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Generic Competencies of Business Tertiary Students After Secondary Curriculum Reform in Hong Kong

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Abstract

This paper attempts to explore the correlation between academic discipline (business and non-business) and the development of generic competences among secondary graduates who were just admitted to Associate Degree and Higher Diploma programmes in Hong Kong tertiary institution. A total of 3238 freshmen had completed a set of self-assessment questionnaires across three academic years from 2011 to 2013. The result indicated that there were significant differences between freshmen in business and non-business programmes in five areas, including communication, cultural appreciation, entrepreneurship, lifelong learning and teamwork in 2011; and there was a trend of diminishing differences between two groups in the area of generic competencies afterwards. This trend might be due to the impact of curriculum reform on generic skills education. Therefore, the impact of new secondary curriculum reform on students' generic skills is also discussed. When the reported scores of general skills on the areas of communication, cultural appreciation, entrepreneurship, lifelong learning and teamwork, among different cohorts, were analyzed, it shows that the introduction of new secondary curriculum strengthens the generic competences of the freshmen.

1. Introduction

Holistic development and generic competencies have been capturing attention in the education field in recent years. Scholars, educators, and student activities coordinators have devoted significant efforts to study different aspects of generic skills for curriculum design and setting students affairs strategies. Previous studies contributed to different aspects of generic skills. Common streams of studies include defining and assessing generic skills [1], developing generic skills [2], generic skills in relation to discipline-specific factors, other determinants of generic competencies [3-5] and educational reform [6], [7, 8]. This study aims to fill in some gaps of the existing knowledge by focusing on students' generic skills background at entry stage of tertiary education in Hong Kong.

Several studies attempted to discuss the framework for developing generic attributes. Barrie [2] mentioned six categories of descriptions on how students develop generic attributes: remedial; associated; teaching content; teaching process; engagement and participatory. According to Barrie [2], some academics considered that developing

generic skills should be mainly carried out at earlier education stages instead of university curriculum. From this perspective, the role of tertiary education would be remedial teaching for those students who have not adequately acquired generic skills at earlier stages. Another category of perspective suggests associated approach that university education should provide additional separate curriculum to associate with the usual curriculum patterns as to develop students' generic skills. The third category states that generic development should be considered as part of the teaching content of the subject disciplines. The other three categories mentioned in Barrie's Framework [2] highlight the importance of other factors such as teaching process and the active learning by students' engagement and participation in extra-curricular activities.

Besides, another common stream of studies investigated the influence of programme-related factors. Duggan [4] studied Engineering students' perception on generic skills. Results showed that engineering students were aware of the importance of generic skills. However, accordingly to this study, students perceived that generic skills had not been not adequately covered in their curriculum. Duggan [4] also pointed out that, in general, mature students when compare with younger students perceive generic skills as more important element. Kaddoura, Dyke and Yang [9] mentioned the importance of critical thinking skills for nursing profession, and they discussed the correlation between critical thinking skills and the performance in a licensure examination for registered nurse. Keneley and Jackling [10] examined accounting students' perception on developing their generic skills. The results showed that accounting students found the accounting courses help to develop their generic skills. Towers-Clark [11] also discussed the skills required for accounting students in preparing for workplace. So, Lam and So [3] attempted to compare two broad academic disciplines (Science and Technology versus Non-Science). Their studies reported that there was only slight difference between these two groups with different academic background. This result is inconsistent with the work of other researchers, such as Saemann and Crooker [12] and Ibrahim, Tomic and Parsa [13]. 'Students decide to major in a particular academic area because that area goes with their personality' [12] *as cited in* [14]. Saemann and Crooker [12] found that the business students tended to be less creative than the general university students. Ibrahim, Tomic and Parsa [13] also stated that the business students' idealism was significantly weaker than the non-business students, but their relativism was much stronger than non-business students. Shahzad, Ahmed and Ghaffar [14] conducted a study to explain whether personality can explain difference in business and non-business students' academic program choices. The result indicated that there was a significant difference in personality traits across academic major.

Moreover, studies on education reform shed light to the discussion on developing generic skills by suggesting effective ways to address the issues at macro-level. Hansen [6] introduced several features for applying systems theory to systemic changes. According to Hansen [6], effective model for school reform should consist of an open system view of education, recognition and alignment of the vision, missions and goals. Well defined methods for enhancing communication, mechanisms for providing and analyzing feedback as well as recommendation are also desirable features of effective model for applying educational reform. In the light of increasing attention made to the importance of generic competencies, educators have spent significant efforts on reforming curriculum as to enhance students' learning in this area.

In Hong Kong, a new secondary curriculum has been launched in 2009 with the aims to widen students' knowledge base and help students to enhance all-round development, lifelong learning and preparation for further studies and career development [7]. The new curriculum design consists of three main components, namely core subjects, elective subjects and other learning experiences. The objective of the other learning experience is to strengthen students' development in the non-academic aspects such as moral and civic education, aesthetic development, physical and career-related experiences. The Hong Kong Secondary Education Reform remarks an increasing attention to generic skills training for secondary students. Lam, So and Ng [15] examined the influence of HK Secondary Education Reform to the associate degree freshmen mainly on the social and cultural awareness dimensions. Results indicated that there was no statistically difference in the dimensions of social and cultural awareness dimensions between associate degree freshmen from the old and new secondary education curriculum in 2012.

Based on the previous findings of researches, the present research aims to investigate the development of generic competencies among tertiary students at their entry stage. The framework of this research mainly focuses on the remedial approach which is the first category of Barrie's framework [2]. This study also attempt to explore the correlation between academic discipline and the impact of this education reform from another perspective by comparing the potential impact on freshmen of different disciplines (business and non-business programmes). In relation to the study on the generic competency of freshmen, the present study also provides insights to the education practitioners for curriculum design from the perspectives of associated approach and teaching content approach.

2. Methodology

2.1. Background

This study investigated students from a community college affiliated with a large-scale tertiary institution in Hong Kong from 2011 to 2013. The college offered 36 two-year associate degree and higher diploma programmes spanning arts, science, social sciences, business and a number of specialized

areas for local students after their graduation from secondary schools. Students enrolling in the college must have met certain minimum entry requirements: Pass in one A-Level subject or two AS-Level subjects in Hong Kong Advanced Level Examination (HKALE) or equivalent qualifications. On the other hand, in 2012, the first batch of New Senior Secondary (NSS) students took the Hong Kong Diploma of Secondary Education (HKDSE) from secondary school to enrol to the first year of the tertiary education. Level 2 or above in five HKDSE subjects including English Language and Chinese Language were required.

2.2. Sample

Participants were randomly selected freshmen who commenced their studies across three academic years from 2011 to 2013. The overall number of participants was 3238. Participant were categorized into two subgroups by discipline: "BUS", which was composed of academic programmes of business and "NBUS" which included all other academic programmes such as arts, social science, design, science and technology. A total of 933, 1263 and 1042 freshmen were surveyed in October 2011, 2012 and 2013 respectively. In 2011/12 academic year, the sample comprised of 409 "BUS" (43.8%) and 524 "NBUS" (52.2%) in which 336 were male students (36%) and 597 were female students (64%). 529 "BUS" (41.9%) and 734 "NBUS" (58.1%) were analysed in 2012/13 academic year. The sample comprised of 474 male (37.5%) and 789 female students (62.5%). A total number of 409 "BUS" (39.3%) and 633 "NBUS" freshmen (60.7%) from the 2013/14 cohort participated in the survey, while the number of male and female students were 436 (41.8%) and 606 (58.2%).

2.3. Measure

The survey employed a set of self-assessment inventory—the Self-Assessment of All-Round Development (SAARD) Questionnaire to assess the generic competencies of respondents [16, 17]. The SAARD consists of 56 statements covering 14 areas of generic competencies: communication; creative thinking; critical thinking; culture appreciation; entrepreneurship; EQ & psychological wellness; global outlook; healthy lifestyle; interpersonal effectiveness; leadership; lifelong learning; problem solving; social and national responsibility; and teamwork. It was a 7-point Likert scale self-assessing questionnaire. Participants were asked to reflect upon how well they believed they accomplished the statement (1 = not well at all; 7 = very well). Each statement assessed only one area of generic competency, and each domain of generic competency consisted of 4 statements. All statements were listed in random order. Points marked in each statement were converted into scores (multiplied by 4), resulting in a minimum of 4 marks and maximum of 28 marks for each statement. The score of each generic competency was the mean score of all four statements. Only a complete domain with all-answered statements within respective generic competencies was considered a valid assessment. If one or more of the statements of a generic competency was not answered by the respondent or deemed invalid, the mean score of that particular generic competency for that particular respondent would not be calculated and counted towards in the analysis.

3. Results and Discussions

In this section, data analysis on the questionnaires collected from three cohorts who entered the college from 2011 to 2013 was presented. The discussions mainly consist of two parts: general comparison between freshmen in business and non-business programmes for the three cohorts, and comparison on the freshmen with HKALE and HKDSE background in the areas of generic competencies.

3.1. Comparison Between Freshmen in Business and Non-Business Programmes (2011-2013)

For the cohort of 2011, among 14 areas of generic competencies covered in this study, five areas (communication, cultural appreciation, entrepreneurship, lifelong learning and teamwork) indicated significant differences between freshmen in business and non-business programmes. The t-test results of all 14 generic competencies for 2011 cohort are shown in Table 1.

Results showed that business freshmen in general scored higher than non-business freshmen in the aspects of communication, entrepreneurship, lifelong learning and teamwork. However, non-business freshmen reported higher score than freshmen business students in the area of cultural appreciation. These observations suggest that students' personal interests and previous exposures to various generic competencies may have influence on their programme choice decision. For those students who have more interests in entrepreneurship, they may be inclined to apply for business programmes as their tertiary studies. Thus, freshmen in business reported a higher mean score in entrepreneurship *(M=20.29, p=0.02)* than freshmen in non-business students. Besides, freshmen business students may be more attentive to those activities and exposures during their secondary education which help to equip them with business communication and teamwork skills due to their interests in the business discipline. Shahzad, Ahmed and Ghaffar [14] found that business students go with extroversion style, who tend to be more sociable, talkative and moving around. Hence, the freshmen in business programmes showed higher scores in the corresponding areas of generic competencies. The personal interests in the area of cultural appreciation of some non-business freshmen also impose influence on their selection of culture related programmes which are classified as non-business programmes. As a result, non-business freshmen reported higher score in the aspect of cultural appreciation *(M=19.64, p=0.00)*.

Results for the cohort of 2012 indicated that there were significant differences between two groups of students only in two generic competencies: cultural appreciation and

entrepreneurship. Similar to the previous cohort, non-business students indicated higher score in the cultural appreciation *(M=19.91, p=0.4),* whereas business students showed higher score in the area of entrepreneurship *(M=20.60, p=0.17).*

Table 1. *Cohort 2011 (buss & non buss).*

Variable	Academic Discipline	M	SD	t	df	p
Communication	BUS	18.8706	3.40209	2.109	917	0.035*
	Non-BUS	18.3830	3.53613			
Creative Thinking	BUS	18.7420	3.30394	0.568	927	0.570
	Non-BUS	18.6207	3.17587			
Critical Thinking	BUS	19.6642	2.79478	0.810	930	0.418
	Non-BUS	19.5134	2.83953			
Cultural Appreciation	BUS	18.3951	4.40038	-4.308	925	0.000*
	Non-BUS	19.6398	4.33534			
Entrepreneurship	BUS	20.2948	3.47497	3.098	926	0.002*
	Non-BUS	19.5835	3.46760			
EQ & Psychological Wellness	BUS	18.9035	3.58562	0.706	922	0.480
	Non-BUS	18.7288	3.83342			
Global Outlook	BUS	18.8840	3.82137	0.314	927	0.754
	Non-BUS	18.8053	3.75954			
Healthy Lifestyle	BUS	19.0637	3.98595	0.729	928	0.466
	Non-BUS	18.8697	4.06075			
Interpersonal Effectiveness	BUS	19.4177	3.57709	1.070	927	0.285
	Non-BUS	19.1590	3.71793			
Leadership	BUS	20.3350	3.46141	1.855	928	0.064
	Non-BUS	19.9218	3.29545			
Lifelong Learning	BUS	19.8870	3.02160	2.583	929	0.010*
	Non-BUS	19.3683	3.05273			
Problem Solving	BUS	19.5819	2.95866	1.741	924	0.082
	Non-BUS	19.2437	2.91591			
Social and National Responsibility	BUS	20.0368	3.49673	-0.499	928	0.618
	Non-BUS	20.1494	3.34754			
Teamwork	BUS	20.2029	3.03014	2.199	931	0.028*
	Non-BUS	19.7691	2.95959			

Apart from these two areas, results for the other 12 aspects showed that the differences between two groups were statistically insignificant. The results of all 14 generic competencies are summarized in Table 2.

Table 2. *Cohort 2012 (buss & non buss).*

Variable	Academic Discipline	M	SD	t	df	p
Communication	BUS	19.4259	3.44608	0.075	1255	0.940
	Non-BUS	19.4104	3.74035			
Creative Thinking	BUS	19.3669	3.06693	-0.241	1252	0.809
	Non-BUS	19.4093	3.07897			
Critical Thinking	BUS	20.2042	2.61893	0.388	1253	0.698
	Non-BUS	20.1436	2.79675			
Cultural Appreciation	BUS	19.2996	4.44511	-2.054	1249	0.040*
	Non-BUS	19.8102	4.26010			
Entrepreneurship	BUS	20.5985	3.32288	2.396	1259	0.017*
	Non-BUS	20.1269	3.53692			
EQ & Psychological Wellness	BUS	19.7070	3.53006	1.841	1193	0.066
	Non-BUS	19.3201	3.87501			
Global Outlook	BUS	19.3890	3.63476	-0.448	1254	0.654
	Non-BUS	19.4829	3.68954			
Healthy Lifestyle	BUS	19.3233	3.98903	-0.055	1260	0.956
	Non-BUS	19.3356	3.94142			
Interpersonal Effectiveness	BUS	20.0361	3.59137	0.557	1256	0.577
	Non-BUS	19.9179	3.79204			
Leadership	BUS	20.9125	3.10697	0.909	1199	0.364
	Non-BUS	20.7425	3.49045			
Lifelong Learning	BUS	20.1524	2.86989	0.953	1188	0.341
	Non-BUS	19.9891	3.16096			
Problem Solving	BUS	20.1418	2.88753	1.650	1259	0.099
	Non-BUS	19.8716	2.85728			
Social and National Responsibility	BUS	20.9184	3.17233	-0.160	1258	0.873
	Non-BUS	20.9482	3.30590			
Teamwork	BUS	20.6262	2.95574	0.396	1207	0.692
	Non-BUS	20.5554	3.35614			

Comparing with the results for the areas of communication, lifelong learning and teamwork in 2011 which showed significant differences between non-business freshmen and business freshmen, it is observed that the results became insignificant between two groups for the cohort of 2012. The different results in two cohorts could be possibly explained by the different background of the freshmen in 2012 that consisted of students with background from HKALE and HKDSE curriculum. With more focus on generic competencies under HKDSE curriculum, students were nurtured towards a more common ground of generic skills. The impact of curriculum reform on students' generic skills will be further discussed in the second part of this section.

The results in 2013 further support the trend of diminishing differences between two groups in the area of generic competencies. As shown in Table 3, it is observed that there were no significant differences between two groups for all the 14 items of generic competencies measured. This finding suggests that freshmen in 2013 reported similar level of generic competencies regardless of their programme choice. Comparing with the cohort of 2012, the impact of curriculum reform on generic skills education became more obvious in the cohort of 2013 which consisted of students mainly came with HKDSE background.

Table 3. *Cohort 2013 (buss & non-buss).*

Variable	Academic Discipline	M	SD	t	df	p
Communication	BUS	18.7897	3.48875	0.861	1040	0.389
	NON-BUS	18.5987	3.49866			
Creative Thinking	BUS	19.3521	2.96933	0.602	1040	0.547
	NON-BUS	19.2354	3.11030			
Critical Thinking	BUS	19.7017	2.56752	-0.229	1040	0.819
	NON-BUS	19.7393	2.61023			
Cultural Appreciation	BUS	19.5183	4.28578	-0.753	1040	0.452
	NON-BUS	19.7220	4.24880			
Entrepreneurship	BUS	20.2885	3.25770	1.799	1040	0.072
	NON-BUS	19.9068	3.39851			
EQ & Psychological Wellness	BUS	19.2176	3.45547	0.399	1040	0.690
	NON-BUS	19.1295	3.48990			
Global Outlook	BUS	19.3301	3.38481	1.511	1040	0.131
	NON-BUS	18.9905	3.64048			
Healthy Lifestyle	BUS	18.9609	3.63378	-0.322	1040	0.747
	NON-BUS	19.0379	3.85601			
Interpersonal Effectiveness	BUS	19.7359	3.48789	1.483	1040	0.138
	NON-BUS	19.4044	3.54636			
Leadership	BUS	20.3301	3.30568	0.608	1040	0.543
	NON-BUS	20.2006	3.38779			
Lifelong Learning	BUS	19.9756	2.86363	1.316	1040	0.188
	NON-BUS	19.7314	2.96241			
Problem Solving	BUS	19.7237	2.70791	0.302	1040	0.762
	NON-BUS	19.6698	2.87173			
Social and National Responsibility	BUS	20.6577	3.15066	-1.746	1040	0.081
	NON-BUS	21.0079	3.16752			
Teamwork	BUS	20.1296	3.08146	-0.248	1040	0.804
	NON-BUS	20.1769	2.96076			

3.2. Comparison on the Generic Competencies of Freshmen with HKAL and HKDSE Background

3.2.1. Generic Competencies

As illustrated in previous sections, it is found that there was a trend of diminishing differences between business and non-business students with regards to the reported scores of generic skills for the cohorts of 2012 and 2013. As these two cohorts overlapped with the implementation of the new secondary curriculum (HKDSE) which started in 2012, it is imperative to discuss the possible influence of the education reform to students' generic competencies. Based on the results of three cohorts, changes were observed in five areas: communication, cultural appreciation, entrepreneurship, lifelong learning and teamwork. Table 4 summarizes the changes on these aspects across the period 2011-2013.

Table 4. *Cohorts 2011-2013 (buss & non-buss) for the 4 items (Communication; Lifelong learning; Teamwork; Cultural Appreciation; Entrepreneurship).*

Variable	Academic Discipline	2011 M(p)	2012 M(p)	2013 M(p)
Communication	BUS	18.87 (0.035*)	19.43 (0.940)	18.79 (0.389)
	Non-BUS	18.38	19.41	18.60
Cultural Appreciation	BUS	18.40 (0.000*)	19.30 (0.040*)	19.52 (0.452)
	Non-BUS	19.64	19.81	19.72
Entrepreneurship	BUS	20.29 (0.002*)	20.60 (0.017*)	20.29 (0.072)
	Non-BUS	19.58	20.13	19.91
Lifelong Learning	BUS	19.89 (0.010*)	20.15 (0.341)	19.78 (0.188)
	Non-BUS	19.37	19.99	19.73
Teamwork	BUS	20.20 (0.028*)	20.63 (0.692)	20.13 (0.804)
	Non-BUS	19.77	20.56	20.18

3.2.2. Communication, Lifelong Learning and Teamwork

From the data analysis across the period of 2011 to 2013, the areas of communication, lifelong learning and teamwork showed significant differences between the two groups in 2011; whereas the differences became statistically insignificant in the cohorts of 2012 and 2013. The observed changes provide positive evidence that the HKDSE system introduced in the education curriculum reform started in 2012 did impose influence on students background the area of generic competencies.

3.2.3. Cultural Appreciation

With respects to the area of cultural appreciation, non-business students reported higher mean scores than business students in cohorts 2011-2012. However, the mean difference between two groups decreased from 1.24 (in 2011) to 0.51 (in 2012). Furthermore, insignificant difference was reported in 2013. This observation also supports the positive impact on students' generic competencies. Despite that students have different personal interests in cultural appreciation, the enriched education on generic skills under HKDSE curriculum help to reduce the variance of students' background in this regard.

3.2.4. Entrepreneurship

As discussed in an earlier part in this section, students' personal interests could play an important role in programme choice. Accordingly, business freshmen indicated higher score than non-business freshmen in the area of entrepreneurship for the cohort of 2011 with mean difference of 0.71. Similar to the phenomenon observed in the study on cultural appreciation, the mean difference dropped to 0.47 in 2012, and became statistically insignificant in 2013. This finding conforms with the intended outcome of HKDSE curriculum in strengthening students' generic competencies.

4. Conclusion

Researchers have been trying to examine the relationship between the generic competencies and the academic disciplines and also the impact of major structural changes of secondary and higher education in Hong Kong. The results of this study leads to several conclusions which providing useful insights for local educators. For students who entered in this community college in 2011, receiving 7-year-secondary curriculum, among 14 areas of generic competencies covered in this study, communication, cultural appreciation, entrepreneurship, lifelong learning and teamwork are the five areas on which having statistical differences. Business freshmen in general have higher scores in communication, entrepreneurship, lifelong learning and teamwork, while non-business freshmen performed better in cultural appreciation. This observation shows that the students' personal interest and exposures have positive influence on their stream of studies. However, the differences between academic disciplines in the area of generic competencies are getting smaller and smaller in coming years. For the cohort in 2012 which is featured as a mixture of the last year of 7-year-secondary curriculum as well as the first year of new NSS curriculum, statistical differences are reported only in the aspects of cultural appreciation and entrepreneurship. Furthermore, there is no difference for students who entered in 2013, which only includes all DSE students. This diminishing trend of difference can be explained by the introduction of new secondary curriculum reform on students' generic skills. The findings shows that the introduction of a new compulsory subject of Liberal Studies and the implementation of the Other Learning Experience (OLE) under new three-year New Senior Secondary academic structure, also known as HKDSE structure, have positive impact on the changes of generic competency of students.

The self-evaluation nature by the participants might be one of the limitations of this study. Their generic competencies and the impact of the curriculum reform are revealed based on the perception of the students themselves, which might not be objective enough. To have a better conclusion on the generic competencies among tertiary students in Hong Kong, more factors should be included in the study and it is also worthwhile to explore the distinguished natures of various academic disciplines apart from business disciplines.

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