

DEVELOPING AND VALIDATING A MULTI-ITEM SELF-REPORT SCALE

I. CONSTRUCT DEFINITION AND CONTENT DOMAIN

1. Develop instrument purpose statement (i.e. construct definition, content domain)
2. Review existing social and behavioural sciences for suitable instruments

II. GENERATE AND JUDGE MEASUREMENT ITEMS

3. Generate original instrument content through critical review of relevant literature
4. Produce potential pool of scale items (i.e., **draft 1**)
5. Determine response formats (e.g., 5- 7-point Likert)
6. Identify panel of experts for a content analysis assessment
7. Identify panel of laypeople for a content analysis assessment
8. Contact panel of experts and laypeople and invite them to participate as critical friends
9. Direct panels to:
 - a. Review each of the statements relative to instrument purpose statement
 - b. Comment on the appropriateness of each item relative to instrument purpose statement
 - c. edit each statement accordingly
 - d. eliminate redundant items
10. On the basis of panel of expert and laypeople assessments, distill original pool of items into **draft 2**.

III. DESIGN AND CONDUCT STUDIES TO DEVELOP AND REFINE THE SCALE

11. Pretest instrument for face validity with a randomly selected group from the target population
12. Conduct follow-up interviews with each pretest participant to ensure the instrument was being properly interpreted (i.e., face validity assessments)
13. On the basis of pretest participant assessments, update instrument accordingly into **draft 3**.
14. Pilot-test draft 3 of instrument with a randomly selected sample from the target population
15. Conduct Exploratory Factor Analyses (EFA) to derive initial factor structure – i.e., dimensionality and theory
16. Assess internal consistency of instrument (i.e., Cronbach's alpha)
17. On the basis of EFA and internal consistency estimates, update instrument accordingly into **draft 4**.

IV. FINALIZE THE SCALE

18. Administer draft 4 of instrument to the sample
19. Conduct Exploratory Factor Analyses (EFA) to derive initial factor structure – i.e., dimensionality and theory
20. Assess internal consistency of instrument (i.e., Cronbach's alpha)
21. Conduct Confirmatory Factor Analyses (EFA) to test the theoretical factor structure and model specification
22. Evaluate CFA measurement models
23. On the basis of CFA and internal consistency estimates, finalize instrument accordingly as **draft 5**.
24. Roll-out draft 5 confident that your sound design will have produced a valid and reliable instrument that will yield you useful information.

REFERENCES

- Fowler Jr., F. J. (2002). **Survey research methods**. Thousand Oaks, CA, Sage
- Gray, G. and N. Guppy (2003). **Successful surveys: Research methods and practice**. Scarborough, ON, Nelson
- Netemeyer et al. (2003). **Scaling procedures**. Thousand Oaks, CA: SAGE.

A picture of caring and compassion... or of privilege and indifference? (and looking at how to use survey methodology sensibly)

Eric Jabal, KGV school
(Paper 2)

Connections student conference

1. To bring together Y12 students from 7 international schools in Hong Kong.
 2. To challenge them to 'connect' with each other and problem-solve local and global case study simulations.
- Participants were invited to complete a pre-conference survey.

CPCS – Survey portal

Welcome | Connections Pre-conference Survey | ESF - Microsoft Internet Explorer

http://www.ericjabal.ca/esf/index-bak.php

Connections Pre-conference Survey (CPCS)

Welcome!

The **Connections Pre-conference Survey (CPCS)** invites Year 12 conference attendees to shape the day's activities. The **CPCS** is specifically designed to explore the relationships between:

1. your view of internationalism;
2. your beliefs and behaviours regarding a variety of local and global environmental issues; and
3. how you see and make sense of yourself.

Divided into four sections, the confidential **CPCS** should take about 15 minutes. Because there are no 'right' or 'wrong' answers, your only concern should be to respond as honestly as possible. Take part and be heard!

If you have any questions about the **CPCS**, please email Eric Jabal (survey designer and conference team member): jabal1@kgv.edu.hk

Thanks for submitting your survey by Wednesday, Sept. 19th (7:00pm)

Username

Password

To go to the first question, select

Done Internet 100%

CPCS – Gross figures

- **Potential** sample:
 - 983 Y12 students from 7 international schools
- **Achieved** sample:
 - 428 surveys submitted from 7 int'l schools
- **Average time taken:** 11 min. 46sec.
 - given 7 days to submit a *CPCS* survey
- **Response rate** (gross): 44%
 - by school, **RR** ranged from 16% to 57%

CPCS – Nett figures

- **Achieved** sample: 428 surveys
- **Useable** sample: 373 surveys
 - with at least 75% of *CPCS* items completed
- **Nett** sample: 267 surveys
 - from 3 schools with 40% ≥ response rates
 - **Response rate** (nett): 27%

Sample characteristics

- **Sex**: 63% female, 37% male
- **Birthplace**: 47% HK | 14% Canada
7% US | 7% UK
- **'Home'**: 59% HK | 10% Canada | 5% China
- **Years in HK**:
57% 13+
34% 7-12
9% <7

Sample characteristics

- **Language mostly used with parents:**
 - 45% Cantonese | 38% English | 5% Korean
- **International school student type:**
 - 47% local-HK | 43% expatriate-HK | 10% expat
- **Nationality:** 22% British
20% Canadian
16% HK

What can we conclude?

1. **Closely 'connected' to/with Hong Kong**
 - ✓ birthplace
 - ✓ place called 'home'
 - ✓ years in HK
 - ✓ language mostly used with parents:
Cantonese
 - ✓ glo-cal-ised international school student type:
global-local/HK... (but not cosmopolitan local)

CPCS: View of Internationalism

<i>In order to be int'l, it is necessary...</i> (1 = Strongly disagree; 5 = Strongly agree)	Mean (1-5)
1. To believe that all cultures are equally valid.	4.38
2. To be aware of the cultural customs of people from other parts of the world.	4.13
3. To understand the key issues and events taking place around the world today.	4.12
3. To be interested in what happens in other parts of the world. (Hayden, 1998)	4.12

CPCS: View of Internationalism

<i>In order to be int'l, it is necessary...</i> (1 = Strongly disagree; 5 = Strongly agree)	Mean (1-5)
8. To read/view books or media from other cultures (either in their original language or in translation).	3.34
8. To speak another language well.	3.34
10. To have been taught by teachers from a different culture. (Hayden, 1998)	3.09

CPCS: How do you see yourself?

Relative importance to 'who I am' <i>(1=Not at all import.; 7=Extremely important)</i>	Mean <i>(1-7)</i>
1. My academic achievements.	5.14
2. My being an int'l school student.	4.91
3. My living in Hong Kong.	4.76
4. My being a student at this school.	4.65

CPCS: How do you see yourself?

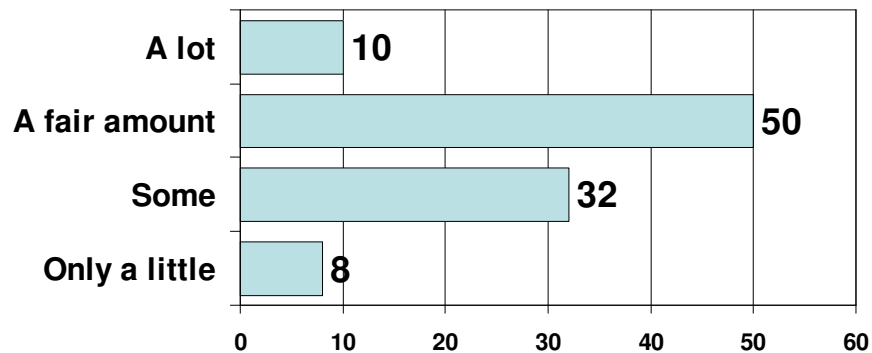
Relative importance to 'who I am' <i>(1=Not at all import.; 7=Extremely important)</i>	Mean <i>(1-7)</i>
7. My passport country.	3.65
8. My being artistic.	3.61
9. My religion.	3.53
10. The colour of my skin.	3.24

What can we conclude?

2. **Interested in world affairs.**
3. **Interested in/aware/tolerant of cultural 'Other'**
 - ✓ but through medium (comfort?) of English.
4. **MOST important to 'who I am':**
 - ✓ 'academic achievements' | 'being an international school student' | 'living in Hong Kong'.
5. **LEAST important to 'who I am':**
 - ✓ 'skin colour' | 'religion' | 'being artistic' | 'passport country'.

CPCS: Environment and You

How much do you think you know about environmental issues and problems? (%)



CPCS: Environment and You

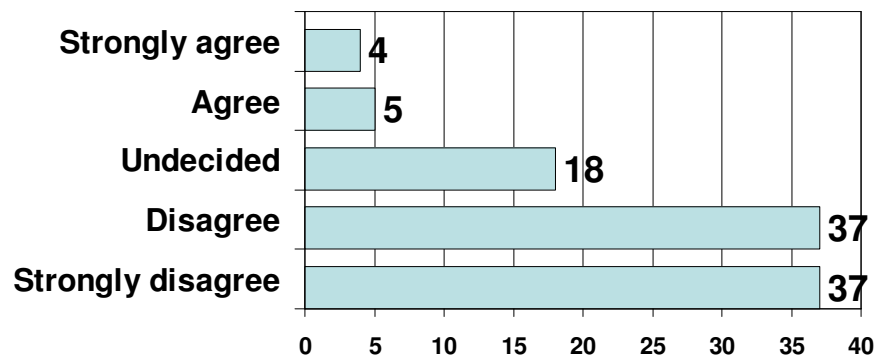
How serious an environmental problem do you think each one of these is for the planet today?

'One of the most serious problems'

1. Climate change	87%
2. Pollution	83%
3. Resources depletion	71%
4. Ozone depletion	66%
5. Waste/rubbish management	59%

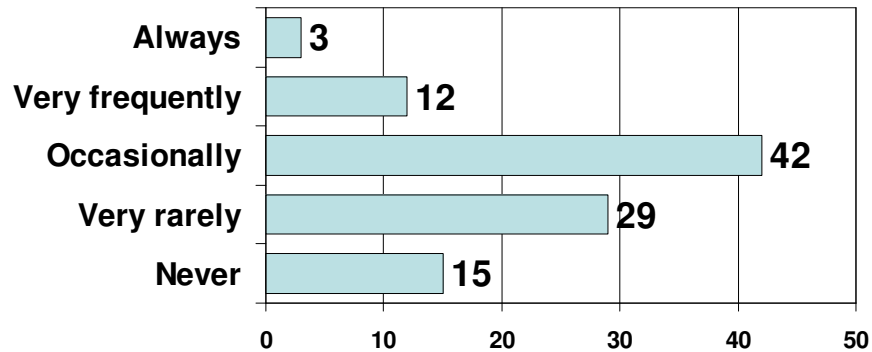
CPCS: Environment and You

There are more important things to do in life than protect the environment. (%)



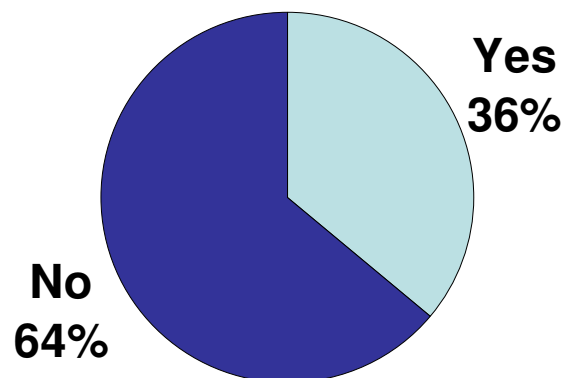
CPCS: Environment and You

How often do you make a special effort to pick up other people's rubbish at school? (%)



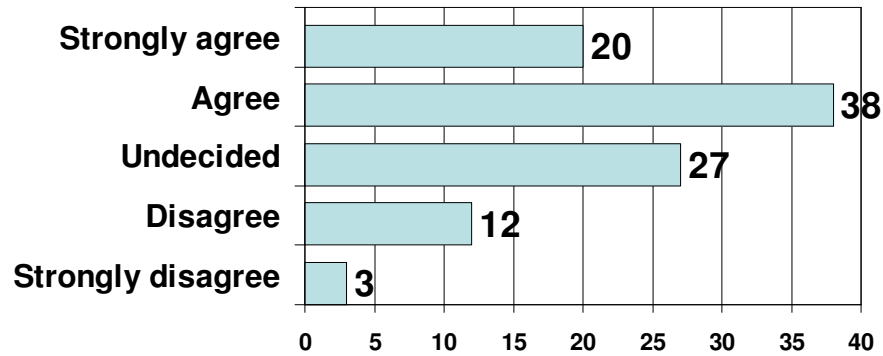
CPCS: Environment and You

By chance, have you joined a group at your school to help do things for the environment?



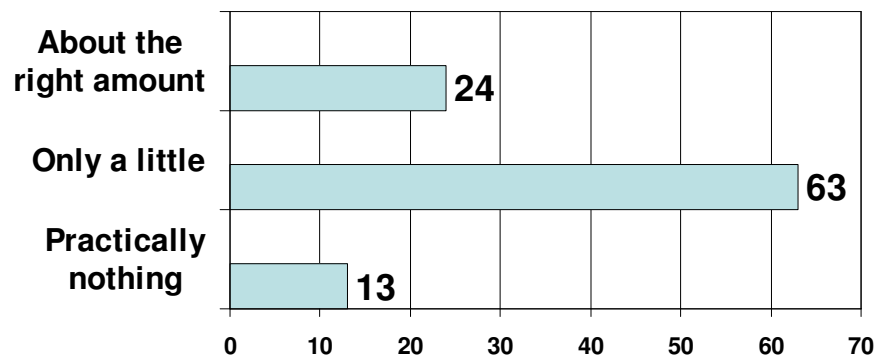
CPCS: Environment and You

People of my age in Hong Kong are consuming too much (me included). (%)



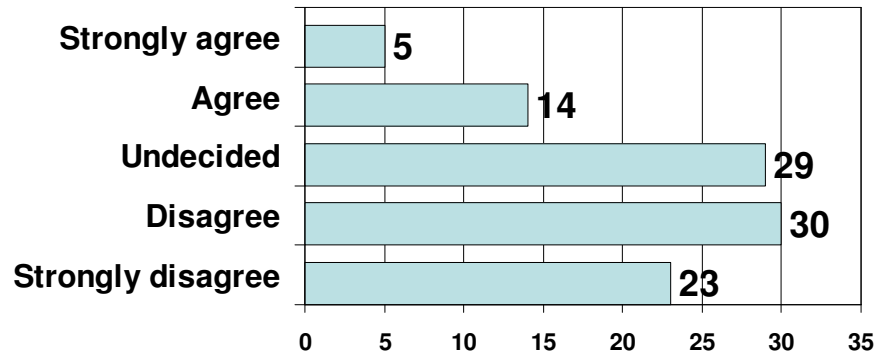
CPCS: Environment and You

How do you think the HK government is doing in terms of protecting the environment? (%)



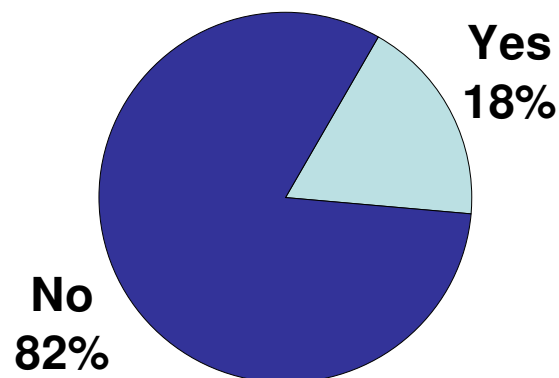
CPCS: Environment and You

It is just too difficult for someone like me to do much about the environment. (%)



CPCS: Environment and You

By chance, have you joined a group in Hong Kong to help do things for the environment?



What can we conclude?

6. Concerned about the natural environment.
7. Don't think the HK government is doing enough to protect the natural environment.
8. Consider themselves to be environmentally informed...
 - yet (in-) actions indicate that could be playing a greater part to help the environment

Thanks very much!

eric.jabal@kgv.edu.hk

- ✓ Thoughts?
- ✓ Questions?
- ✓ Comments?

