of performance) was named “Concentrate here”. The attributes/characteristics located in this region should be improved with the highest priority.

Region II (high level of importance / high level of performance) was named “Keep up the Good work”. The attributes/characteristics located in this area are critical. So, they need to be maintained and promoted by the organization.

Region III (low level of importance / low level of performance) was named “Low Priority”. The attributes/characteristics located in the area are said to be unimportant and expression levels of the organization are not good. These attributes are not important and should not affect

the organization and the organization does not need to improve the level of performance attributes.

Region IV (low level of importance /high level of performance) was named “Possible overkill”. The properties falling into this area are done to the necessary extent, while they are less important. Therefore, organizations need to reduce resources to the implementation of the properties in this area and should allocate more resources to the properties in Region I.



Figure 1: IPA Diagram(Martilla & James, 1977)

Data collection and methodology

Data collection

Data collection methods used for the quantitative analysis in the study was technical investigation by an online questionnaire (web-based survey). It is based on the adjustment capacity frame from previous qualitative research, questionnaire design. The questionnaire consists of five sections as follows.

The first part (Part I) of the questionnaire includes questions on the necessary level of knowledge and skills each. Interviewees were asked to evaluate the necessity of each knowledge and skills in the form of Likert scale with 5 levels as follows:

- 1: Completely unnecessary
- 2: Not necessary
- 3: Relatively necessary
- 4: Necessary / Pretty needed
- 5: Very necessary

The second part (Part II) of the questionnaire includes questions about the assessment of the degree to meet the demands on graduates' knowledge and skills in accounting in 5 levels as follows:

- 1: Absolutely not meet
- 2: Not met
- 3: The response is inadequate
- 4: The response is (fairly)
- 5: Fully meet

+ Objects and object investigation

Information about job placement of alumni graduated in accounting from the School of Economics - Hue University shows graduates in accounting practice in diverse fields and industries such as: accountant / chief accountant of an enterprise in all the sectors (industrial production, trade, services), accountant / chief accountant of administrative units, career; accountant / chief accountant in banking and credit institutions, auditors in companies providing accounting services, audit. Perhaps this is also true of the work situation of graduates in accounting at other universities across the country.

To collect the information from the sample mean, and to reflect the characteristics of the overall survey sample, the following were selected - accountants, chief accountants, and managers of businesses from many different industries; auditors and managers of audit firms; accountants, chief accountants of administrative units, and accountants and managers of banks and credit institutions.

+ Enumeration

To ensure representation (at a certain level) for the overall, EA being distributed in some provinces and cities in the country such as Thua Thien Hue, Da Nang, Quang Tri, Quang Binh, Ho Chi Minh city, Hanoi and some provinces/cities.

+ Sample size

In order to make more precise conclusions from the investigation, the sample size is determined by the following formula:

Inside:

Z: is the value of Z score distribution corresponding to the selected reliability,

p: the estimated overall percentage

e: sampling error is allowed

In this study, reliability was chosen as 95% (corresponding to the significance level of 5%), the value Z is determined to be 1.96. P-values are usually chosen based on the experience of previous studies. In case a p-value cannot be determined, it is often chosen by 0.5. (Or 50%). That allows for a sampling error to be chosen as e = 5%. Thus, the sample size would be:

$$n = \frac{Z^2 \cdot p(1-p)}{e^2} = \frac{(1.96)^2 \cdot 0,5 \cdot 0,5}{(0,05)^2} = 385$$

In addition to using the frequency, descriptive statistics, charts, and graphs to present the results aggregated summary data collected, researchers used the method "Analysis of importance - implementation level" (IPA) and other techniques such as statistic tests - Wilcoxon rank test and seal, Kruskal Wallis H test to analyze the data and draw conclusions based on the study. Then, using a technical analysis to indicate the extent of IPA responsiveness of workers in the field of accounting.

Results

The importance of knowledge and skills for accountants

The survey results presented in Table 1 show that knowledge in Financial Accounting, Tax Accounting, Management Accounting, and Law of those who are interviewed is considered to be the most important expertise block of accounting practice.

Table 1: Assessing the statistics of required knowledge

Knowledge	Sample size	Min	Max	Medium	Median	Standard deviation
Financial Accounting	206	3,00	5,00	4,185	4,143	0,383
Taxation accounting	206	2,80	5,00	4,156	4,200	0,429
Managerial Accounting	206	2,67	5,00	4,118	4,111	0,414
Law	206	2,50	5,00	3,994	4,000	0,454
Financial and Financial Management	206	1,89	5,00	3,552	3,667	0,672
Business and Management	206	1,86	5,00	3,481	3,429	0,669

Auditing	206	1,17	5,00	2,211	2,000	0,851
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The survey of the level of required personal and social skills of accounting graduates are summarized and presented in Table 2. Those interviewed said that these skills are needed, with the two groups of evaluation for this skill in less than 4 points on a scale of 5.

Table 2: Assessing the statistics of required skills

Skills	Sample size	Min	Max	Medium	Median	Standard deviation
Personal skills	206	2,70	5,00	4,112	4,100	0,460
Social skills	206	2,00	5,00	3,969	4,000	0,613

Compliance with professional ethics and good behavior at work plays an important role for individual accounting practice, for organizations, and society. Those respondents attach great importance to professional ethics as a highly necessary level of criteria, with an average assessment level rated on a scale of 4.5 points from a total of 5. In addition, they also said that personal attitudes (such as diligence at work, sense of organization and discipline and a sense of responsibility) are also important for workers and the point of evaluation criteria is nearly 4.4 / 5 points.

Table 3: The need of criteria Ethics and Attitudes

Criteria	Sample size	Min	Max	Medium	Median	Standard deviation
Ethics	206	2,83	5,00	4,508	4,667	0,467
Attitudes	206	2,20	5,00	4,388	4,000	0,548

The importance and the performance of those required competencies of graduated accounting students

The statistics in Table 4 show that respondents who are rated highly do not meet the level of work required for a graduated accounting student, with the points they rated them below 3 on a scale of 5 points for all groups of professional knowledge of accounting.

Table 4: The level of knowledge to meet the requirements

(According to the type of knowledge)

	Important (I)	Performance (P)	(P – I)
Knowledge	Medium	Medium	Medium
Financial Accounting	4,185	2,899	-1,286
Taxation	4,156	2,887	-1,269
Managerial Accounting	4,118	2,819	-1,299
Auditing	4,100	2,760	-1,340
Law	3,994	2,941	-1,053
Financial and Financial Management	3,552	2,612	-0,940
Business and Management	3,481	2,853	-0,628

Group social skills (such as communication, teamwork, negotiation, relationship management) of graduates are inferior when assessed from the point of employers about the level of performance of engineering groups this feature is only 2,752 students / 5 points, reaching fewer

than 70% ($= 2.752 / 3.969$) compared with the requirement of the need of this knowledge to the requirements of the job. The gap between the implementation and importance (P - I) of this skill is very large, up to -1.217, equivalent to nearly 31%. In summary, the graduates not meet the requirements expected by the employer.

Table 5: The level of skills to meet the requirements
(On personal and social skills)

Skills	Important (I)	Performance (P)	(P - I)
	Medium	Medium	Medium
Personal skills	4,112	3,189	-0,923
Social skills	3,969	2,752	-1,217

The statistics in Table 6 shows the level of work to meet the requirements of the graduates with respect to the criteria Ethics and Attitudes which are low.

Table 6: The level of Ethics and Attitudes to meet the requirements

Criteria	Important (I)	Performance (P)	(P - I)
	Medium	Medium	Medium
Ethics	4,508	3,851	-0,657
Attitudes	4,388	2,938	-1,450

IPA Chart

From the analysis of importance and the level of implementation of the knowledge, skills, ethics and attitudes, we have evaluated and summarized in Table 7:

Table 7: The evaluation of all the knowledge, skills, ethics and attitudes

Criteria	Medium of Important (I)	Rank of Important	Medium of Performance (P)	Rank of Performance
Ethics – ETHIC	4,508	1	3,851	1
Attitudes- ATTIT	4,388	2	2,938	4
Financial Accounting – FI-AC	4,185	3	2,899	5
Taxation - TA-AC	4,156	4	2,887	6
Managerial Accounting - MA-AC	4,118	5	2,819	8
Personal Skills – PERSONAL	4,112	6	3,189	2
Audit – AUDIT	4,110	7	2,760	9
Law – LAW	3,994	8	2,941	3
Social Skills – SOCIAL	3,969	9	2,752	10
Financial and Financial Management – FINANCE	3,552	10	2,612	11
Business and Management – BU-MA	3,481	11	2,853	7
Medium	4,052		2,955	

The IPA Chart in Figure 1 is a very useful tool in evaluating the aggregate level of implementation of the knowledge, skills, and attitudes placed in relationship system compared to the importance of these criteria, thereby helping those who are interested (as educators) to

identify appropriate strategies for the rational allocation of resources to achieve the goal. An axis (vertical axis) of the IPA diagram showing the importance and the remaining axis (horizontal axis) represents the level of implementation. Coordinates of the intersection of the two axes of the IPA diagram are determined by the average score of importance (4.052) and the average score of implementation (2,955).

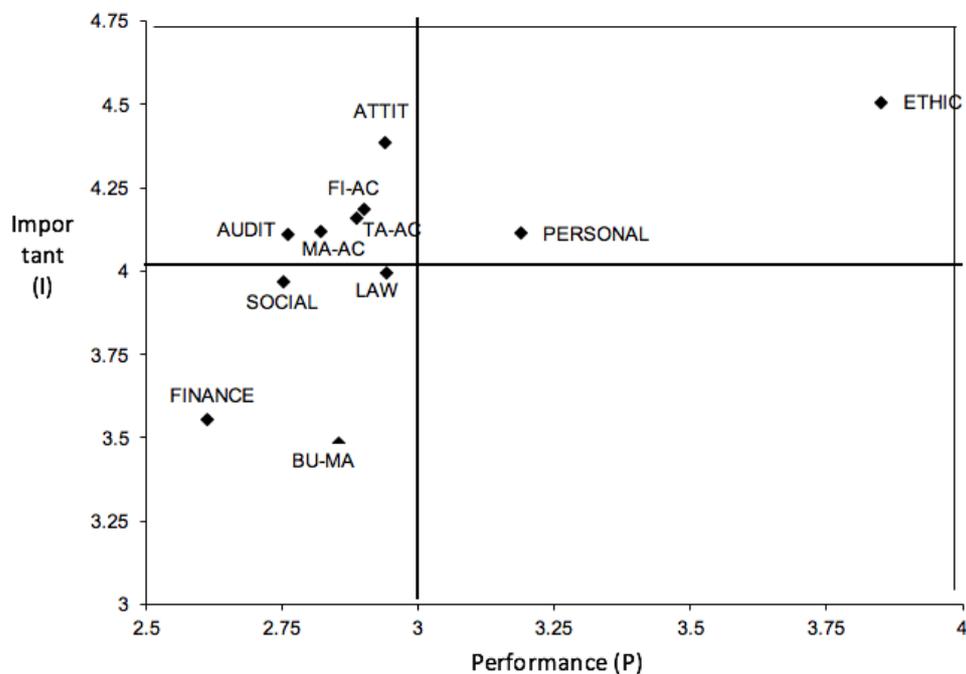


Figure 1. Importance – Performance Chart

From the IPA diagram, Figure 1, we identified five criteria, which are said to have a high level of importance, but the level of performance of graduates is lower than the average, that is: personal attitude, knowledge of financial accounting, management accounting knowledge, knowledge of tax accounting and audit knowledge. This means that the level of implementation of the graduates does not meet the requirements. These criteria need to be improved on the level of implementation. There are two criteria according to which the professional ethics and personal skill level are quite good and they should be maintained.

Conclusion

The analysis and the assessment of the level of necessary knowledge and skills of each of the accounting professions through which we ranked the limit of the relative importance of each type of knowledge and skills in groups.

By identifying and assessing the extent to meet the requirements of the work on the knowledge and skills of university graduates in accounting at the start of participation in the labor market; we can measure the “distance” between the “importance” and “implementation” of graduates for each group of knowledge, skills.

We also recommend some orientations and policy suggestions for the Vietnamese universities in to change accounting training strategy towards developing the skills of students as required by the market. The recommendations of the authors focus on the implementing a curriculum reform, a reform of teaching methods assessment methods, clear positioning and training activities associated with the business community.

In order to meet the requirements of the labour market in the field of accounting, accounting training activities at universities in Vietnam need to change their direction and not only provide pure knowledge on which to build expertise and training to students’ personal skills, social

skills and moral qualities necessary for students to be able to adapt quickly to the labour market and to achieve career success after graduation.

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