



# The Development of the Card-Set

Rationales, Development Process and Literature Review

Mr. Jeff Man



香港輔導教師協會  
Hong Kong Association of Careers Masters and Guidance Masters





# Objectives

By providing teachers a tool, the development of this card-set aims to:

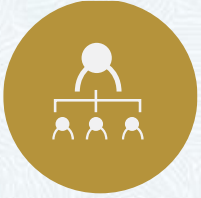
- *help students better understand themselves*
- *help students explore career options*
- *help students set goals & action-plans for self-actualization*
- *facilitate post-activity debriefing sessions*
- *facilitate educational activities such as positive education*



# The Guiding Principles

- Theory-Driven
- Evidence-Based
- Contextualized
- Collaboration with Input from Academics and Experienced Practitioners
- Non-Profit Making





# Why “Cards”?





## The Use of “Cards” in Qualitative Assessment Approaches

*“The qualitative assessment approach ... is instead attentive to a process that helps clients look toward creating greater meaning in their lives.”*

(Chope, 2015, p.71)

*APA Handbook of Career Intervention Vol.2*





## The Use of “Cards” in Qualitative Assessment Approaches

*“Counselors who use qualitative assessments ... engage the client in an active process of constructing a picture that takes shape through both the data gathered from the client and the interpretation of those data.”*

(Chope, 2015, p.71)

*APA Handbook of Career Intervention Vol.2*



# What Qualities is the World Looking For?



# What Qualities is the World Looking For?



Competencies?

Soft-skills?

Personality?

Attitude?

Skills?

Generic skills?

Ethics?

Aptitude?

Abilities?

Styles?





# Main References

## Sources:

O\*NET OnLine

**51 items (35 Skills** (10 Basic Skills, 1 Complex Problem Solving Skill, 4 Resources Management Skills, 6 Social Skills, 3 System Skills, 11 Technical Skills) **+ 16 Work Styles)**

OECD's Competency Framework (2014)

**15 items (15 Competencies** (6 Delivery-related Competencies, 5 Interpersonal Competencies, 4 Strategic Competencies) )

OECD's Skills for Social Progress (2015)

**26 items (3 Cognitive Abilities** (9 sub-abilities) **+ 3 Social and Emotional Skills** (9 sub-skills) )

World Economic Forum (2016)

**47 items (2 Abilities** (8 sub-abilities) **+ 2 Basic Skills** (8 sub-skills) **+ 5 Cross-Functional Skills** (19 sub-skills) )

Lippman et al. (2016) "Soft Skills" for Youth Workforce Success

**238+ items (29 Soft skills** (categorised from 172 studies – at least 238 terms were found in the field)

*\*It reviewed 380 literatures & included 172 studies only*

EDB's 9 Generic Skills (revised ver.) (CDC, 2015) **9 items (9 generic skills)**

EDB's 7 Priority Values (2008)

**7 items (7 values)**



# Main References

Sources:

At Least 393+ Different Terms Have Been Used to Describe the Qualities/Attributes

**BUT HOW??**

54 Qualities/Attributes

- O\*NET OnLine: 51 items (35 Skills (10 Basic Skills, 1 Complex Problem Solving Skill, 4 Resources Management Skills, 6 Social Skills, 3 System Skills, 11 General Skills) - 16 Work Styles)
- OECD's Competency Framework (2018): 15 items (15 Competencies (6 Delivery-related Competencies, 5 Interpersonal Competencies, 4 Societal Competencies))
- OECD's Skills for Social Progress (2015): 26 items (2 Cognitive Abilities (9 sub-abilities) + 3 Social and Emotional Skills (9 sub-skills))
- World Economic Forum (2016): 17 items (3 Abilities (3 sub-abilities) + 2 Basic Skills (8 sub-skills) + 2 Social Skills (19 sub-skills))
- Lippman et al. (2016) "Soft Skills" for Youth Workforce Success: 238 items (29 Soft skills (categorised from 172 studies - at least 238 terms were found in the field))  
*\*It reviewed 380 literatures & included 172 studies only*
- EDB's 9 Generic Skills (revised ver.) (CDC, 2015): 9 items (9 generic skills)
- EDB's 7 Priority Values (2008): 7 items (7 values)



# Stage 1 - Start with the O\*Net Model

## Main Reasons to Start with the O\*Net Model:

- Well-developed
- Jobs/occupations are mapped with the model and the info. is readily available on their website for free

## Limitations:

- English only
- Cultural differences (US vs HK)

→ The need for adaptation



# Stage 1 - Start with the O\*Net Model

## Merging terms:

- Items that are of very similar scopes were merged
- Mainly related to the items in “*Technical Skills*”

e.g.

*Equipment Maintenance*

+ *Equipment Selection*

+ *Installation*

⇒ *Equipment Installation and Maintenance*

# Stage 1 - Start with the O\*Net Model

At the end of this stage: 45 items



## Stage 2 - Mapping with Other Models

Items of the O\*Net model were mapped with the aforementioned models/frameworks

**Objectives of the mapping:**

- To evaluate the importance of the items (*i.e. skills & styles*) by checking whether they are also covered in other models
- To check whether there are items that are covered in other models/frameworks but are not included in the O\*Net model





## Stage 2 - Mapping with Other Models

**Some examples that are included in other models but are not covered in the O\*Net Model**

- IT Literacy Skills
- Basic Cognitive Skills
- Positive Attitude (e.g. Optimistic)
- Networking
- Cultural Sensitivity (e.g. Global Thinking)





## Stage 2 - Mapping with Other Models

**At the end of this stage:**

**A list of 63 items that cannot be  
directly mapped with the O\*Net model  
was compiled**





## Stage 3 -

# Deciding Which Qualities to be Added



### 3.1 Preliminary Survey among the Panel Members

- The Panel was formed by 7 educators and counsellors
- The 63 items were rated on a 3-point scale (0-2) in terms of:
  - (i) *Distinctiveness to the items in the O\*Net model*
  - (ii) *Perceived importance in the 21<sup>st</sup> century*
- **18 Items** with an average score  $\geq 1.2$  were included for the next steps



## Stage 3 -

# Deciding Which Qualities to be Added



### 3.2 Compiling the List for Teachers & Students Survey

- The 18 items were added to the 45 O\*Net model's items to form a list of 63 items
- This list was further discussed in the Panel to:
  - (i) *merge items that have very similar meaning and scope*
  - (ii) *remove items that have ambiguous meanings*
- At last, a list of **56 items** was compiled for teachers & students Survey





# Stage 3 - Deciding Which Qualities to be Added

## 3.3 Translation of the Items' Headings into Chinese



## Stage 3 -

# Deciding Which Qualities to be Added



## 3.4 Teachers & Students Survey (I)

On a 5-point scale,

- Students were asked 3 questions for each of the 56 items:
  - (i) 你是否了解以下各項「技能／能力」的意思？
  - (ii) 你認為你是否擁有／掌握以下各項「技能／能力」？
  - (iii) 你認為以下各項「技能／能力」對你未來就業是否有幫助？
- Teachers were asked 3 similar questions for each of the 56 items:
  - (i) 平均而言，你認為你的學生是否了解以下各項「技能／能力」的意思？
  - (ii) 平均而言，你認為你的學生是否擁有／掌握以下各項「技能／能力」？
  - (iii) 你認為以下各項「技能／能力」對你的學生未來就業是否有幫助？



## Stage 3 -

# Deciding Which Qualities to be Added



### 3.4 Teachers & Students Survey (II)

- A total of 32 teachers from 23 secondary schools have responded to the online survey
- A total of 129 secondary school students (127 S4-6 & two S1-3 students) have responded to the online survey



## Stage 3 -

# Deciding Which Qualities to be Added



### 3.4 Teachers & Students Survey (III) – Key Results (I)

From the perspective of students:

- On average, they somewhat understood the 56 items (*all items have an average score > 3.00*)
- They generally agreed that all the 56 items would be important to their career development (*all items have an average score > 3.40*)



## Stage 3 -

### Deciding Which Qualities to be Added

#### 3.4 Teachers & Students Survey (III) – Key Results (II)

From the perspective of teachers:

- Except 1 item (*i.e. equipment installation and maintenance, avg.= 2.97*), they generally agreed that the remaining 55 items would be important to their students' future career development (*with 3 items have an average score ranging from 3.00-3.40; the remaining 52 items have an average score > 3.40*)



## Stage 3 -

# Deciding Which Qualities to be Added



### 3.4 Implications from the Survey

- Just by reading the names of the selected 56 items, students said they could somewhat understand the meaning
- Both students and teachers generally agreed on the importance of the selected 56 items to the students' career development





## Stage 4 -

# Finalizing the List and Translation



The list and result were further discussed in the panels, during which the following tasks were completed:

- With reference to the original sources, descriptions of each items (*i.e. related behaviours/performances*) were written up
- The translated version of the descriptions were discussed and amended

## Stage 4 -

# Finalizing the List and Translation



- One item (*i.e. Repairing and Troubleshooting*) was merged with another item (*i.e. Equipment Installation and Maintenance*)
- One item (*i.e. Efficiency*) was deleted because its core meaning was covered by other items (*i.e. Time Management, Personal Management, Multi-Tasking, etc.*)



## Stage 4 -

# Finalizing the List and Translation

At the end of this stage:  
A list of 54 items was finalized



# Interesting Findings and Observations from the Teacher & Student Survey

1. The gap between teachers and students on the understanding of the items:
    - On average, teachers thought their students did not fully understand the meanings of about half of the 56 items (*26 items have an average score lower than 3.00*)
    - But all students respondents thought they somewhat understood the meanings of all 56 items (*All items have an average score higher than 3.00*)
- Any implications?





# Interesting Findings and Observations from the Teacher & Student Survey

2. The gap between teachers' and students' perceptions on the Five Most Important Qualities/Attributes to the students' career development:

From the Teachers' Angle:	From the Students' Angle:
Initiative 主動性	Adaptability/flexibility 適應能力／靈活性
Time Management 時間管理能力	Cooperation 合作
Speaking 說話能力	Stress Tolerance 抗壓能力
Adaptability/flexibility 適應能力／靈活性	Efficiency 效率
Integrity 誠信	Multi-tasking 多任務處理的能力





## Interesting Findings and Observations from the Teacher & Student Survey

3. The gap between teachers' and students' perceptions on the Five Least Important Qualities/Attributes to students' career development:

From the Teachers' Angle:	From the Students' Angle:
Equipment Installation and Maintenance 設備安裝與維修能力	Programming 程式編製能力
Programming 程式編製能力	Equipment Installation and Maintenance 設備安裝與維修能力
Equipment Operations and Monitoring 設備操作與監察能力	Operations Analysis and Design 操作分析與設計能力
Operations Analysis and Design 操作分析與設計能力	Science inquiry 科學探究
System Analysis and Evaluation 系統分析與評估能力	Mathematical Skills 數學能力





# Interesting Findings and Observations from the Teacher & Student Survey

4. The gap between teachers' and students' perceptions on the Top Five Skills that students possess:

From the Teachers' Angle:	From the Students' Angle:
Basic IT Skills 基本資訊科技能力	Dependability 可信賴
Cooperation 合作	Integrity 誠信
Concern for others 關心別人	Concern for others 關心別人
Networking 建立人際網絡能力	Independence 獨立
Reading Comprehension 閱讀理解能力	Cooperation 合作 Basic Cognitive Skills 基本認知能力





# Interesting Findings and Observations from the Teacher & Student Survey

5. Some skills that students thought they have mastered, but not in the eyes of teachers:

**Students thought they have mastered, but teachers disagreed:**

Judgment and Decision-making

判斷與決策能力 (S: 3.49 vs T: 2.63)

Management of Financial Resources

財政資源管理能力 (S: 3.32 vs T: 2.66)

Negotiation

協商能力 (S: 3.30 vs T: 2.66)

Attention to Detail

著眼細節 (S: 3.64 vs T: 2.69)





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