

Survey on Opinions of Employers on Major Aspects of Performance of Publicly-funded First Degree Graduates in Year 2003



Executive Summary

Date: May, 2006

1. Introduction and Survey Methodology

Background

Education and Manpower Bureau (EMB) has been conducting a Survey on Opinions of Employers on Major Aspects of Performance of Graduates as a way of keeping track of the value-added output in the education system. So far, three surveys in the same series had been conducted covering full-time publicly-funded first degree graduates of the University Grants Committee (UGC)-funded institutions (except the Hong Kong Institute of Education) in the years 1998, 1999 and 2000. The findings of the Surveys had 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.

Following the completion of the last Survey, EMB has decided to conduct similar Surveys once every three years with a view to keeping track of the performances of graduates at work. The present Survey was therefore commissioned and covers the graduates of 2003 with its scope being expanded to cover the graduates of the Hong Kong Institute of Education.

Study Objectives

The objectives of the survey are to:

- (i) Obtain the opinions of employers on major aspects of performance of our 2003 full-time publicly-funded first degree graduates in the work place, including the civil service, with regard to nine 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 students' competency in knowledge aspects, as well as collecting employers' suggestions on ways to improving the quality of students.

- (ii) Identify any changes in opinions given by the employers on 2003 graduates as compared to that of the 1998 to 2000 first degree graduates.

Coverage

Target companies / organizations are those that have employed the 2002/2003 full-time publicly-funded first degree graduates of the eight University Grants Committee (UGC) – funded institutions as at December 2003:

- a. City University of Hong Kong
- b. Hong Kong Baptist University
- c. Lingnan University
- d. The Chinese University of Hong Kong
- e. The Hong Kong Institute of Education
- f. The Hong Kong Polytechnic University
- g. The Hong Kong University of Science and Technology
- h. The University of Hong Kong

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

Sampling Frame

In 2003, there were 13,531 full-time graduates from the eight UGC-funded institutions. According to the information provided by 12,355 graduates who responded to the Graduate Employment Survey conducted by individual institutions in end-2003, 9,511 graduates were identified to be working on a full-time basis. The remaining respondents were believed to be either working on a part-time basis, being unemployed or pursuing further studies and were considered irrelevant to the survey.

Among the 9,511 graduates, 1,217 failed to provide sufficient information about their employers, and were excluded from the survey. As a result, the present survey covered 8,294 graduates working on a full-time basis as at December 2003.

Among the 8,294 working graduates, 341 were identified as being employed by the Government as at December 2003. The Education and Manpower Bureau (EMB) provided a list of bureaux/ departments which had employed these graduates.

The remaining 7,953 graduates were working full-time in companies/organizations in the non-Government sector as at December 2003, and had provided employment details (e.g. employer's name, employment sector and employment size) to the Graduate Employment Surveys. Records of these graduates were used as the sampling frame.

Sample Design and Allocation

All graduates (341) employed by the Government were fully 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 one graduate, they were listed in order of industry, and within industry, by employment size, and one-quarter of them were selected for the survey, using a systematic random sampling method.

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

No. of first degree graduates employed by each company/organization	% of graduates to be sampled within each company/organization
2 – 29	50%
30 – 49	40%
50 – 99	30%
100 or above	20%

Sample Size

According to the sampling procedure, a total of 3468 first degree graduates were included in the study, with 341 in the Government sector and 3127 in the non-Government sector.

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 and 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 Manpower and a general guideline for completing the questionnaire, were sent to the contact persons on 28 June 2005. Appendix I is a copy of the whole set of survey documents sent to the contact persons. For companies/organizations employing more than one graduate, they were requested to select graduates for assessment in a random way 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 back the questionnaires on a dedicated fax line. Telephone follow-up calls and field visits were made to contact persons/ immediate supervisors who did not return the questionnaires.

Response Rate

By October 2005, 1,554 questionnaires were received, representing a response rate of 59% (which was compiled by excluding 823 invalid cases in most of which the companies/ organizations claimed that they had not employed any 2003 graduates as at December 2003). Appendix II is a copy of the fieldwork enumeration results, showing how the response rate was compiled.

Questionnaire Design

The survey covered nine 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 attributes were carefully chosen with reference to available survey reports and research papers on the subject. A few new attributes were added in this survey to reflect recent developments in the manpower market. Each aspect was measured by a number of attributes, a total of 45 attributes were included for measuring the nine 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 attribute 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 III shows the details of estimation method. Apart from the attributes, the questionnaire also assess students' competency in knowledge aspects, covered by 9 attributes.

Regarding improvement areas for the students, employers were asked to express how much they agreed on seven pre-identified improvement measures, as well as providing their own suggestions for improving the quality of students.

Pilot Test

Before starting the main fieldwork of the survey, a pilot study was carried out to test the questionnaire and survey arrangement. It covered 37 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.

Estimation Method

Of the 1554 returned questionnaires, 295 were from the Government sector and 1259 from the non-Government sector. The data in these questionnaires were weighted according to the actual number of 2003 first degree graduates employed in full-time basis in 2003 by the companies/ organizations.

Cautionary Remarks

1. Readers are advised to take caution when making comparison on results over time given the following differences between the 2000 and 2003 survey:
 - ◆ Difference in institutional coverage: The Hong Kong Institute of Education has been newly included in the 2003 survey.
 - ◆ Difference in attributes: Besides modifying the wordings of some attributes, new attributes have been added into the survey. These attributes are highlighted throughout the report.
2. Readers are advised to take note 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.

2. Key Findings

Overall Performance

The overall performance of the 2003 graduates as assessed by the employers was quite satisfactory, with a score of 3.58, which was between “generally meeting employers’ required standard” and “sometimes exceeding employers’ required standard”. In particular, 20% 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, it is encouraging to see that less than 1% of the graduates received a rating of 2 or below, meaning that very few of them failed to meet employers’ required standard (Table 2.1).

Table 2.1 – Overall Performance Score and Performance Score of the Nine Aspects

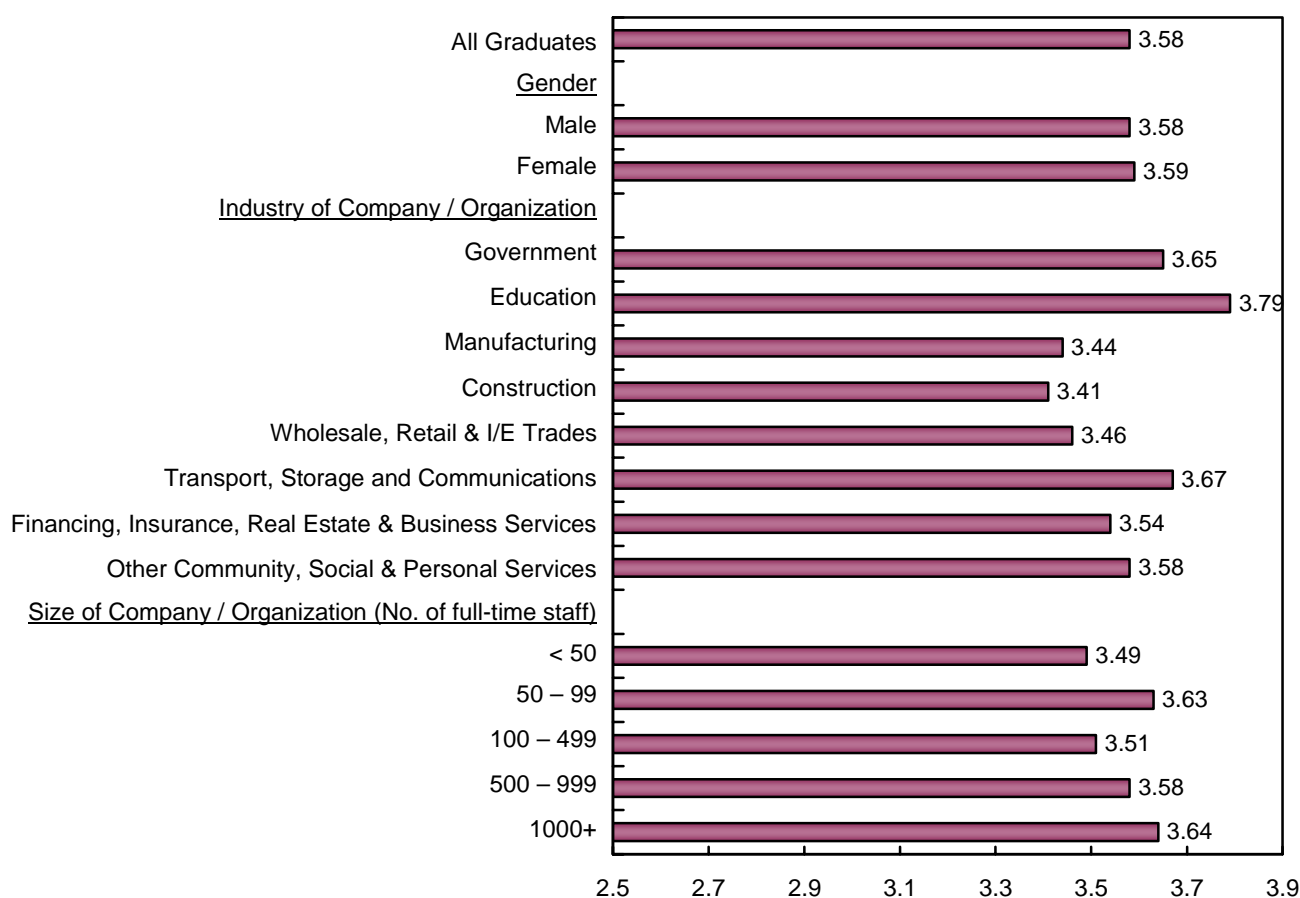
Aspect	Performance score	Distribution of performance score					
		5 – 4.01	4 – 3.01	3 – 2.01	2 – 1.01	1	Not applicable
		%	%	%	%	%	%
OVERALL	3.58	20	69	11	*	-	-
A Chinese Language Proficiency	3.71	22	55	20	*	-	2
B English Language Proficiency	3.56	11	50	35	1	*	3
C Numerical Competency	3.66	12	45	34	1	*	7
D Information Technology Literacy	3.81	24	54	19	*	*	3
E Analytical and Problem-Solving Abilities	3.42	12	58	27	2	*	1
F Work Attitude	3.74	29	53	16	2	*	1
G Inter-personal Skills	3.58	17	58	23	1	*	2
H Management Skills	3.29	7	46	39	3	1	5
I Technical Skills Required for the Job	3.45	9	51	32	1	*	6

Notes: (i) * Denotes less than 0.5%

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

Generally, there is no obvious difference between the overall performance of female (3.59) and male (3.58) graduates. In terms of industry engaged, graduates from the Education sector (3.79) received the highest performance score, while graduates from the Construction sector (3.41) received the lowest. Regarding the size of companies/organizations, the overall performance of graduates working in medium-sized (50-99 staff) and very large (1000+ staff) companies/organizations are more favourable, with score being 3.63 and 3.64, respectively. Graduates working in smaller companies/organizations (less than 50 staff) were given the lowest score (3.49). (Figure 2.1)

Analyses of Overall Performance Score (Figure 2.1)



Comparing the result of the present survey with the previous three surveys, the overall performance of 2003 graduates (3.58) was the highest. Similar observations are found in the individual aspects and attributes. Details are presented in later paragraphs.

	1998 Graduates	1999 Graduates	2000 Graduates	2003 Graduates
Overall performance	3.46	3.46	3.51	3.58

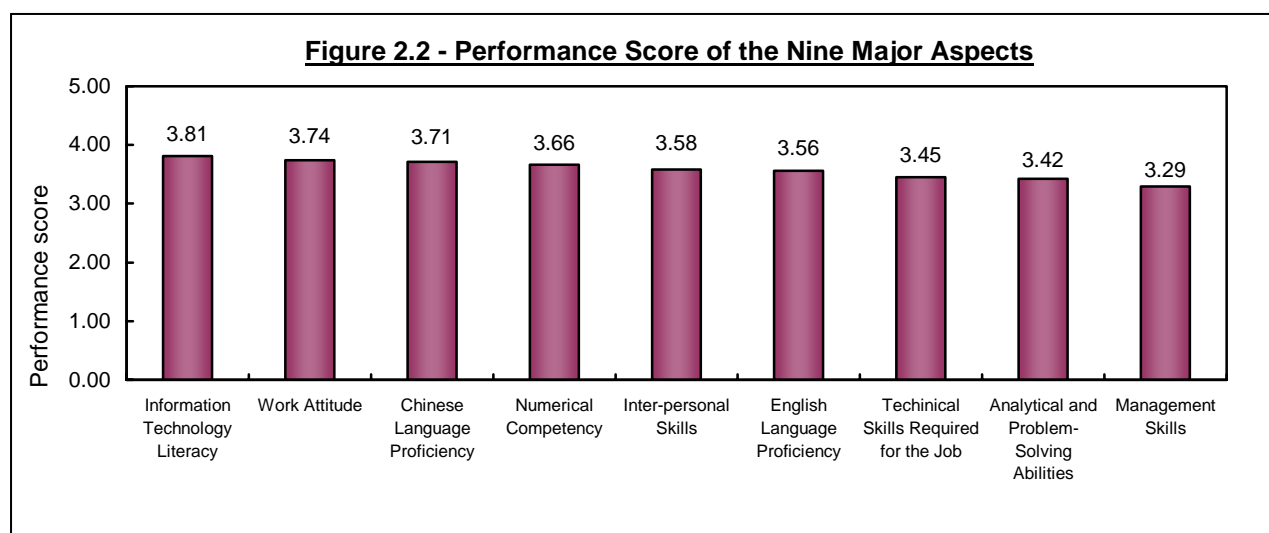
Assessment of Graduates' Performance in Nine Aspects

The performance score in respect of each of the nine major aspects and the corresponding importance score are presented in Table 2.2.

Table 2.2 – Performance and Importance Scores of the Nine Aspects

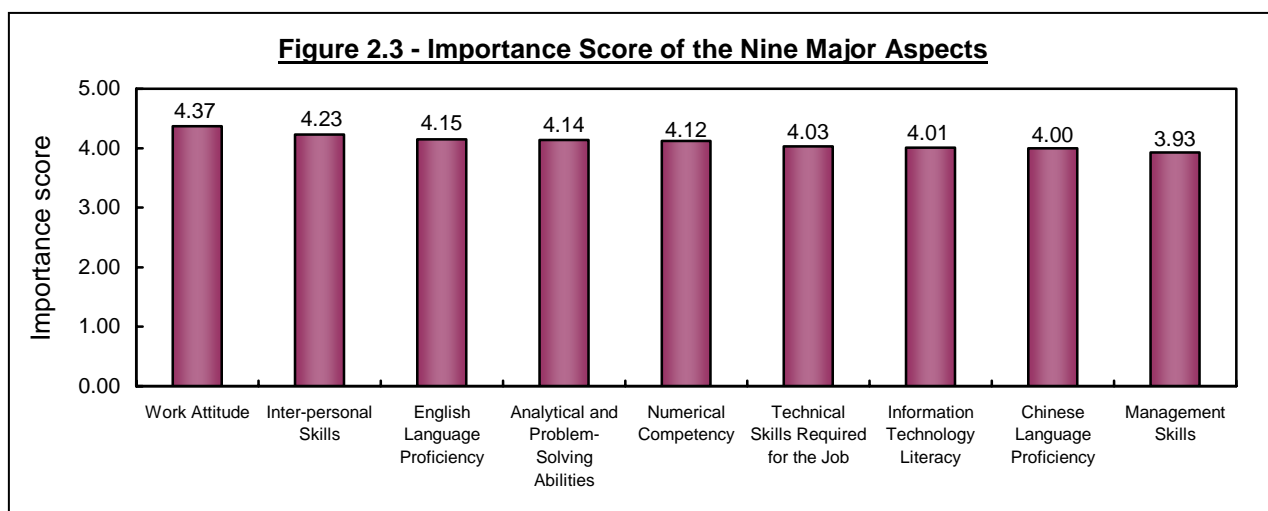
Aspect	Performance score	Importance score
A Chinese Language Proficiency	3.71	4.00
B English Language Proficiency	3.56	4.15
C Numerical Competency	3.66	4.12
D Information Technology Literacy	3.81	4.01
E Analytical and Problem-Solving Abilities	3.42	4.14
F Work Attitude	3.74	4.37
G Inter-personal Skills	3.58	4.23
H Management Skills	3.29	3.93
I Technical Skills Required for the Job	3.45	4.03

The performance scores of the nine major aspects of performance were all above 3.2, implying that the graduates were able to perform better than “generally meeting employers’ required standard”. However, the graduates’ performance varied among the different aspects, with the lowest score of 3.29 for Management Skills and the highest score of 3.81 for Information Technology Literacy. Figure 2.2 shows the nine major aspects arranged in descending order of performance score.



Assessment of Importance of the Nine Aspects

Regarding the importance of these aspects as perceived by the employers, nearly all aspects received a rating between “quite important” and “very important”, with Management Skill receiving the lowest score of 3.93 and Work Attitude being the most important aspect (4.37). Figure 2.3 shows the nine major aspects arranged in descending order of importance score.



Detailed Analysis of Individual Aspects

A. Chinese Language Proficiency

This aspect had an importance score of 4.00, the second least important aspect among the nine areas. Yet, the performance score of graduates on this aspect was the third highest on the list (3.71), with 22% of graduates receiving a rating above 4 and less than 1% a rating of 2 or below.

B. English Language Proficiency

This aspect had an importance score of 4.15, the third highest among the nine areas. Yet, the performance score (3.56) was slightly below average, with 11% of graduates receiving a rating above 4 and 1% a rating of 2 or below.

C. Numerical Competence

This aspect had an importance score of 4.12. The performance score was 3.66, with 12% of graduates receiving a rating above 4 and 1% a rating of 2 or below.

D. Information Technology Literacy

This aspect had an importance score of 4.01. Yet, the performance score was 3.81, being the highest among the nine aspects, with 24% of graduates received a rating above 4 and less than 1% a rating of 2 or below.

E. Analytical and Problem-solving Abilities

This aspect had an importance score of 4.14. However, the performance score was 3.42, the second lowest, with 12% of graduates receiving a rating above 4 and 2% a rating of 2 or below.

F. Work Attitude

This aspect received the highest importance score of 4.37. The performance score was 3.74, the second highest among the nine aspects, with 29% of graduates receiving a rating above 4 and 2% a rating of 2 or below.

G. Inter-personal Skills

This aspect received the second highest importance score of 4.23. The performance score was 3.58, with 17% of graduates receiving a rating above 4 and 1% a rating of 2 or below.

H. Management Skills

This aspect received the lowest importance score (3.93), as well as the lowest performance score (3.29) among the nine aspects. It is noted that only 7% of graduates received a rating above 4 (being the lowest percentage among the nine aspects) but 4% a rating of 2 or below.

I. Technical Skills Required for the Job

This aspect had an importance score of 4.03. The performance score was 3.45, with 9% of graduates receiving a rating above 4 and 1% a rating of 2 or below.

Over Time Comparison of Graduates' Performance in the Nine Aspects

2003 graduates performed better in all the eight aspects (no comparison can be made with reference to the aspect on "Technical Skills" which is newly added to the present survey) as compared to graduates in 1998, 1999 and 2000. Most substantial improvements were found in English Language Proficiency, Information Technology Literacy, Management Skills, Analytical and Problem-solving Abilities and Work Attitude.

Table 2.3 – Trend Comparison of Performance Scores of the Nine Aspects

Aspect	Performance score of 1998 graduates	Performance score of 1999 graduates	Performance score of 2000 graduates	Performance score of 2003 graduates
	Score (Index)*	Score (Index)*	Score (Index)*	Score (Index)*
A Chinese Language Proficiency	3.57 (100.0)	3.59 (100.6)	3.61 (101.1)	3.71 (103.9)
B English Language Proficiency	3.38 (100.0)	3.37 (99.7)	3.41 (100.9)	3.56 (105.3)
C Numerical Competency	3.52 (100.0)	3.51 (99.7)	3.55 (100.9)	3.66 (104.0)
D Information Technology Literacy	3.62 (100.0)	3.69 (101.9)	3.75 (103.6)	3.81 (105.2)
E Analytical and Problem-solving Abilities #	3.26 (100.0)	3.26 (100.0)	3.32 (101.8)	3.42 (104.9)
F Work Attitude	3.57 (100.0)	3.57 (100.0)	3.62 (101.4)	3.74 (104.8)
G Inter-personal Skills #	3.52 (100.0)	3.47 (98.6)	3.53 (100.3)	3.58 (101.7)
H Management Skills #	3.13 (100.0)	3.16 (101.0)	3.17 (101.3)	3.29 (105.1)
I Technical Skills Required for the Job #	NA	NA	NA	3.45 (NA)

Note : * Figure in brackets denotes an index number with the performance score of 1998 graduates taken as 100.0

Denotes areas with new/ modified attributes incorporated in survey on 2003 graduates

Assessments 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	Sometimes exceeds	Generally meets	Sometimes fails to meet	Always fails to meet	Not Applicable
			%	%	%	%	%	%
A. CHINESE LANGUAGE PROFICIENCY	4.00	3.71						
Expression of ideas in								
1 (i) Written Chinese	3.89	3.57	6	38	39	1	*	16
2 (ii) Cantonese	4.29	3.94	20	52	25	1	*	2
3 (iii) Putonghua	3.54	3.14	4	14	37	10	1	34
Comprehension in								
4 (i) Written Chinese	4.03	3.75	12	44	32	1	*	11
5 (ii) Cantonese	4.29	4.00	24	50	23	*	*	2
6 (iii) Putonghua	3.59	3.21	4	19	36	8	2	31
B. ENGLISH LANGUAGE PROFICIENCY	4.15	3.56						
Expression of ideas in								
7 (i) Written English	4.22	3.54	7	44	43	3	1	3
8 (ii) Oral English	4.07	3.50	7	37	44	4	1	7
Comprehension in								
9 (i) Written English	4.24	3.65	9	46	40	2	*	3
10 (ii) Oral English	4.09	3.57	8	40	42	2	*	7
C. NUMERICAL COMPETENCY	4.12	3.66						
11 Comprehension of data	4.14	3.70	11	46	36	2	*	5
12 Application of data	4.10	3.62	9	41	39	2	*	8
D. INFORMATION TECHNOLOGY LITERACY	4.01	3.81						
13 Use of standard computer software	4.10	3.85	16	51	30	1	*	3
14 Adaptability to new software	3.90	3.68	11	42	36	1	*	10
15 Ability to make use of the Internet & Intranet to facilitate work & business	4.05	3.92	20	49	27	1	*	4
16 Locate, gather & organize information using appropriate technology and information systems #	4.01	3.77	15	45	33	2	*	6
E. ANALYTICAL AND PROBLEM-SOLVING ABILITIES	4.14	3.42						
17 Common sense	4.29	3.65	11	48	37	3	1	*
18 Foresight	4.07	3.27	4	31	51	10	1	2
19 Analytical mind	4.27	3.50	7	43	44	5	1	1
20 Problem-solving ability	4.30	3.41	6	39	46	8	1	*
21 Creativity	3.82	3.29	5	29	51	10	1	4
22 Ability to implement solution and act on opportunities for improvement #	4.09	3.38	5	36	49	7	1	1
23 Judgment #	4.17	3.36	6	34	51	8	1	1

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 Applicable
			Mean	Mean	%	%	%	%
F. WORK ATTITUDE	4.37	3.74						
24 Sense of responsibility and commitment	4.59	3.92	24	49	22	4	1	-
25 Ability to work independently	4.36	3.74	17	47	31	5	1	*
26 Perseverance	4.37	3.68	15	46	32	6	1	*
27 Initiative and drive	4.34	3.59	13	43	35	8	1	*
28 Receptivity and adaptability to new ideas and environment	4.14	3.62	11	45	38	5	1	1
29 Professional/ business ethics	4.41	3.77	18	46	31	3	1	2
G. INTER-PERSONAL SKILLS	4.23	3.58						
30 Inter-personal relationship	4.31	3.75	15	49	32	3	*	*
31 Team work	4.44	3.79	16	51	29	3	1	1
32 Negotiation and communication skills #	4.19	3.45	6	38	47	5	1	3
33 Able to accept and provide feedback in a constructive and considerate manner #	4.16	3.53	9	41	43	5	1	1
34 Able to manage and resolve conflict when appropriate #	4.04	3.31	5	29	53	7	1	5
H. MANAGEMENT SKILLS	3.93	3.29						
35 Organization of work	4.19	3.45	6	38	45	6	1	4
36 Management of staff	3.73	3.16	2	13	37	7	1	40
37 Leadership	3.73	3.11	2	13	40	7	1	37
38 Able to motivate team-members #	3.76	3.15	3	16	46	8	1	26
39 Management of available resources and ability to seek resources and assistance #	3.90	3.32	4	26	47	6	*	17
I. TECHNICAL SKILLS REQUIRED FOR THE JOB	4.03	3.45						
40 Technical knowledge #	4.12	3.47	7	35	46	4	1	8
41 Ability to handle technical demands in work #	4.06	3.48	7	36	45	4	1	8
42 Ability to solve technical problems #	4.01	3.36	6	30	47	6	1	10
43 Ability to select and use appropriate tools and technology for a task or project #	3.97	3.40	5	33	47	5	1	10
44 Able to work to agreed quality standards and specification #	4.08	3.49	6	39	43	4	1	8
45 Aware of occupational health and safety practices and procedures, and act in accordance with these #	3.94	3.43	5	31	46	4	1	13

Notes: (i) * Denotes less than 0.5%

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

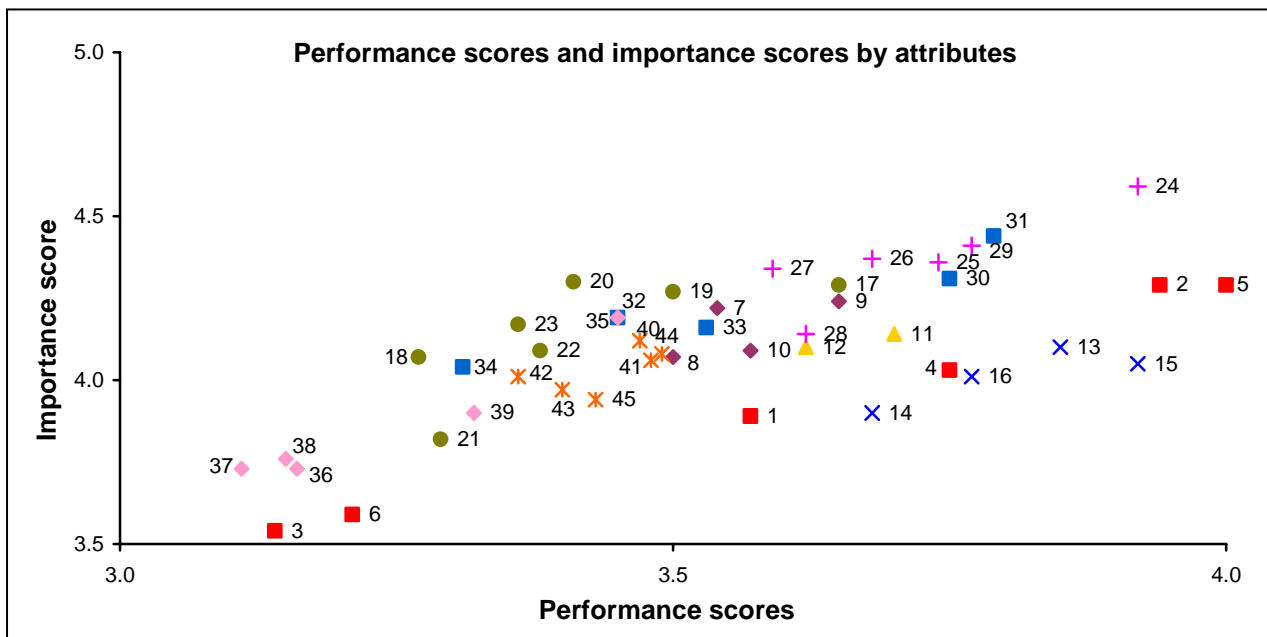
(iii) # Denotes new / modified attributes in survey on 2003 graduates

All attributes were perceived as important (score greater than 3) for the posts held by the graduates. In comparison, sense of responsibility and commitment remained as the most important attribute (4.59), whereas expression of ideas in Putonghua continued to be rated as the least important attribute (3.54).

The 2003 graduates were able to perform better than “generally meeting their employers’ required standard” in all 45 attributes. The four attributes with the highest performance score were comprehension in Cantonese (4.00), expression of ideas in Cantonese (3.94), sense of responsibility and commitment (3.92) and ability to make use of the Internet & Intranet to facilitate work & business (3.92). The performance of 20% to 24% of the graduates in these four attributes was considered as “always exceeding their employers’ required standard”.

On the other hand, areas with comparatively lower performance scores were related to proficiency in Putonghua (expression of ideas in Putonghua: 3.14; comprehension in Putonghua: 3.21) and Management Skills (leadership: 3.11; able to motivate team-members: 3.15; management of staff: 3.16). The performance of 8% to 11% of the graduates in these five attributes was considered as sometimes or always failing to meet their employers’ required standard.

The importance scores and the corresponding performance scores for the 45 attributes were plotted on a 2-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.



Note: Numbers in the graph represents 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

Over Time Comparison of Graduates' Performance in the 45 Attributes

Table 2.5 shows that the 2003 graduates performed better than graduates in 1998, 1999 and 2000 in attributes covered in all four rounds of surveys. Attributes showing a relatively greater increase in the performance score included expression of ideas in Putonghua (in which the performance score of 2003 graduates showed an increase of 18.0% over that of 1998 graduates), comprehension in Putonghua (15.9%), ability to make use of the Internet and Intranet to facilitate work and business (10.7%), negotiation and communication skills (8.8%) and management of staff (8.2%).

Table 2.5 – Over Time Comparison of Performance Score in 45 Attributes

Attribute	Performance score of 1998 graduates	Performance score of 1999 graduates	Performance score of 2000 graduates	Performance score of 2003 graduates
	Score (Index)*	Score (Index)*	Score (Index)*	Score (Index)*
A. CHINESE LANGUAGE PROFICIENCY	3.57 (100.0)	3.59 (100.6)	3.61 (101.1)	3.71 (103.9)
Expression of ideas in				
1 (i) Written Chinese	3.35 (100.0)	3.39 (101.2)	3.44 (102.7)	3.57 (106.6)
2 (ii) Cantonese	3.86 (100.0)	3.90 (101.0)	3.85 (99.7)	3.94 (102.1)
3 (iii) Putonghua	2.66 (100.0)	2.82 (106.0)	2.92 (109.8)	3.14 (118.0)
Comprehension in				
4 (i) Written Chinese	3.64 (100.0)	3.65 (100.3)	3.63 (99.7)	3.75 (103.0)
5 (ii) Cantonese	3.95 (100.0)	3.98 (100.8)	3.92 (99.2)	4.00 (101.3)
6 (iii) Putonghua	2.77 (100.0)	3.01 (108.7)	3.06 (110.5)	3.21 (115.9)
B. ENGLISH LANGUAGE PROFICIENCY	3.38 (100.0)	3.37 (99.7)	3.41 (100.9)	3.56 (105.3)
Expression of ideas in				
7 (i) Written English	3.33 (100.0)	3.32 (99.7)	3.39 (101.8)	3.54 (106.3)
8 (ii) Oral English	3.29 (100.0)	3.28 (99.7)	3.33 (101.2)	3.50 (106.4)
Comprehension in				
9 (i) Written English	3.48 (100.0)	3.47 (99.7)	3.50 (100.6)	3.65 (104.9)
10 (ii) Oral English	3.39 (100.0)	3.38 (99.7)	3.41 (100.6)	3.57 (105.3)
C. NUMERICAL COMPETENCY	3.52 (100.0)	3.51 (99.7)	3.55 (100.9)	3.66 (104.0)
11 Comprehension of data	3.56 (100.0)	3.54 (99.4)	3.59 (100.8)	3.70 (103.9)
12 Application of data	3.46 (100.0)	3.48 (100.6)	3.51 (101.4)	3.62 (104.6)
D. INFORMATION TECHNOLOGY LITERACY	3.62 (100.0)	3.69 (101.9)	3.75 (103.6)	3.81 (105.2)
13 Use of standard computer software	3.71 (100.0)	3.77 (101.6)	3.82 (103.0)	3.85 (103.8)
14 Adaptability to new software	3.52 (100.0)	3.59 (102.0)	3.67 (104.3)	3.68 (104.5)
15 Ability to make use of the Internet & Intranet To facilitate work & business	3.54 (100.0)	3.70 (104.5)	3.79 (107.1)	3.92 (110.7)
16 Locate, gather & organize information using appropriate technology and information systems #	NA	NA	NA	3.77 (NA)
E. ANALYTICAL AND PROBLEM-SOLVING ABILITIES	3.26 (100.0)	3.26 (100.0)	3.32 (101.8)	3.42 (104.9)
17 Common sense	3.47 (100.0)	3.42 (98.6)	3.47 (100.0)	3.65 (105.2)
18 Foresight	3.05 (100.0)	3.07 (100.7)	3.14 (103.0)	3.27 (107.2)
19 Analytical mind	3.35 (100.0)	3.37 (100.6)	3.42 (102.1)	3.50 (104.5)
20 Problem-solving ability	3.28 (100.0)	3.28 (100.0)	3.33 (101.5)	3.41 (104.0)
21 Creativity	3.07 (100.0)	3.11 (101.3)	3.16 (102.9)	3.29 (107.2)
22 Ability to implement solution and act on opportunities for improvement #	NA	NA	NA	3.38 (NA)
23 Judgment #	NA	NA	NA	3.36 (NA)

Attribute	Performance score of 1998 graduates	Performance score of 1999 graduates	Performance score of 2000 graduates	Performance score of 2003 graduates
	Score (Index)*	Score (Index)*	Score (Index)*	Score (Index)*
F. WORK ATTITUDE	3.57 (100.0)	3.57 (100.0)	3.62 (101.4)	3.74 (104.8)
24 Sense of responsibility and commitment	3.76 (100.0)	3.72 (98.9)	3.81 (101.3)	3.92 (104.3)
25 Ability to work independently	3.53 (100.0)	3.55 (100.6)	3.60 (102.0)	3.74 (105.9)
26 Perseverance	3.57 (100.0)	3.54 (99.2)	3.60 (100.8)	3.68 (103.1)
27 Initiative and drive	3.38 (100.0)	3.42 (101.2)	3.44 (101.8)	3.59 (106.2)
28 Receptivity and adaptability to new ideas and environment	3.44 (100.0)	3.50 (101.7)	3.49 (101.5)	3.62 (105.2)
29 Professional/ business ethics	3.64 (100.0)	3.63 (99.7)	3.73 (102.9)	3.77 (103.6)
G. INTER-PERSONAL SKILLS	3.52 (100.0)	3.47 (98.6)	3.53 (100.3)	3.58 (101.7)
30 Inter-personal relationship	3.60 (100.0)	3.55 (98.6)	3.61 (100.3)	3.75 (104.2)
31 Team work	3.70 (100.0)	3.63 (98.1)	3.69 (99.7)	3.79 (102.4)
32 Negotiation and communication skills #	3.17 (100.0)	3.18 (100.3)	3.22 (101.6)	3.45 (108.8)
33 Able to accept and provide feedback in a constructive and considerate manner #	NA	NA	NA	3.53 (NA)
34 Able to manage and resolve conflict when appropriate #	NA	NA	NA	3.31 (NA)
H. MANAGEMENT SKILLS	3.13 (100.0)	3.16 (101.0)	3.17 (101.3)	3.29 (105.1)
35 Organization of work	3.25 (100.0)	3.29 (101.2)	3.29 (101.2)	3.45 (106.2)
36 Management of staff	2.92 (100.0)	3.01 (103.1)	3.03 (103.8)	3.16 (108.2)
37 Leadership	2.95 (100.0)	3.05 (103.4)	3.06 (103.7)	3.11 (105.4)
38 Able to motivate team-members #	NA	NA	NA	3.15 (NA)
39 Management of available resources and ability to seek resources and assistance #	NA	NA	NA	3.32 (NA)
I. TECHNICAL SKILLS REQUIRED FOR THE JOB	NA	NA	NA	3.45 (NA)
40 Technical knowledge #	NA	NA	NA	3.47 (NA)
41 Ability to handle technical demands in work #	NA	NA	NA	3.48 (NA)
42 Ability to solve technical problems #	NA	NA	NA	3.36 (NA)
43 Ability to select and use appropriate tools and technology for a task or project #	NA	NA	NA	3.40 (NA)
44 Able to work to agreed quality standards and specification #	NA	NA	NA	3.49 (NA)
45 Aware of occupational health and safety practices and procedures, and act in accordance with these #	NA	NA	NA	3.43 (NA)

Note : (i) * Figure in brackets denotes an index number with the performance score of 1998 graduates taken as 100.0

(ii) # Denotes new / modified attributes in survey on 2003 graduates

Graduates' Knowledge on current affairs & business issues, Self-learning Ability and Self-esteem

Starting from 1999 survey, a question regarding graduates' knowledge and self-learning ability has been included. In this year's survey, five more areas were added to the session for a more comprehensive assessment on graduate's performance. The five new areas include:

- (i) Knowledge about China trade/ economical development;
- (ii) Knowledge about industry or business environment working in;
- (iii) Knowledge of technical developments related to own profession;
- (iv) Ability to develop necessary new technical skills required for the job;
- (v) Self-esteem.

Employers' assessments on 2003 graduates' self-learning ability, self-esteem, knowledge of work and profession were very favourable, with 66%, 64% and 52% 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 over a third did not have any comment on this area. Even so, among those rated this area, a much smaller proportion of graduates were rated as good or very good. Details are shown in the following table:

	Very Good	Good	Average	Poor	Very Poor	No Comment
	%	%	%	%	%	%
(a) Knowledge of global issues & development	1 (1)	21 (18)	53 (58)	5 (8)	1 (*)	19 (14)
(b) Knowledge of work and profession #	6 (6)	46 (52)	43 (38)	2 (2)	* (*)	3 (*)
(c) Knowledge of current affairs	2 (1)	25 (22)	52 (57)	4 (6)	1 (*)	17 (13)
(d) Knowledge about China trade/ economical development #	1 (NA)	10 (NA)	42 (NA)	10 (NA)	1 (NA)	37 (NA)
(e) Knowledge about industry or business environment working in #	3 (NA)	23 (NA)	52 (NA)	5 (NA)	1 (NA)	17 (NA)
(f) Knowledge of technical developments related to own profession #	3 (NA)	38 (NA)	46 (NA)	3 (NA)	* (NA)	10 (NA)
(g) Self-learning ability	13 (11)	53 (52)	28 (29)	2 (5)	1 (1)	3 (2)
(h) Ability to develop necessary new technical skills required for the job #	7 (NA)	39 (NA)	39 (NA)	3 (NA)	1 (NA)	11 (NA)
(i) Self-esteem #	10 (NA)	54 (NA)	30 (NA)	1 (NA)	- (NA)	4 (NA)

- Notes:
- (i) * Denotes less than 0.5%
 - (ii) Percentages may not add up to 100% due to rounding
 - (iii) Figures in brackets denote results of survey on 2000 graduates.
 - (iv) # Denotes new / modified attributes in survey on 2003 graduates

Comparing the results of the present and the last survey, it is found that the employers' assessments on 2003 graduates' knowledge and self-learning ability were more or less the same as those on 2000 graduates, except slightly less graduates were rated as good or very good in knowledge of work and profession (2003 graduates: 52% vs. 2000 graduates: 58%).

Satisfaction with the Overall Performance

71% of the employers were satisfied with the overall performance of 2003 graduates, an increased of 3%-point as compared to that of the 2000 graduates. (Table 2.7)

Table 2.7 – Satisfaction with Overall Performance of Graduates

Overall Performance	1999 Graduates %	2000 Graduates %	2003 Graduates %
Very Satisfied	13	16	18
Quite Satisfied	56	52	53
Average	24	26	25
Quite Dissatisfied	5	5	3
Very Dissatisfied	1	1	1
Total	100	100	100

Opinions on Suggested Improvement Measures

Regarding some suggested measures which may improve the quality of first degree graduates, employers generally agreed with these measures. The results of the present survey did not show much difference from the last survey, except that more employers "strongly agree" to the suggestion of arranging internship programmes in collaboration with companies/ organizations for undergraduates (2003 graduates: 23% vs. 2000 graduates :13%). Areas that most employers agree with were having assessment tests on English and communication skills before graduation. (Table 2.8)

Table 2.8 – 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	28 (29)	53 (53)	8 (7)	2 (3)	10 (9)
	(ii) English language	41 (49)	48 (42)	5 (4)	1 (2)	5 (3)
	(iii) Information technology	18 (23)	57 (54)	13 (10)	2 (2)	11 (11)
	(iv) Interpersonal and Management skill	24 (21)	51 (50)	13 (12)	2 (4)	10 (13)
	(v) Communication skills	32 (32)	51 (47)	8 (9)	2 (3)	8 (9)
(b)	Universities to enhance the relevance and quality of the undergraduate programmes by:					
	(i) Involving employers in curriculum development	12 (7)	54 (61)	12 (11)	2 (1)	19 (19)
	(ii) Arranging internship programmes in collaboration with companies/ organizations for undergraduates	23 (13)	50 (62)	8 (7)	1 (1)	18 (17)

Notes: (i) Percentages may not add up to 100% due to rounding
(ii) Figures in brackets denote results of survey on 2000 graduates

Among those agreeing to the improvement measures of “involving employers in curriculum development” and “arranging internship programmes”, respectively 34% and 44% of the employers showed interest in getting involved. Comparing to the last survey, an increased percentage of employers expressed that they were willing to involve in these activities. (Table 2.9)

Table 2.9

Improvement Measures		Whether willing to be involved		
		Yes	No	Don't know/ Not sure
		%	%	%
(i)	Involving employers in curriculum development	34 (27)	6 (7)	60 (66)
(ii)	Arranging internship programmes in collaboration with companies/ organizations for undergraduates	44 (36)	5 (6)	51 (58)

Notes: (i) Percentages may not add up to 100% due to rounding
(ii) Figures in brackets denote results of survey on 2000 graduates

Other Suggested Improvements

Of the 1554 respondents who returned the questionnaires, 373 (or 24%) gave further suggestions for improving the performance of first degree graduates. As shown in Table 2.10, 17% of respondents suggested improvements in language abilities, followed by work attitude (13%) and inter-personal and management skills (11%).

Table 2.10

Major aspect	% of respondents with comments #
Language abilities	17%
Work attitude	13%
Inter-personal and management skills	11%
Numerical and information technology literacy	5%
Technical skills	5%
Others	3%

Note: # The number of respondents with comments as a percentage of the total number of respondents (i.e. 1554)

Respondents suggested some possible ways to improve graduates' language abilities. These included specific language training (especially training on Putonghua), more practice and training on writing in both languages (in particular commercial correspondences), more opportunities for making speeches/ presentations, encourage reading, etc. Some respondents also suggested that training on language skills should start at the primary or secondary levels and that undergraduates should be tested on their biliteracy and trilingualism before graduation.

On Work Attitude, some respondents said that graduates should improve on their willingness to bear responsibilities and enhance their level of commitment. They should also be more enthusiastic about their work, more hard-working and willing to learn new things. Some also suggested that graduates should increase their awareness on professional ethics and be more proactive.

Regarding inter-personal skills and management skills, some respondents commented that the graduates should learn to be all-rounded in communicating with others, have basic manners, strengthen negotiation skills, etc. It was also suggested that they should enhance their inter-personal and management skills by participating more in team work, group projects and workshops. Some suggested graduates to participate in workshops about management (e.g. time management, leadership) and problem-solving during their undergraduate study.

Apart from the above specific aspects, some respondents suggested that attachments to/ training programmes in large companies/ organizations should be arranged for undergraduates so that they can gain real life working experience.

APPENDICES

Appendix I – Survey Documents to be inserted in hard copies

Appendix II – Fieldwork Enumeration Results

	Government sector	Non-government sector	Total
(i) No. of graduates sampled	341	3127	3468
(ii) No. of completed questionnaires received	295	1259	1554
(iii) No. of questionnaires not returned	19	574	593
(iv) No. of refusals	0	498	498
(a) <i>By Coordinators</i>	0	457	457
(b) <i>By Immediate Supervisors</i>	0	41	41
(v) No. of invalid cases	27	796	823
(a) <i>Companies/ organizations claiming not having appointed any 2003 graduates in 2003</i>	13	361	374
(b) <i>2003 graduates having left the company/ organization with no one knowing their performance</i>	5	80	85
(c) <i>No. of 2003 graduates employed as claimed by companies/ organizations being less than the number recorded in the sampling frame</i>	9	148	157
(d) <i>Unable to locate the company (Have already made visit)</i>	0	207	207
(vi) Response rate $\left(\frac{\text{(ii)}}{\text{(i) minus (v)}} \right)$	94%	54%	59%

Appendix III – Estimation Method

(1) For kth company/organization

Let x_{kije} : performance score (between 1 and 5) of eth graduate in jth attribute under ith aspect (i.e. assessment of performance ignoring “Not Applicable” case).

w_{kije} : importance score (between 1 and 5) of eth graduate in jth attribute under ith aspect (i.e. corresponding weighting).

n_k : number of 2003 graduates sampled (i.e. sample size ignoring “Not Applicable” case).

N_k : total number of 2003 graduates employed in 2003 as reported by company / organization in the survey.

$$\text{Then } \bar{x}_{kij} = \frac{\sum x_{kije}}{n_k}$$

= average performance of all sampled graduates in jth attribute under ith aspect.

$$\bar{w}_{kij} = \frac{\sum w_{kije}}{n_k}$$

= average importance of jth attribute under ith aspect.

$$\bar{x}_{ki} = \frac{\sum_j \bar{x}_{kij} \bar{w}_{kij}}{\sum_j \bar{w}_{kij}}$$

= average performance score of all sampled graduates in i^{th} aspect

$$\bar{x}_{ki'} = \frac{\sum_{i'} \sum_j \bar{x}_{ki'j} \bar{w}_{ki'j}}{\sum_{i'} \sum_j \bar{w}_{ki'j}} \quad \text{where } i' = \text{more than one aspect}$$

= average performance score of all sampled graduates in selected aspects

$$\bar{x}_k = \frac{\sum_i \sum_j \bar{x}_{kij} \bar{w}_{kij}}{\sum_i \sum_j \bar{w}_{kij}}$$

= overall average performance score of all sampled graduates

(2) For a selected group of m companies (or all companies)

$$\bar{y} = \frac{\sum_{k=1}^m y_k N_k}{\sum_{k=1}^m N_k}$$

where \bar{y} = overall average score of performance of all 2003 graduates (i.e. a sub-indicator for one or several aspects of performance, or an overall indicator).

y_k : relevant x variable in (1) above for k^{th} company / organization.