ORACLE
ADDEDVALUE

Survey on Opinions of Employers on Major Aspects of Performance of Sub-degree Graduates in Year 2006

Executive Summary
Date: Apr 2010

1.   Introduction and Survey Methodology

1.1   Background

In 2003, Education and Manpower Bureau[1] conducted employer survey on publicly-funded sub-degree graduates to ascertain employers' opinion towards performance of publicly-funded sub-degree graduates.   The survey covered full-time publicly-funded sub-degree graduates of the City University of Hong Kong, the Hong Kong Polytechnic University, the Vocational Training Council and the Hong Kong Institute of Education.   Findings of the Survey have provided insight into the quality of our graduates at work, and have helped both the Government and the tertiary institutions to better understand the employers' needs.

In the last few years, the landscape of Hong Kong's post-secondary education sector has undergone substantial changes resulting not only in a significant increase in self-financing sub-degree education opportunities but also a wider choice of progressive pathways for the secondary school leavers.   In 2006, around half of sub-degree graduates are from the self-financing sector.   To ascertain employers' opinion on performance of sub-degree graduates in general, the present Survey was commissioned to cover both publicly-funded and self-financed sub-degree graduates of 2006.

1.2   Study Objectives

The objective of the survey is to obtain the opinions of employers on major aspects of performance of 2006 full-time sub-degree graduates in the work place, with regard to 9 major aspects of performance, i.e.

    a.   Chinese Language Proficiency;

    b.   English Language Proficiency;

    c.   Numerical Competency;

    d.   Information Technology Literacy;

    e.   Analytical and Problem-solving Abilities;

    f.   Work Attitude;

    g.   Inter-personal Skills;

    h.   Management Skills; and

    i.   Technical Skills Required for the Job.

The study also looks into graduates' competency in knowledge aspects, as well as collecting employers' suggestions to institutions on ways to improving the quality of graduates.

---

[1] The Education and Manpower Bureau has been re-organized as Education Bureau since 1 July 2007.

1.3   Coverage

Target companies/organizations are those that have employed the 2005/2006 full-time sub-degree graduates of the following 18 institutions as at December 2006:

a. City University of Hong Kong, proper and Community College of City University

b. The Hong Kong Institute of Education, proper and School of Continuing and Professional Education

c. The Hong Kong Polytechnic University, proper and Hong Kong Community College

d. Hong Kong Institute of Vocational Education (IVE), VTC/VTC School of Business and Information Systems

e. Caritas Bianchi College of Careers

f.   Caritas Francis Hsu College

g. Chu Hai College of Higher Education

h. Hang Seng School of Commerce

i.   Hong Kong Art School

j.   Po Leung Kuk Community College of Hong Kong

k. Hong Kong College of Technology

l.   Hong Kong Institute of Technology

m. Hong Kong Shue Yan University

n. Lingnan University, The Community College at Lingnan University

o. Hong Kong Baptist University, College of International Education

p. The Chinese University of Hong Kong,
     School of Continuing and Professional Studies

q. The Open University of Hong Kong

r.   The University of Hong Kong, School of Professional and Continuing Education (HKU SPACE)

The target respondents of the survey are the immediate supervisors of the graduates or staff at senior level who have knowledge of the performance of the graduates.

1.4   Sampling Frame

According to the information from the Graduate Employment Survey conducted by individual institutions in end-2006, 6,939 graduates were identified to be working on a full-time basis. The remaining respondents (who might be working on a part-time basis or pursuing further studies) were considered irrelevant to this Survey.

Among the 6,939 graduates, 1,737 failed to provide sufficient information about their employers, and were excluded from the survey. As a result, the present survey covered 5,202 graduates working on a full-time basis as at December 2006.

Among the 5,202 working graduates, 336 were employed by the Government. The EDB has provided a list of bureaux/departments which employed these graduates. The remaining 4,866 graduates were working full-time in companies/organizations in the non-Government sector. They provided employment details (e.g. employer's name, employment sector and employment size) to this Survey. Records of these graduates were used as the sampling frame.

1.5   Sample Design and Allocation

All graduates (336) employed by the Government were enumerated.

In the non-Government sector, all the companies/organizations which employed 2 or more graduates were invited to participate in the survey.   For companies/organizations employing only 1 graduate, they were listed in order of industry, and within industry, by employment size, and 70% of them were selected for the survey, using a systematic random sampling method.

However, to minimize respondents' reporting burden, companies/organizations employing 2 or more graduates were asked to provide assessment for a proportion of the graduates as follows:

No. of sub-degree graduates employed by each company/organization	% of graduates to be sampled within each company/organization
2 – 99	50%
100 or above	40%

1.6   Sample Size

According to the sampling procedure, a total of 3,319 sub-degree graduates of year 2006 were included in the study, with 336 in the Government sector and 2,983 in the non-Government sector.

1.7   Data Collection Method

Data were collected by means of a self-administered questionnaire.   Telephone calls were made to the Government bureaux/departments and the sampled companies/organizations to explain the purpose of the survey and to identify a contact person to co-ordinate the survey. These contact persons were usually the Personnel Managers or Human Resources Managers.

Copies of the questionnaires, together with a letter from the Permanent Secretary for Education and a general guideline for completing the questionnaire, were sent to the contact persons on 9 July, 2008.   A copy of survey documents sent to the contact persons is at Appendix I.   For companies/organizations employing more than 1 graduate, they were requested to select graduates randomly for assessment by following the rules given in the general guideline and distribute the questionnaires to the immediate supervisors of the sampled graduates.   These immediate supervisors were requested to complete and return

the questionnaire using the pre-paid self-addressed envelope.   Alternatively, the respondents could fax the questionnaires to a dedicated number.   Telephone follow-up calls and field visits were made to contact persons/immediate supervisors who did not return the questionnaires.

1.8   Response Rate

By April 2009, 961 questionnaires were received, representing a response rate of 54% (which was compiled by excluding 1,536 invalid cases in most of which the companies/organizations reported that they had not employed any 2006 graduates as at December 2006 or that the no. of graduates employed is less than the record).

1.9   Questionnaire Design

The survey covered 9 aspects of performance, i.e. (A) Chinese Language Proficiency; (B) English Language Proficiency; (C) Numerical Competency; (D) Information Technology Literacy; (E) Analytical and Problem-solving Abilities; (F) Work Attitude; (G) Inter-personal Skills; (H) Management Skills; (I) Technical Skills Required for the Job.   These aspects were carefully chosen with reference to available survey reports and research papers on the subject. Each aspect was measured by a number of attributes, and a total of 45 attributes were included for measuring the 9 aspects of performance.

For each attribute, respondents were requested to give (i) their assessment on the performance of the sampled graduates and (ii) their views on the importance of the attributes for the post held by the sampled graduates.   Their assessments were indicated by a score on a 5-point scale as follows:

Score	Performance	Importance
5	Always exceeds the employers' required standard	Very important
4	Sometimes exceeds the employers' required standard	Quite important
3	Generally meets the employers' required standard	Average
2	Sometimes fails to meet the employers' required standard	Not quite important
1	Always fails to meet the employers' required standard	Not important at all

The overall performance score or the performance score for each aspect was taken as the weighted average of the performance scores of its constituent attributes, with the respective importance scores taken as the weights. Appendix II shows the details of estimation method.

Apart from performance, the questionnaire also assessed graduates' competency in knowledge aspects, covered by 9 attributes.

Regarding improvement areas for the graduates, respondents were asked to express how much they agreed on 7 pre-identified improvement measures, as well as providing their own suggestions for institutions to improve the quality of students.

1.10   Pilot Test

Before starting the main fieldwork of the survey, a pilot test was carried out to test the questionnaire and survey arrangement. It covered 31 graduates selected among those not sampled for the main survey. Based on the results of the pilot test, some minor modifications to the survey arrangements were made but no change to the questionnaire was required.

1.11   Estimation Method

Of the 961 returned questionnaires, 234 were from the Government sector and 727 from the non-Government sector. The data in these questionnaires were weighted according to the actual number of 2006 sub-degree graduates employed in full-time basis in 2006 by the companies/organizations.

1.12   Quality Control Measures

Measures were taken to ensure that the survey results were of high quality. These included proper training of interviewers responsible for telephone follow-up calls and field visits, monitoring of process, editing of the returned questionnaires and validation of the collected data by fieldwork supervisors.

1.13   Cautionary Remarks

Readers should not compare the results of present Survey with the employer survey on publicly-funded sub-degree graduates conducted in 2003.   The coverage of the 2 surveys are different: present Survey covers publicly-funded and self-financing sub-degree graduates of 18 institutions, while the 2003 survey only covers publicly-funded sub-degree graduates from 4 institutions.   Hence, any direct comparisons on performance scores recorded by the 2 surveys are inappropriate.

Readers are advised to take caution in interpreting subgroup of the findings based on small number of observations (less than 50).   These sub-group findings are subject to relatively larger sampling error.   Such sub-groups are highlighted throughout the report.

1.14   Reliability of the Estimates

Results of the survey are subject to sampling error and non-sampling error.   The estimates in this report are based on information obtained from a particular sample, which is one of the numerous possible samples that could be drawn by using the same sample design.   By chance, estimates derived from different samples would differ from each other.   The 'sampling error' is a measure of these variations and also a measure of the precision with which an estimate derived from a particular sample would be applied to infer the population parameter that need to be measured.

It should be noted that since all estimates contained in this report are subject to sampling error, a zero figure may mean a non-zero figure of a small number of observations.

For comparing the precision of the estimates of various variables contained in this report, the coefficient of variation (CV) can be used.   The CV of the estimates of the main variable contained in this report is given below :

Variable	Estimate	CV %
Performance score	3.41	0.6
Chinese Language Proficiency	3.58	0.6
English Language Proficiency	3.11	0.7
Numerical Competency	3.47	0.7
Information Technology Literacy	3.66	0.7
Analytical and Problem-Solving Abilities	3.20	0.7
Work Attitude	3.54	0.7
Inter-personal Skills	3.50	0.7
Management Skills	3.14	0.8
Technical Skills Required for the Job	3.31	0.7

2.   Summary of Key Findings

2.1   Overall Performance

The overall performance of the 2006 sub-degree graduates as assessed by the employers was quite satisfactory, with a score of 3.41, which was between "generally meeting employers' required standard" and "sometimes exceeding the employers' required standard". In particular, 14% of the graduates received a rating above 4, implying that their performance was between "sometimes" and "always" exceeding employers' required standard. On the other hand, only 1% of the graduates received a rating of 2 or below, implying that very few of them failed to meet employers' required standard. (Table 2.1)

Table 2.1 – Overall Performance Scores and Performance Scores of the 9 Aspects

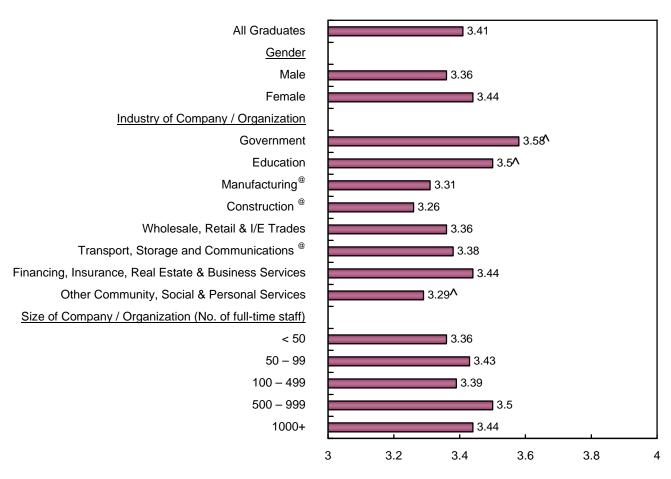|	Aspect	Performance score	Distribution of performance score					
			5 – 4.01 %	4 – 3.01 %	3 – 2.01 %	2 – 1.01 %	1 %	Not applicable %
	OVERALL	**3.41**	**14**	**63**	**22**	**1**	**-**	*****
A	Chinese Language Proficiency	3.58	19	55	25	1	-	1
B	English Language Proficiency	3.11	2	24	56	11	1	6
C	Numerical Competency	3.47	8	40	43	4	1	5
D	Information Technology Literacy	3.66	17	52	26	2	*	2
E	Analytical and Problem-Solving Abilities	3.20	9	44	42	5	*	*
F	Work Attitude	3.54	21	49	25	4	*	*
G	Inter-personal Skills	3.50	16	53	27	5	-	*
H	Management Skills	3.14	8	33	43	7	1	7
I	Technical Skills Required for the Job	3.31	7	42	43	3	-	5

Notes: (i)   * : Less than 0.5%

(ii)   Percentages may not add up to 100% due to rounding

Generally speaking, the overall performance of female graduates (3.44) and male graduates (3.36) were similar. In terms of industry, graduates working in the Government sector (3.58) and Education sector (3.50) received the highest performance score, while graduates from the Other Community, Social and Personal Services sector (3.29) received score lower than average. Regarding the size of companies/organizations, the overall performance of graduates working in larger (500-999 staff) companies/organizations had the highest score of 3.50. (Figure 2.1)

Analyses of Overall Performance Score (Figure 2.1)

Notes: (i) @ : Small no. of observations (less than 50)

(ii) ^ : Significantly different (at 95% confidence level) from the figure of all graduates

2.2   Satisfaction with the Overall Performance

58% of the employers were satisfied with the overall performance of 2006 graduates.

Table 2.2 – Satisfaction with Overall Performance of Graduates

Overall Performance	2006 Graduates
	%
Very Satisfied	11
Quite Satisfied	47
Average	33
Quite Dissatisfied	7
Very Dissatisfied	1
Total	100

2.3   Assessment of Graduates' Performance in 9 Aspects

The performance score in respect of each of the 9 major aspects and the corresponding importance score are presented in Table 2.3.
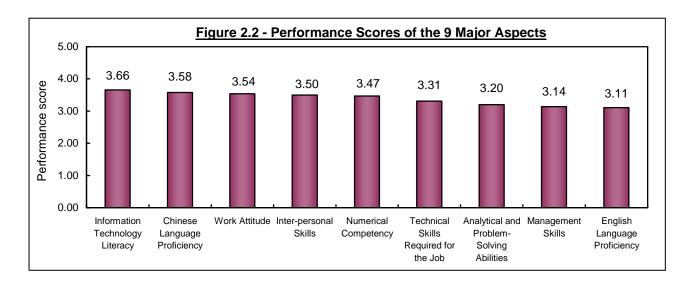
Table 2.3 – Performance and Importance Scores of the 9 Aspects

Aspect	Performance score	Importance score
A Chinese Language Proficiency	3.58	3.98
B English Language Proficiency	3.11	3.81
C Numerical Competency	3.47	3.88
D Information Technology Literacy	3.66	3.87
E Analytical and Problem-Solving Abilities	3.20	3.90
F Work Attitude	3.54	4.24
G Inter-personal Skills	3.50	4.11
H Management Skills	3.14	3.75
I Technical Skills Required for the Job	3.31	3.87

The performance scores of the 9 major aspects were all above 3, implying that the graduates were able to perform better than "generally meeting employers' required standard".   However, graduates' performance varied among different aspects, with the lowest score of 3.11 for English Language Proficiency and the highest score of 3.66 for Information Technology Literacy.   Figure 2.2 shows the performance scores of the 9 major aspects in descending order.
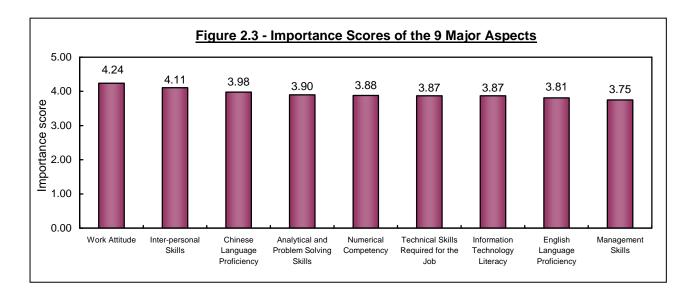
Figure 2.2 - Performance Scores of the 9 Major Aspects

Performance score

Information Technology Literacy	Chinese Language Proficiency	Work Attitude	Inter-personal Skills	Numerical Competency	Technical Skills Required for the Job	Analytical and Problem-Solving Abilities	Management Skills	English Language Proficiency
3.66	3.58	3.54	3.50	3.47	3.31	3.20	3.14	3.11

2.4   Assessment of Importance of the 9 Aspects

Regarding the importance of these aspects, employers generally perceived all aspects were of above average importance, with Management Skills receiving the lowest score of 3.75 and Work Attitude having the highest score of 4.24.   Figure 2.3 shows the important scores of the 9 major aspects in descending order.

Figure 2.3 - Importance Scores of the 9 Major Aspects

Importance score

Work Attitude	Inter-personal Skills	Chinese Language Proficiency	Analytical and Problem Solving Skills	Numerical Competency	Technical Skills Required for the Job	Information Technology Literacy	English Language Proficiency	Management Skills
4.24	4.11	3.98	3.90	3.88	3.87	3.87	3.81	3.75

2.5   Detailed Analysis of Individual Aspects

A. Chinese Language Proficiency

This aspect had an importance score of 3.98, the third highest among the nine aspects.   The performance score of graduates was 3.58, the second highest on the list, with 19% of graduates receiving a rating above 4 and 1% of graduates received a rating of 2 or below.

B. English Language Proficiency

This aspect had an importance score of 3.81, the second least important among the 9 aspects. The performance score was 3.11, the lowest among the 9 areas, with 2% of graduates receiving a rating above 4 and 12% of graduates received a rating of 2 or below.

C. Numerical Competency

This aspect had an importance score of 3.88. The performance score was 3.47, with 8% of graduates receiving a rating above 4 and 5% of graduates received a rating of 2 or below.

D. Information Technology Literacy

This aspect had an importance score of 3.87.   The performance score was 3.66, with 17% of graduates receiving a rating above 4 and only 2% of graduates received a rating of 2 or below.

E. Analytical and Problem-solving Abilities

This aspect had an importance score of 3.90.   The performance score was 3.20, the third lowest among the 9 areas, with 9% of graduates receiving a rating above 4 and 5% of graduates received a rating of 2 or below.

F. Work Attitude

This aspect received the highest importance score of 4.24.   The performance score was 3.54, ranked third highest on the list, with 21% of graduates receiving a rating above 4 and 4% of graduates received a rating of 2 or below.

G. Inter-personal Skills

This aspect received the second highest importance score of 4.11.   The performance score was 3.50, with 16% of graduates receiving a rating above 4 and 5% of graduates received a rating of 2 or below.

H. Management Skills

This aspect had an importance score of 3.75, the least important among the 9 aspects.   The performance score was 3.14, the second lowest among the 9 aspects, with 8% of graduates receiving a rating above 4 and 8% of graduates received a rating of 2 or below.

I.   Technical Skills Required for the Job

This aspect had an importance score of 3.87.   The performance score was 3.31, with 7% of graduates receiving a rating above 4 and 3% of graduates received a rating of 2 or below.

2.6　Assessment of Graduates' Performance in the 45 Attributes

Table 2.4 shows the importance score and performance score of the graduates in respect of each of the 45 attributes.

Table 2.4 – Performance Score and its Distribution in respect of the 45 Attributes

Attribute	Importance Score	Performance Score	Views of employers on whether the graduates' performance had met their required standard					
			Always exceeds	Some-times exceeds	Generally meets	Some-times fails to meet	Always fails to meet	Not Appli-cable
	Mean	Mean	%	%	%	%	%	%
A. CHINESE LANGUAGE PROFICIENCY	**3.98**	**3.58**						
Expression of ideas in								
1　(i)　Written Chinese	3.79	3.46	8	33	48	4	1	7
2　(ii)　Cantonese	4.22	3.85	19	48	31	1	-	1
3　(iii) Putonghua	3.15	3.03	3	14	40	12	3	28
Comprehension in								
4　(i)　Written Chinese	3.92	3.60	11	40	41	3	*	4
5　(ii)　Cantonese	4.23	3.89	20	50	28	2	-	1
6　(iii) Putonghua	3.19	3.17	3	19	39	11	1	26
B. ENGLISH LANGUAGE PROFICIENCY	**3.81**	**3.11**						
Expression of ideas in								
7　(i)　Written English	3.71	3.12	2	21	56	12	1	8
8　(ii)　Oral English	3.65	3.10	2	19	54	13	1	11
Comprehension in								
9　(i)　Written English	3.74	3.23	3	26	54	9	1	6
10　(ii)　Oral English	3.65	3.15	3	22	53	11	1	10
C. NUMERICAL COMPETENCY	**3.88**	**3.47**						
11　Comprehension of data	3.79	3.50	7	39	43	4	1	5
12　Application of data	3.73	3.43	7	34	45	6	1	7
D. INFORMATION TECHNOLOGY LITERACY	**3.87**	**3.66**						
13　Use of standard computer software	3.93	3.74	13	48	32	3	*	3
14　Adaptability to new software	3.67	3.56	9	40	37	5	1	7
15　Ability to make use of the Internet & Intranet to facilitate work & business	3.73	3.72	13	45	34	3	*	6
16　Locate, gather & organize information using appropriate technology and information systems	3.70	3.63	11	41	37	4	*	7
E. ANALYTICAL AND PROBLEM-SOLVING ABILITIES	**3.90**	**3.20**						
17　Common sense	4.01	3.44	7	37	49	6	1	*
18　Foresight	3.79	3.05	3	20	55	17	2	2
19　Analytical mind	3.92	3.20	4	29	51	14	1	1
20　Problem-solving ability	4.04	3.20	6	26	50	15	2	1
21　Creativity	3.59	3.11	5	20	55	14	2	4
22　Ability to implement solution and act on opportunities for improvement	3.82	3.18	4	26	53	13	2	3
23　Judgment	3.91	3.13	3	25	55	15	1	2

Attribute	Importance Score Mean	Performance Score Mean	Views of employers on whether the graduates' performance had met their required standard					
			Always exceeds %	Some-times exceeds %	Generally meets %	Some-times fails to meet %	Always fails to meet %	Not Appli-cable %
F. WORK ATTITUDE	**4.24**	**3.54**						
24 Sense of responsibility and commitment	4.41	3.68	18	43	28	8	2	*
25 Ability to work independently	4.20	3.54	14	37	39	8	1	1
26 Perseverance	4.24	3.52	13	38	36	11	1	1
27 Initiative and drive	4.21	3.37	11	32	42	13	2	*
28 Receptivity and adaptability to new ideas and environment	4.01	3.44	7	39	45	7	1	1
29 Professional/business ethics	4.30	3.64	16	40	35	5	2	2
G. INTER-PERSONAL SKILLS	**4.11**	**3.50**						
30 Inter-personal relationship	4.14	3.65	13	47	33	6	1	*
31 Team work	4.25	3.70	15	47	31	6	1	*
32 Negotiation and communication skills	4.02	3.36	7	34	46	9	2	2
33 Able to accept and provide feedback in a constructive and considerate manner	4.06	3.43	8	39	43	8	2	1
34 Able to manage and resolve conflict when appropriate	3.91	3.29	7	27	50	11	1	4
H. MANAGEMENT SKILLS	**3.75**	**3.14**						
35 Organization of work	3.81	3.28	6	28	43	12	2	9
36 Management of staff	2.97	3.04	3	11	34	11	1	39
37 Leadership	3.03	2.98	2	11	37	13	2	35
38 Able to motivate team-members	3.22	2.98	3	13	42	14	3	25
39 Management of available resources and ability to seek resources and assistance	3.44	3.20	5	22	44	10	2	17
I. TECHNICAL SKILLS REQUIRED FOR THE JOB	**3.87**	**3.31**						
40 Technical knowledge	3.76	3.33	5	29	49	9	*	8
41 Ability to handle technical demands in work	3.74	3.31	5	27	51	8	*	8
42 Ability to solve technical problems	3.67	3.22	5	23	52	11	1	9
43 Ability to select and use appropriate tools and technology for a task or project	3.61	3.31	5	28	50	8	1	9
44 Able to work to agreed quality standards and specification	3.74	3.30	5	28	50	9	1	7
45 Aware of occupational health and safety practices and procedures, and act in accordance with these	3.65	3.37	5	29	51	5	*	10

Notes: (i)   * : Less than 0.5%

(ii)   Percentages may not add up to 100% due to rounding

All attributes, except Management of Staff, were perceived as important (score greater than 3) for the posts held by the graduates.   In comparison, sense of responsibility and commitment (4.41) was the most important attribute, whereas management of staff was perceived as the least important attribute (2.97).
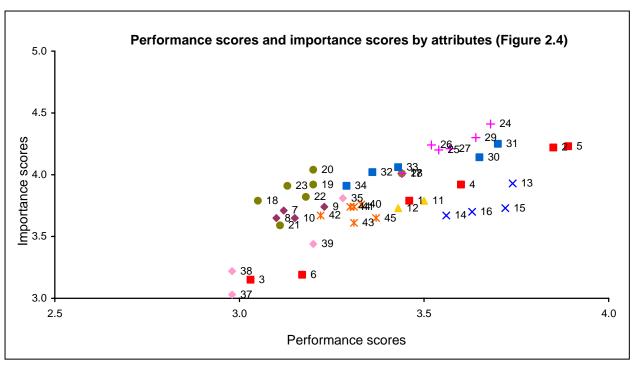
For nearly all the attributes (43 out of 45), the graduates were able to perform better than "generally meeting their employers' required standard".   The 3 attributes with the highest performance score were comprehension in Cantonese (3.89), expression of ideas in Cantonese (3.85) and use of standard computer software (3.74).   The performance of 13% to 20% of the graduates in these 3 attributes were considered as always exceeding their employers' required standard.

On the contrary, only 2 attributes received a rating lower than 3, namely leadership (2.98) and able to motivate team-members (2.98), the performance of 2% to 3% of the graduates were considered as always failing to meet their employers' required standard.

The importance scores and the corresponding performance scores for the 45 attributes were plotted on a two-dimensional graph below.   It can be seen that there was a positive relationship between the two scores.   For attributes considered as relatively more important, the graduates generally received a relatively higher rating in their performance score.

Performance scores and importance scores by attributes (Figure 2.4)

Notes: Numbers in the graph represent attributes listed on Table 2.4.

■	Chinese Language Proficiency
◆	English Language Proficiency
▲	Numerical Competency
✕	Information Technology Literacy
●	Analytical and Problem-Solving Abilities
◆	Management Skills
■	Inter-Personal Skills
+	Work Attitude
✻	Technical Skills Required for the Job

2.7 Graduates' Knowledge on Current Affairs & Business Issues, Self-learning Ability and Self-esteem

Employers' assessments of the 2006 graduates' self-esteem, self-learning ability, knowledge of work and profession were very favourable, with 54%, 52% and 40% of graduates respectively being rated as good or very good.   Knowledge about China trade/economical development seemed to be less relevant to the employers covered in this survey, as 27% of them did not have any comment on this area.   Details are shown in the following table:

Table 2.5 - Graduates' Knowledge on Current Affairs & Business Issues, Self-learning Ability and Self Esteem

	Very Good	Good	Average	Poor	Very Poor	No Comment
	%	%	%	%	%	%
(a) Knowledge of global issues & development	1	15	58	10	*	17
(b) Knowledge of work and profession	3	37	51	6	*	3
(c) Knowledge of current affairs	1	16	57	9	1	17
(d) Knowledge about China trade/economical development	1	8	45	18	2	27
(e) Knowledge about industry or business environment working in	3	20	57	9	1	10
(f) Knowledge of technical developments related to own profession	3	29	54	6	1	7
(g) Self-learning ability	8	44	38	7	*	3
(h) Ability to develop necessary new technical skills required for the job	4	33	47	8	*	7
(k) Self-esteem	6	48	37	3	*	6

Notes: (i)   * : Less than 0.5%
　　　　　 (ii)   Percentages may not add up to 100% due to rounding

2.8 Opinions on Suggested Improvement Measures

Regarding some measures suggested to improve the quality of sub-degree graduates, employers generally indicated support.   Areas that employers most agree with were having assessment test on English, Chinese and communication skills before graduation.   Most respondents also agreed that involving employers on curriculum development and arranging internship programmes would enhance the relevance and quality of sub-degree programmes. (Table 2.6)

Table 2.6 – Opinions on Suggested Improvement Measures

	Improvement Measure	Strongly Agree %	Quite Agree %	Quite Disagree %	Strongly Disagree %	No Comment %
(a)	To pass an assessment test on the following subjects before graduation:					
(i)	Chinese language	38	50	4	-	8
(ii)	English language	44	48	2	-	6
(iii)	Information technology	22	61	7	*	9
(iv)	Interpersonal and Management skill	27	55	8	*	10
(v)	Communication skills	36	50	6	*	8
(b)	Institutions to enhance the relevance and quality of the sub-degree programmes by:					
(i)	Involving employers in curriculum development	9	50	17	1	23
(ii)	Arranging internship programmes in collaboration with companies/organizations for students	12	52	14	1	21

Notes: (i)   * : Less than 0.5%

(ii)   Percentages may not add up to 100% due to rounding

Among those agreeing with the improvement measures of "involving employers in curriculum development" and "arranging internship programmes", 24% and 36% of the employers showed interest respectively in getting involved. (Table 2.7)

Table 2.7 - Involvement in Improvement Measures

	Improvement Measures	Whether willing to be involved		
		Yes %	No %	Don't know/Not sure %
(i)	Involving employers in curriculum development	24	19	57
(ii)	Arranging internship programmes in collaboration with companies/organizations for students	36	15	49

Note: (i)   Percentages may not add up to 100% due to rounding

2.9 Other Suggested Improvements

Of the 961 returned questionnaires, 192 (20%) gave further suggestions for improving the performance of sub-degree graduates. As shown in Table 2.8, 16% of respondents suggested improvements in language abilities, followed by work attitude (14%) and inter-personal and management skills (11%).

Table 2.8 - Other Suggested Improvement

Major aspect	% of returned questionnaires with comments #
Language abilities	16%
Work attitude	14%
Inter-personal and management skills	11%
Technical skills	6%
Numerical and information technology literacy	4%
Others	3%

Note: (i) # : The number of returned questionnaires with comments as a percentage of the total number of returned questionnaires (i.e. 961)

Respondents are concerned with graduates' ability on writing and oral communication in English. Besides, respondents suggested graduates should have more practice on writing letters and proposals.

On Work Attitude, some respondents said that the graduates should improve on their willingness to bear responsibilities, taking more initiative and enhance their problem solving skills. In addition, graduates should have positive thinking and show improvement in punctuality and office manner.

Regarding inter-personal and management skills, respondents recommended that graduates should learn to be all-rounded in communicating with others through involving more in team work and group projects. Some also commented that graduates should be more open to criticisms and open to seek advice from colleagues to improve own weaknesses.

Apart from the above specific aspects, some respondents also pointed out that there was room for improvement in other areas like independent thinking, common sense, and creativity. It was also suggested that attachments to training programmes in large companies/organizations should be arranged for graduates so that they can gain work experience.

APPENDICES

Appendix I – Survey Documents

Education Bureau
The Government of the Hong Kong Special Administrative Region

Serial Number: ☐ ☐ ☐ ☐ ☐

SURVEY ON OPINIONS OF EMPLOYERS ON MAJOR ASPECTS OF PERFORMANCE OF SUB-DEGREE[*] GRADUATES IN 2006

– Questionnaire –

Part I **To be completed by the coordinator of this survey in your company**

(A)   Please provide information about the SAMPLED GRADUATE to whom this questionnaire refers:

Sex (Please tick) :   ☐$_1$ Male   ☐$_2$ Female

Whether still working in company now (Please tick) :

☐$_1$ Yes   ☐$_2$ No

If no, please specify the length of service in company :

☐$_1$ Less than 3 months   ☐$_2$ 3 months or more

Present position in company or position before leaving company : _____

Whether a sub-degree is the minimum qualification required for the position (Please tick):

☐$_1$ Yes   ☐$_2$ No

Type of sub-degree the SAMPLED GRADUATE has taken:

☐$_1$ Associate Degree   ☐$_2$ Higher Diploma

☐$_3$ Professional Diploma   ☐$_4$ Honours Diploma

☐$_5$ The Certificate of the Hong Kong Institute of Education

---

*   Sub-degree includes Associate Degree, Higher Diploma, Professional Diploma, Honours Diploma as well as the certificate of the Hong Kong Institute of Education.

SD   1

Institution from which he/ she graduated (Please tick):

☐₁	City University of Hong Kong	☐₁₃	City University of Hong Kong, Community College of City University
☐₂	The Hong Kong Institute of Education	☐₁₄	The Hong Kong Institution of Education, School of Continuing and Professional Education
☐₃	The Hong Kong Polytechnic University	☐₁₅	The Hong Kong Polytechnic University, Hong Kong Community College
☐₄	Vocational Training Council	☐₁₆	Vocational Training Council - Hong Kong Institute of Vocational Education
☐₅	Caritas Bianchi College of Careers	☐₁₇	Vocational Training Council - School of Business and Information Systems
☐₆	Caritas Francis Hsu College	☐₁₈	Hong Kong Shue Yan University (formerly known as Hong Kong Shue Yan College)
☐₇	Chu Hai College of Higher Education	☐₁₉	Lingnan University, The Community College at Lingnan University
☐₈	Hang Seng School of Commerce	☐₂₀	Hong Kong Baptist University, College of International Education
☐₉	Hong Kong Art School	☐₂₁	The Chinese University of Hong Kong, School of Continuing and Professional Studies
☐₁₀	Po Leung Kuk Community College of Hong Kong	☐₂₂	The Open University of Hong Kong
☐₁₁	Hong Kong College of Technology	☐₂₃	The University of Hong Kong, School of Professional and Continuing Education (HKU SPACE)
☐₁₂	Hong Kong Institute of Technology		

(B) Please provide information about the IMMEDIATE SUPERVISOR of the sampled graduate who will be requested to answer Part II of this questionnaire:

Name: _____

Position in company: _____

Contact telephone number: _____

E-mail address: _____

Part II **To be completed by the immediate supervisor of the sampled graduate.**

1. Please provide your assessment on the performance of the SAMPLED GRADUATE in respect of a range of skills and knowledge shown below. Please indicate your assessment by putting a tick in the box on a 5-point scale:

    5 — Performance always exceeds your required standard

    4 — Performance sometimes exceeds your required standard

    3 — Performance generally meets your required standard

    2 — Performance sometimes fails to meet your required standard

    1 — Performance always fails to meet your required standard

    If the skill or knowledge is not required by the post of the SAMPLED GRADUATE or has not been tested, please tick the "Not Applicable" box.

2. Please also indicate your views on the importance of the skills and knowledge for the post held by the SAMPLED GRADUATE by putting a tick in the box on a 5-point scale:

    5 — Very important

    4 — Quite important

    3 — Average

    2 — Not quite important

    1 — Not important at all

	Q1. Has the performance of the GRADUATE met your required standard in the following aspects?				**Q2.** For the post held by the GRADUATE, how do you perceive the importance of the following aspects?		
	Always exceeds / Generally meets / Always fails to meet		Not Applicable	Very important / Average / Not important at all			
A CHINESE LANGUAGE PROFICIENCY							
a. Expression of ideas *(e.g. clear, precise, concise, logical, grammatically correct)* in							
(i) **Written** Chinese	☐5 ☐4 ☐3 ☐2 ☐1		☐9	☐5 ☐4 ☐3 ☐2 ☐1			
(ii) **Cantonese**	☐5 ☐4 ☐3 ☐2 ☐1		☐9	☐5 ☐4 ☐3 ☐2 ☐1			
(iii) **Putonghua**	☐5 ☐4 ☐3 ☐2 ☐1		☐9	☐5 ☐4 ☐3 ☐2 ☐1			
b. Comprehension *(e.g. able to understand)* in							
(i) **Written** Chinese	☐5 ☐4 ☐3 ☐2 ☐1		☐9	☐5 ☐4 ☐3 ☐2 ☐1			
(ii) **Cantonese**	☐5 ☐4 ☐3 ☐2 ☐1		☐9	☐5 ☐4 ☐3 ☐2 ☐1			
(iii) **Putonghua**	☐5 ☐4 ☐3 ☐2 ☐1		☐9	☐5 ☐4 ☐3 ☐2 ☐1			

Please answer both Q1 and Q2 for each aspect

		Q1. Has the performance of the GRADUATE met your required standard in the following aspects?				Q2. For the post held by the GRADUATE, how do you perceive the importance of the following aspects?				
		Always exceeds	Generally meets	Always fails to meet	Not Applicable	Very important		Average		Not important at all
B	**ENGLISH LANGUAGE PROFICIENCY**									
a.	Expression of ideas *(e.g. clear, precise, concise, logical, grammatically correct)* in									
	(i) **Written** English	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
	(ii) **Oral** English	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
b.	Comprehension *(e.g. able to understand)* in									
	(i) **Written** English	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
	(ii) **Oral** English	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
C	**NUMERICAL COMPETENCY**									
a.	Comprehension of data *(e.g. understanding the meaning and implications of data)*	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
b.	Application of data *(e.g. able to make use of data or statistical/ mathematical methods in drawing conclusions and making recommendations)*	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
D	**INFORMATION TECHNOLOGY LITERACY**									
a.	Use of standard computer software *(e.g. proficient in using software, such as word processing, spreadsheet, database, presentation kits, at work)*	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
b.	Adaptability to new software *(e.g. able to use new software to facilitate work)*	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
c.	Ability to make use of the Internet and Intranet to facilitate work and business	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1
d.	Locate, gather and organize information using appropriate technology and information systems	□5 □4	□3	□2 □1	□9	□5 □4		□3	□2	□1

Please answer both Q1 and Q2 for each aspect

	Q1. Has the performance of the GRADUATE met your required standard in the following aspects?					Q2. For the post held by the GRADUATE, how do you perceive the importance of the following aspects?				
	Always exceeds	Generally meets		Always fails to meet	Not Applicable	Very important		Average		Not important at all
E ANALYTICAL AND PROBLEM-SOLVING ABILITIES										
a. Common sense *(e.g. able to display a practical good sense in handling daily tasks)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
b. Foresight *(e.g. able to plan ahead/ foreseeing problems)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
c. Analytical mind *(e.g. analyzing information logically and accurately)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
d. Problem-solving ability *(e.g. resourceful, able to identify problems/ recommend logical and practical solutions, able to assess if a solution works)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
e. Creativity *(e.g. able to innovate/ put forward new ideas)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
f. Ability to implement solutions, and act on opportunities for improvement	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
g. Judgment *(e.g. able to assess situation and recommend direction or course of action)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
F WORK ATTITUDE										
a. Sense of responsibility and commitment *(e.g. willing to take up responsibilities, accountable for the results, committed to organizational goals)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
b. Ability to work independently	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
c. Perseverance *(e.g. able to cope with difficult work environment/ work pressure/ uncertainty/ meeting deadline, patient in completing complicated tasks)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
d. Initiative and drive *(e.g. reacting to problems/ opportunities without being told, improving oneself and actively seeking new challenges)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
e. Receptivity and adaptability to new ideas and environment	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1
f. Professional/ business ethics *(e.g. aware of professional image building, having integrity, not acting with favouritism or vested interest)*	☐5	☐4	☐3	☐2	☐1	☐9	☐5	☐4	☐3	☐2	☐1

Please answer both Q1 and Q2 for each aspect

		Q1.Has the performance of the GRADUATE met your required standard in the following aspects?				Q2.For the post held by the GRADUATE, how do you perceive the importance of the following aspects?				
		Always exceeds	Generally meets	Always fails to meet	Not Appli-cable	Very important		Average		Not important at all
G	**INTER-PERSONAL SKILLS**									
a.	Inter-personal relationship *(e.g. capable of building rapport with colleagues/ people outside the company, earning respect from others)*	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
b.	Team work *(e.g. able to cooperate with colleagues, willing to listen to/ accept other people's views, contribute positively to team work)*	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
c.	Negotiation and communication skills *(e.g. able to present ideas and discuss with other parties and reach agreement in the best interests of the company)*	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
d.	Able to accept and provide feedback in a constructive and considerate manner	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
e.	Able to manage and resolve conflict when appropriate	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
H	**MANAGEMENT SKILLS**									
a.	Organization of work *(e.g. having good time management, able to prioritize based on objectives, planning work efficiently)*	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
b.	Management of staff *(e.g. able to guide and supervise subordinates)*	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
c.	Leadership *(e.g. leading a group to achieve set targets)*	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
d.	Able to motivate team-members	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
e.	Management of available resources and ability to seek resources and assistance	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
I	**TECHNICAL SKILLS REQUIRED FOR THE JOB**									
a.	Technical knowledge	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
b.	Ability to handle technical demands in work	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
c.	Ability to solve technical problems	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
d.	Ability to select and use appropriate tools and technology for a task or project	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
e.	Able to work to agreed quality standards and specification	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				
f.	Aware of occupational health and safety practices and procedures, and act in accordance with these	□5 □4 □3 □2 □1			□9	□5 □4 □3 □2 □1				

Please answer both Q1 and Q2 for each aspect

Education Bureau
The Government of the Hong Kong Special Administrative Region

J	Please rate the competence of the GRADUATE in the following aspects?	Very Good	Good	Average	Poor	Very Poor	No Comment
a.	Knowledge of global issues and development	□5	□4	□3	□2	□1	□9
b.	Knowledge of work and profession	□5	□4	□3	□2	□1	□9
c.	Knowledge of current affairs *(local and international)*	□5	□4	□3	□2	□1	□9
d.	Knowledge about China trade/ economical development	□5	□4	□3	□2	□1	□9
e.	Knowledge about industry or business environment working in	□5	□4	□3	□2	□1	□9
f.	Knowledge of technical developments related to own profession	□5	□4	□3	□2	□1	□9
g.	Self-learning ability	□5	□4	□3	□2	□1	□9
h.	Ability to develop necessary new technical skills required for the job	□5	□4	□3	□2	□1	□9
i.	Self-esteem	□5	□4	□3	□2	□1	□9

K		Very Satisfied	Quite Satisfied	Average	Quite Dissatisfied	Very Dissatisfied	No Comment
a.	Are you satisfied with the OVERALL performance of the GRADUATE?	□5	□4	□3	□2	□1	□9

L	There has been suggestions to improve the quality of sub-degree graduates IN GENERAL. Do you agree or disagree to these suggestions as follows:	Strongly Agree	Quite Agree	Quite Disagree	Strongly Disagree	No Comment
a.	To pass an assessment test on the following subjects before graduation:					
	(i) Chinese Language	□5	□4	□2	□1	□9
	(ii) English Language	□5	□4	□2	□1	□9
	(iii) Information Technology	□5	□4	□2	□1	□9
	(iv) Interpersonal and Management skills	□5	□4	□2	□1	□9
	(v) Communications skills	□5	□4	□2	□1	□9
b.	Institutions to enhance the relevance and quality of the sub-degree programmes by:					
	(i) Involving employers in curriculum development	□5	□4	□2	□1	□9

Is your department/ company willing to participate?
□1 *Yes* □2 *No* □9 *Don't know/ Not sure*

	(ii) Arranging internship programmes in collaboration with companies/ organizations for students	□5	□4	□2	□1	□9

Is your department/ company willing to participate?
□1 *Yes* □2 *No* □9 *Don't know/ Not sure*

M	**Please give your further suggestions, if any, for IMPROVING the performance of sub-degree graduates in the following major aspects:**

Language abilities: _____

_____

Numerical and information technology literacy: _____

_____

Work attitude: _____

_____

Inter-personal and management skills: _____

_____

Technical skills: _____

_____

Others: _____

_____

℣ **Thank you very much for your co-operation** ⁊

Appendix II – Estimation Method

Let P_{ijk} : Performance score (between 1 and 5) of ith graduate in j[th] attribute under k[th] aspect.

I_{ijk} : Importance score (between 1 and 5) of ith graduate in j[th] attribute under k[th] aspect.

W_i : Weighting factor of ith graduate.

n_{ik} : No. of attributes with both performance and importance scores rated as 1-5 of ith graduate in k[th] aspect.

a) Performance score of individual attribute [1]

Average performance score of attribute **j** under aspect **k** =

$$\bar{P}_{jk} = \frac{\sum_i P_{ijk} W_i}{\sum_i W_i}$$

b) Importance score of individual attribute [2]

Average importance score of attribute **j** under aspect **k** =

$$\bar{I}_{jk} = \frac{\sum_i I_{ijk} W_i}{\sum_i W_i}$$

c) Distribution of performance score of individual attribute [3]

Percentage of "Always exceeds required standard" (score 5) of attribute **j** under aspect **k** =

$$P_{jk}\% = \frac{\sum_i F_{ijk} W_i}{\sum_i W_i} \times 100\% \quad where \quad F_{ijk} = \begin{cases} 1 & if \quad P_{ijk} = 5 \\ 0 & otherwise \end{cases}$$

d) Distribution of importance score of individual attribute [4]

Percentage of "Very important" of attribute **j** under aspect **k** =

$$I_{jk}\% = \frac{\sum_i F_{ijk} W_i}{\sum_i W_i} \times 100\% \quad where \quad F_{ijk} = \begin{cases} 1 & if \quad I_{ijk} = 5 \\ 0 & otherwise \end{cases}$$

e) Performance score of each aspect [5]

Average performance score of aspect **k** =

$$\overline{P}_k = \frac{\sum_i \dfrac{\sum_j P_{ijk} I_{ijk}}{\sum_j I_{ijk}} W_i}{\sum_i W_i}$$

f) Importance score of each aspect [5]

Average performance score of aspect **k** =

$$\overline{I}_k = \frac{\sum_i \dfrac{1}{n_{ik}} \left(\sum_j I_{ijk} \right) W_i}{\sum_i W_i}$$

g) Distribution of performance score of each aspect [5]

Percentage of "4.01-5.00" of aspect **k** =

$$P_k\% = \frac{\sum_i F_{ik} W_i}{\sum_i W_i} \times 100\% \quad where \quad F_{ik} = \begin{cases} 1 & if \quad \dfrac{\sum_j P_{ijk} I_{ijk}}{\sum_j I_{ijk}} > 4 \\ 0 & otherwise \end{cases}$$

h) Distribution of importance score of individual aspect [5]

Percentage of "4.01-5.00" of aspect **k** =

$$I_k\% = \frac{\sum_i F_{ik} W_i}{\sum_i W_i} \times 100\% \quad where \quad F_{ik} = \begin{cases} 1 & if \quad \dfrac{\sum_j I_{ijk}}{n_{ik}} > 4 \\ 0 & otherwise \end{cases}$$

Remarks:

1.	Only count those questionnaires with performance score rated as 1-5 for that particular attribute.

2.	Only count those questionnaires with importance score rated as 1-5 for that particular attribute.

3.	Count all returned questionnaires, including those answered "Not applicable"

4.	Only count those questionnaires with importance score rated as 1-5

5.	Only count those attributes with both performance score and importance score rated as 1-5