DEVELOPMENT OF GENERIC SKILLS OF ASSOCIATE DEGREE STUDENTS

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Outline

- Generic skills
- Goal of this study
- SAARD study in HKCC
- Data analysis
- Results and issues

Generic Skills

- Generally refers to a set of multifunctional skills, knowledge and attitudes one possesses, which is "transferable" regardless of discipline
- Many have contributed to the evaluation and categorization of generic skills
  - Taylor (2008)
  - Clayton et al. (2003)
  - Tait & Godfred (1999)
  - Crebert et al. (2004)
  - Barrie (2006, 2007)
  - Kember (2009)

Some Typical Generic Skills

- Problem solving

- Communication

- Creativity

- Interpersonal communication

- Critical thinking

- And many more…

Measuring Generic Skills

- Self-Assessment of All-Round Development (SAARD) Questionnaire
  - Developed in HK PolyU
  - 56 questions covering 14 generic skills (4 questions per skill)

Communication	Creative thinking	Critical thinking	Cultural appreciation	Entrepreneurship
EQ & psychological wellness	Global outlook	Healthy lifestyle	Interpersonal effectiveness	Leadership
Lifelong learning	Problem solving	Social & national responsibility	Teamwork	

  - Questions are using a 7-point Likert scale
  - A total score is calculated for each generic skill

Goal

- What are the factors contributing to the development of generic skills?
  - Exposure to student development activities
  - Gender
  - Academic discipline
  - Time
- Why are these factors important?
  - These factors can be useful intervention points for institutes to improve the development of generic skills

The Study

- It is an ongoing study conducted in HKCC since 2009
  - For each cohort of students, generic skills are measured at *Entry (admission)* and *Exit (graduation)*

- This study focuses on the cohort of students who were admitted to HKCC in 2010/11 academic year and graduated in 2011/12 academic year

Samples at Entry & Exit

- Self reported generic skills were collected from two random samples at Entry & Exit

Academic Discipline	Gender	Phase I (Entry)	Phase II (Exit)
Applied Social Sciences (AD-APSS)	Male	37	68
	Female	37	29
Business (AD-BUS)	Male	354	185
	Female	227	94
Design (AD-DSG)	Male	1	5
	Female	0	0
Humanities & Communication (AD-H&C)	Male	53	58
	Female	13	22
Health Studies (AD-HS)	Male	85	37
	Female	38	9
Science & Technology (AD-S&T)	Male	121	12
	Female	411	45
Total	Male	651	365
	Female	726	199

Note:
1727 unique students

214 responded to both surveys

Exposure to CAT Activities

- Many student development activities in HKCC are logged under a student's Co-curricular Achievement Transcript (CAT)

- CAT activities cover a wide variety of areas including leadership trainings, study tours, language enhancements, complementary studies and etc.

Gender	Exposure to CAT Activities (in Hours)		
	25th Percentile	50th Percentile	75th Percentile
Male	4.0	9.5	22.0
Female	7.0	16.5	31.0
Overall	6.0	13.5	28.5

Statistical Method Used

- Multiple regression is not suitable for this study
  - The two samples are overlapped
  - Some students are observed twice (not independent!)
  - Use repeated measures model to account for multiple observations on the same student, see for example, Singer & Willett (2003)

- Repeated Measures Model
  - Factors: Gender, Year, CAT Hours, Academic Discipline
  - Interactions: Year & Academic Discipline
  - Two measurements: One at Entry, one at Exit
  - One model per generic skill

Results – Significant Factors in Predicting Generic Skills

Generic Skill (Dependent Variable)	CAT HOURS	GENDER	YEAR	SCHEME	SCHEME BY YEAR
Communication	0.12	0.03**	0.16	0.00**	0.04**
Creative Thinking	0.31	0.00**	0.16	0.00**	0.06*
Critical Thinking	0.47	0.00**	0.90	0.00**	0.00**
Cultural Appreciation	0.52	0.09*	0.16	0.00**	0.07*
Entrepreneurship	0.02**	0.00**	0.91	0.04**	0.06*
EQ & Psychological Wellness	0.35	0.00**	0.31	0.10*	0.05**
Global Outlook	0.03**	0.00**	0.36	0.00**	0.33
Healthy Lifestyle	0.17	0.00**	0.54	0.04**	0.56
Interpersonal Effectiveness	0.06*	0.07*	0.43	0.00**	0.00**
Leadership	0.02**	0.66	0.30	0.00**	0.01**
Lifelong Learning	0.05**	0.00**	0.23	0.00**	0.00**
Problem Solving	0.11	0.00**	0.65	0.00**	0.00**
Social and National Responsibility	0.01**	0.84	0.37	0.12	0.93
Teamwork	0.01**	0.18	0.39	0.00**	0.01**

* The effect is significant at level 0.1.

** The effect is significant at level 0.05.

Predicted Improvements in Generic Skills (Business Scheme)

Generic Skills	Entry	Predicted Change on Exit (without CAT exposure)	Predicted Change on Exit (13.5 hours of CAT exposure)
Communication	19.16	0.81**	0.94**
Creative Thinking	18.97	0.72**	0.79**
Critical Thinking	19.12	0.83**	0.88**
Cultural Appreciation	18.73	-0.04	0.03
Entrepreneurship	19.59	0.46*	0.67**
EQ & Psychological Wellness	19.18	0.25	0.33
Global Outlook	18.98	0.04	0.22
Healthy Lifestyle	18.74	0.04	0.18
Interpersonal Effectiveness	19.65	0.52**	0.67**
Leadership	19.91	0.52**	0.70**
Lifelong Learning	19.23	0.83**	0.98**
Problem Solving	19.30	0.82**	0.93**
Social and National Responsibility	19.45	0.19	0.41*
Teamwork	19.61	0.56**	0.74**

Predicted Improvements in Generic Skills (Health Studies Scheme)

Generic Skills	Entry	Predicted Change on Exit (without CAT exposure)	Predicted Change on Exit (13.5 hours of CAT exposure)
Communication	19.30	1.64**	1.77**
Creative Thinking	19.03	2.05**	2.13**
Critical Thinking	19.19	2.41**	2.46**
Cultural Appreciation	18.94	2.10**	2.16**
Entrepreneurship	19.91	1.55**	1.76**
EQ & Psychological Wellness	18.99	1.19**	1.27**
Global Outlook	19.23	1.49**	1.68**
Healthy Lifestyle	19.28	0.72	0.85
Interpersonal Effectiveness	19.88	1.02*	1.18**
Leadership	19.85	1.86**	2.04**
Lifelong Learning	19.37	1.99**	2.13**
Problem Solving	19.37	2.00**	2.12**
Social and National Responsibility	19.80	0.82	1.03*
Teamwork	19.44	1.97**	2.16**

Important Findings

- Positive role of student development activities on development of generic skills
  - Higher level of exposures to CAT activities are associated with higher level of generic skills
  - Although exposures to CAT activities are significant in only 6 of the generic skills, the regression coefficients are all positive

- Strong gender differences in generic skills
  - Male tends to rate themselves higher in most generic skills except for Cultural Appreciation & Interpersonal Effectiveness

Important Findings

- Large variation in generic skills across different academic disciplines
  - May be confounded with previous academic results and self selection of academic programmes

- Improvements in generic skills vary by academic disciplines
  - For example, the improvement in problem solving skill of Health students is much more significant than that of Business students

Next Steps

- Student development activities
  - Study the effectiveness of different types of activities
  - Activities can be targeted towards the right group of students
  - Develop student activities with the goal of improving a specific generic skill
- Further understanding of the mechanics behind the development of generic skills
  - Does academic discipline really play a key role in the development of generic skills?
  - How gender affects self evaluation of generic skills?
- Self reported vs actual generic skills

THANK YOU
Q & A