

Importance/Satisfaction Survey Design and Data Analysis Methods

Qin Liu

Research Analyst

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Background

- Student Satisfaction: An indicator for institutional effectiveness
- How is Student Satisfaction assessed?
 - Global measure & Domain measure
 - One-dimensional approach vs. Two-dimensional approach

Background (cont'd)

- Two-dimensional approach:

Importance/satisfaction survey design

e.g. Student Satisfaction Inventory (Noel-Levitz)

Customer Satisfaction Survey (National Association of College Stores)

Student Satisfaction Manual (Harvey & associates, 1997)

BCIT Full-time Student Opinion Survey

BCIT Library Student Survey

Two-dimensional approach to student satisfaction assessment: Importance/Satisfaction design

- Background
- Theoretical Lenses
- Proposed Methods: examples
- Group Discussion

Objective: to evaluate each method and find out the most appropriate method.

Theoretical Lens (1)

Quality of Life Research

- Importance plays a crucial role in satisfaction assessment.
- Importance-weighted satisfaction score
(e.g. Quality of Life Inventory)
= Satisfaction score * Importance score

Theoretical Lens (2)

Job Satisfaction Research

- Satisfaction rating incorporates the judgment of importance.

Dual value judgment for an affective evaluation:

- (1) Discrepancy between “wants” and “gets”
- (2) Importance

- Range-of-effect hypothesis (Locke, 1969, 1976)

Theoretical Lens (3)

Customer Satisfaction Approach

- Students are viewed as customers
- Expectations are important to satisfaction assessment

“Students can be regarded as ‘consumers’ of the services provided by the university, and that, like all consumers, their satisfaction depends largely on whether or not the outcomes associated with using the service meet expected levels or standards of performance.” (Orpen, 1990, p. 1)

Theoretical Lens (3) (cont'd)

- Expectation-disconfirmation model (Oliver, 1993)

Positive disconfirmation: satisfied

Negative disconfirmation: dissatisfied

Zero disconfirmation/Confirmation: just satisfied

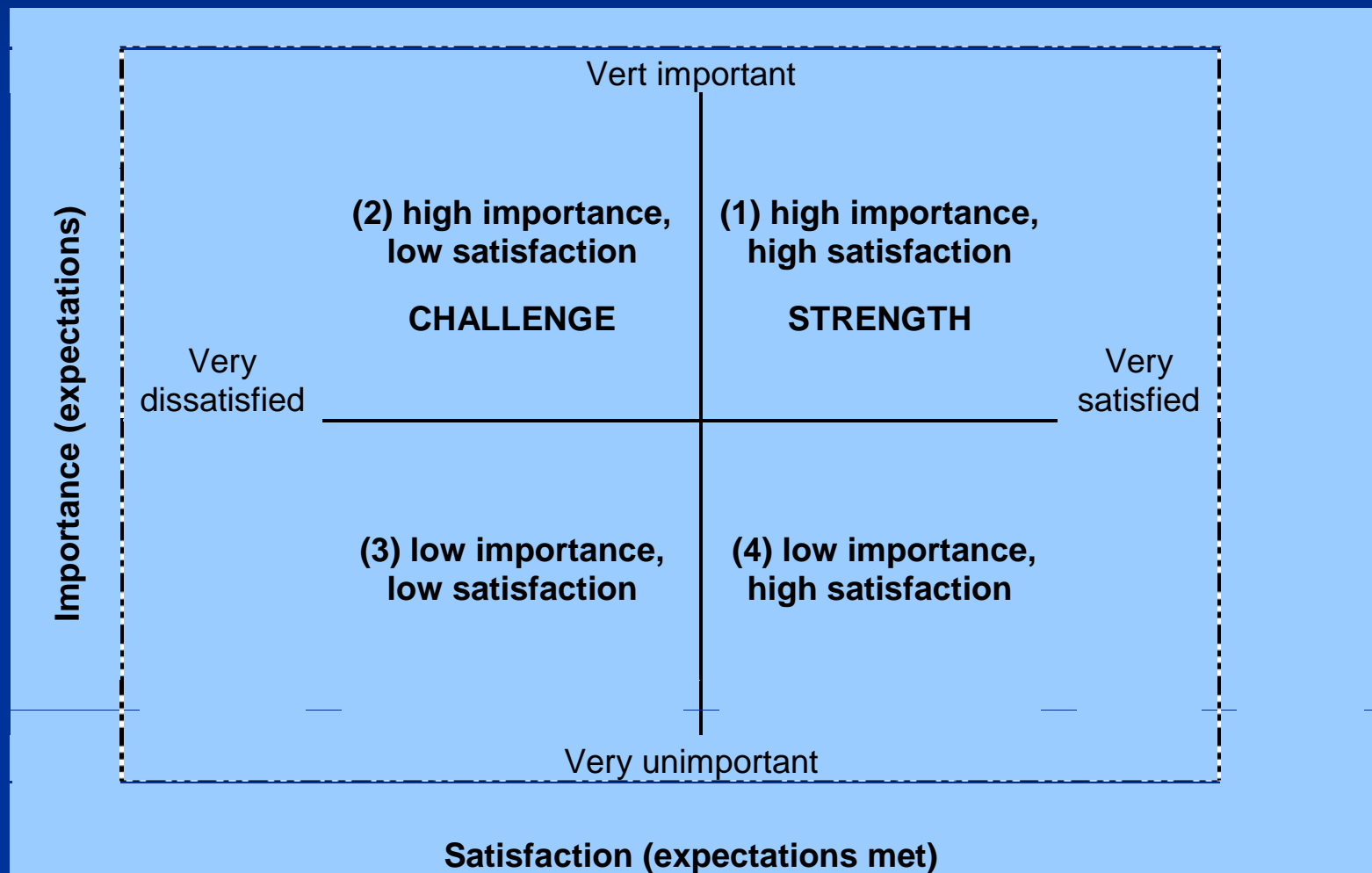
- Expectations can be measured by importance scores.

- Presumptions about “quality”

Quality: perceived services/performance meeting or surpassing customer needs or expectations

Theoretical Lens (4)

- **Satisfaction/Importance Grid** (modified from Bryant, 2006)



Data Analysis Methods

■ Example: BCIT Full-time Student Opinion Survey

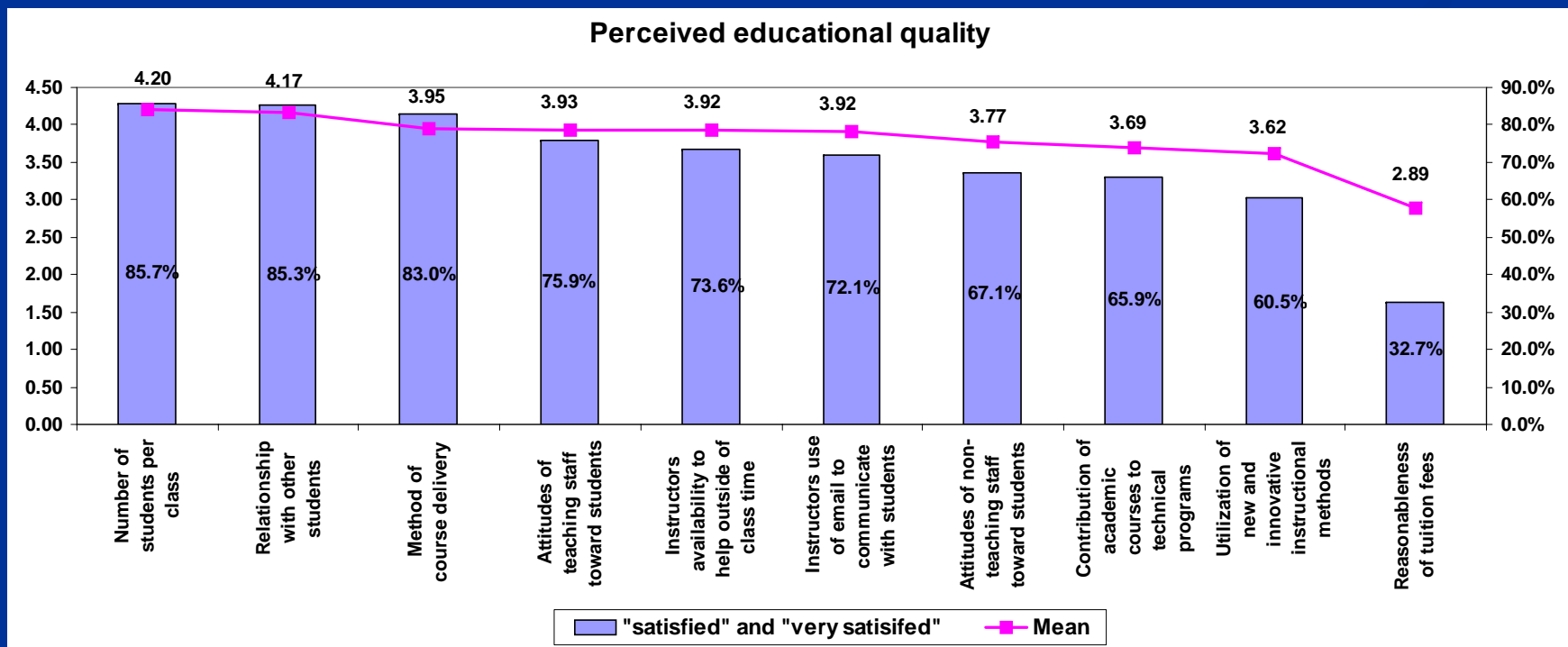
(Two-point importance scale)

Please rate the importance of, and your level of satisfaction with each of the following aspects of BCIT educational quality

	Important	Not Important	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied	Not Applicable / Don't Know
Method of course delivery (e.g., classroom, online, correspondence etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Utilization of new and innovative instructional methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instructors availability to help outside of class time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instructors use of email to communicate with students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of students per class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasonableness of tuition fees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contribution of academic courses (e.g., math, communication, physics, chemistry etc.) to the overall quality of technical programs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attitudes of teaching staff toward students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attitudes of non-teaching staff toward students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relationship with other students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Method (1)

■ One-dimensional approach



Method (2)

- Importance-weighted satisfaction/dissatisfaction

Weighted Satisfaction
(measuring how well student expectations are met given a certain expectation level)

Areas in which the institution is doing well

Weighted Dissatisfaction
(measuring how badly student expectations are *not* met given a certain expectation level)

areas in which the institution needs improvement

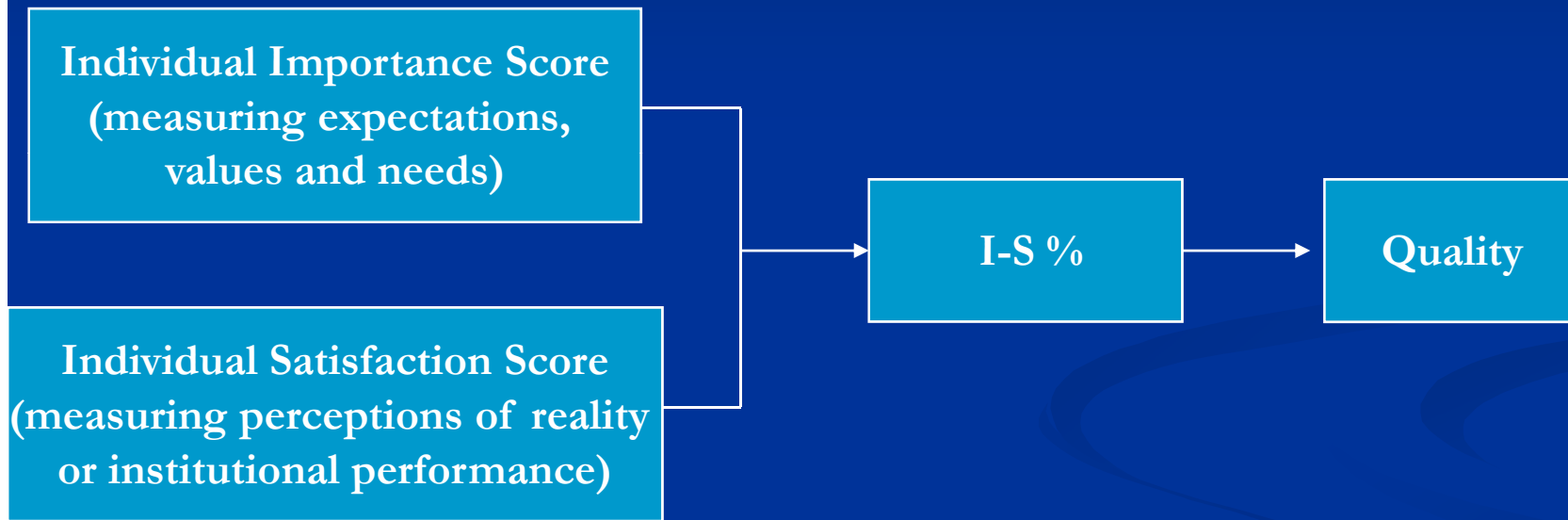
Method (2) (cont'd)

Question Items	N	IMPT	SAT	Weighted SAT	Ranking
Relationship with other students	927	93.2%	86.0%	0.801	1
Method of course delivery	946	91.1%	83.2%	0.758	2
Attitudes of teaching staff toward students	942	98.8%	76.1%	0.752	3
Number of students per class	919	86.8%	85.3%	0.741	4
Instructors availability to help outside of class time	914	91.4%	73.3%	0.670	5
Instructors use of email to communicate with students	878	85.5%	72.0%	0.616	6
Contribution of academic courses (eg. math) to the overall quality of technical programs	861	79.9%	66.3%	0.530	7
Attitudes of non-teaching staff toward students	829	78.0%	66.8%	0.522	8
Utilization of new and innovative instructional methods	910	81.6%	59.9%	0.489	9
Reasonableness of tuition fees	929	96.8%	32.5%	0.315	10

Question Items	N	IMPT	DISSAT	Weighted DISSAT	Ranking
Reasonableness of tuition fees	929	96.8%	37.9%	0.367	1
Utilization of new and innovative instructional methods	910	81.6%	10.8%	0.088	2
Instructors use of email to communicate with students	878	85.5%	9.9%	0.085	3
Attitudes of teaching staff toward students	942	98.8%	8.5%	0.084	4
Instructors availability to help outside of class time	914	91.4%	9.1%	0.083	5
Contribution of academic courses (eg. math) to the overall quality of technical programs	861	79.9%	10.0%	0.080	6
Attitudes of non-teaching staff toward students	829	78.0%	9.5%	0.074	7
Method of course delivery	946	91.1%	6.4%	0.059	8
Number of students per class	919	86.8%	3.9%	0.034	9
Relationship with other students	927	93.2%	2.8%	0.026	10

Method (3)

■ Importance-Satisfaction percentage



	Very dis-satisfied	Dis-satisfied	Neutral	Satisfied	Very satisfied	N/A or missing
Important						
Unimportant						

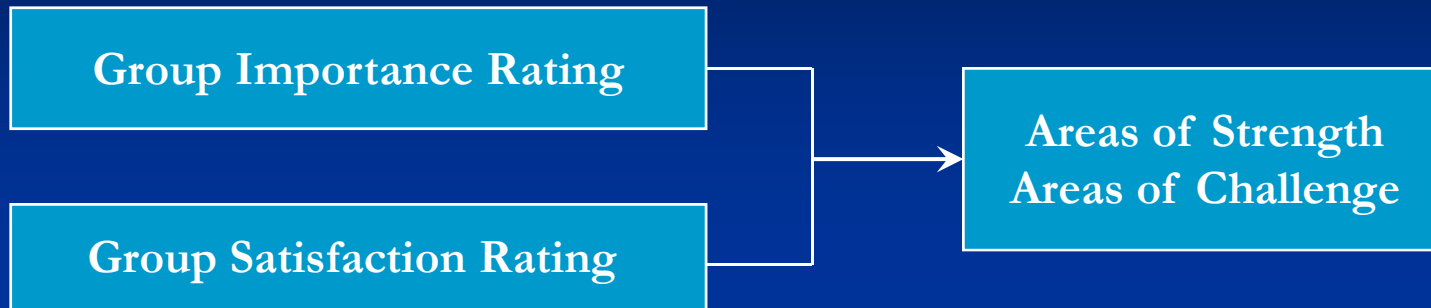
I-S %: percentage of those who indicated both "satisfaction" and "importance" out of all valid responses; i.e., the proportion of those respondents whose high expectations are well met.

Method (3) (cont'd)

■ I-S % results

Question Items	I-S %
Reasonableness of tuition fees	30.9%
Utilization of new and innovative instructional methods	50.3%
Attitudes of non-teaching staff toward students	56.0%
Contribution of academic courses (eg. math) to the overall quality of technical programs	60.4%
Instructors use of email to communicate with students	66.9%
Instructors availability to help outside of class time	69.0%
Attitudes of teaching staff toward students	75.4%
Number of students per class	75.4%
Method of course delivery (eg.classroom, online, correspondence etc)	77.0%
Relationship with other students	81.6%

Method (4)



	Very dis-satisfied	Dis-satisfied	Neutral	Satisfied	Very satisfied	N/A or missing
Important						
Unimportant						

% of importance: percentage of those respondents indicating the item is important out of all valid responses.

	Very dis-satisfied	Dis-satisfied	Neutral	Satisfied	Very satisfied	N/A or missing
Important						
Unimportant						

% of satisfaction: percentage of those respondents indicating "satisfied" or "very satisfied" out of those indicating "important".

Method (4) (cont'd)

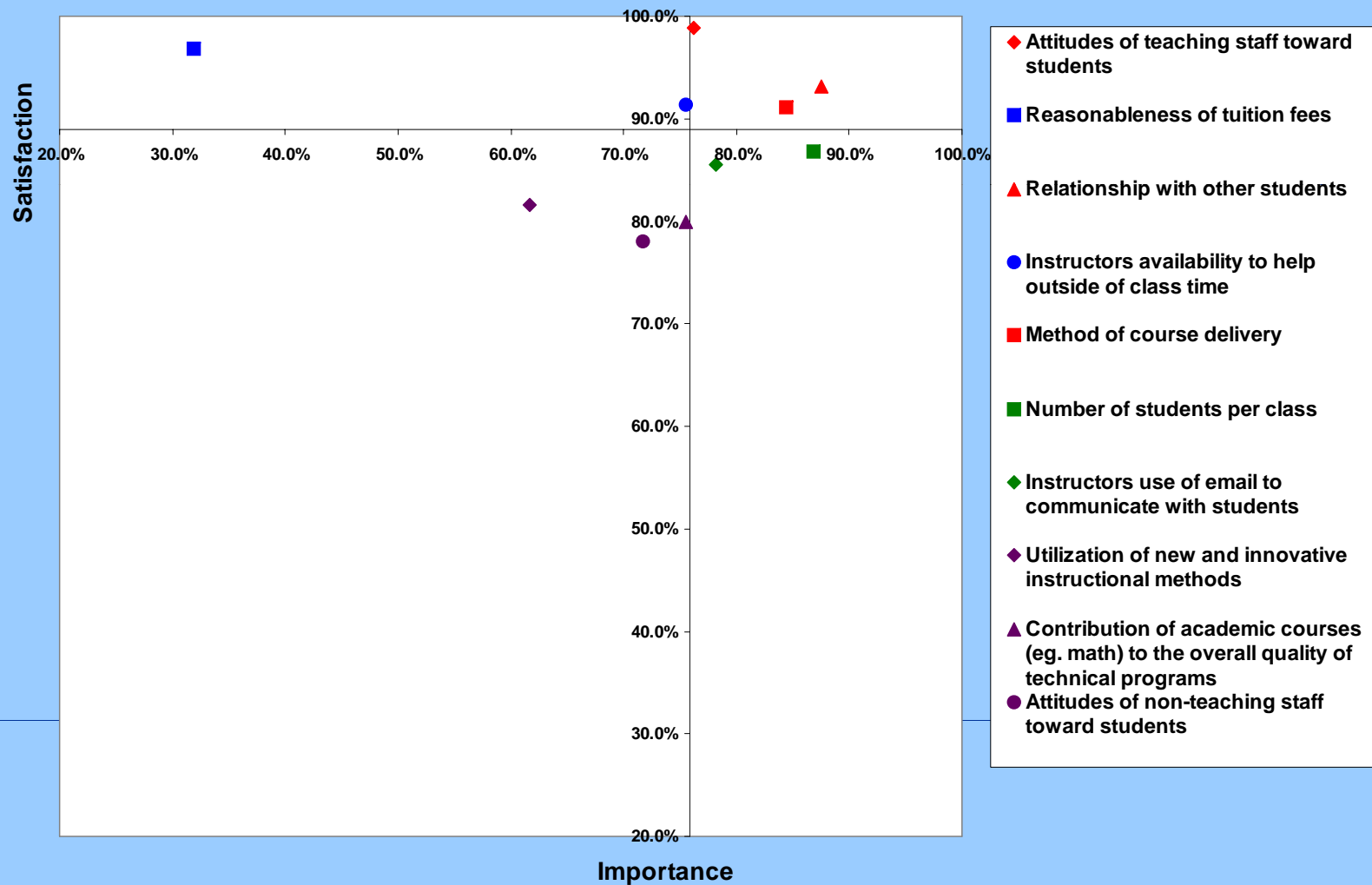
Question Items	Importance	Satisfaction
Attitudes of teaching staff toward students	98.8%	76.3%
Reasonableness of tuition fees	96.8%	31.9%
Relationship with other students	93.2%	87.5%
Instructors availability to help outside of class time	91.4%	75.6%
Method of course delivery	91.1%	84.5%
Number of students per class	86.8%	86.8%
Instructors use of email to communicate with students	85.5%	78.2%
Utilization of new and innovative instructional methods	81.6%	61.6%
Contribution of academic courses (eg. math) to the overall quality of technical programs	79.9%	75.6%
Attitudes of non-teaching staff toward students	78.0%	71.7%
Median	89.0%	75.9%
Internal Benchmark	80.0%	70.0%



Areas of Strength	Areas of Challenge
Relationship with other students	Reasonableness of tuition fees
Method of course delivery	Instructors availability to help outside of class time
Attitudes of teaching staff toward students	

Method (4) (cont'd)

Indicators of perceived educational quality



Another example:

5-point importance scale

Results from BCIT Library Student Survey

COLLECTION AVAILABILITY AND ACCESS Please rate the *importance* and *satisfaction* of the following to your study and research. Use the scales (1 - 5) and mark your responses for each question. If you are unfamiliar with a particular question item, please mark 'Not familiar with'.

		Importance					Not familiar with		Satisfaction					Not familiar with			
		Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
5.	Book collection	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
6.	Print magazines and journals	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
7.	DVD/Video collection	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
8.	Electronic resources (full-text databases, e-journals, e-books)	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
9.	Comments: _____																

LIBRARY FACILITIES AND SERVICES Please rate the *importance* and *satisfaction* of the following to your study and research. Use the scales (1 - 5) and mark your responses for each question. If you are unfamiliar with a particular question item, please mark 'Not familiar with'.

		Importance					Not familiar with		Satisfaction					Not familiar with			
		Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
10.	General study space	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
11.	Bookable rooms for discussion	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
12.	Quiet study rooms	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
13.	An area to plug in a laptop for use in the Library	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
14.	Access to the Internet	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
15.	Wireless Internet access in the Library	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
16.	MyBCIT Card services	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
17.	Microcomputer Centre - availability of computers	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>
18.	Availability of Librarians to answer reference questions	Very important	1	2	3	4	5	Not at all important	<input type="checkbox"/>	Very satisfied	1	2	3	4	5	Not at all satisfied	<input type="checkbox"/>

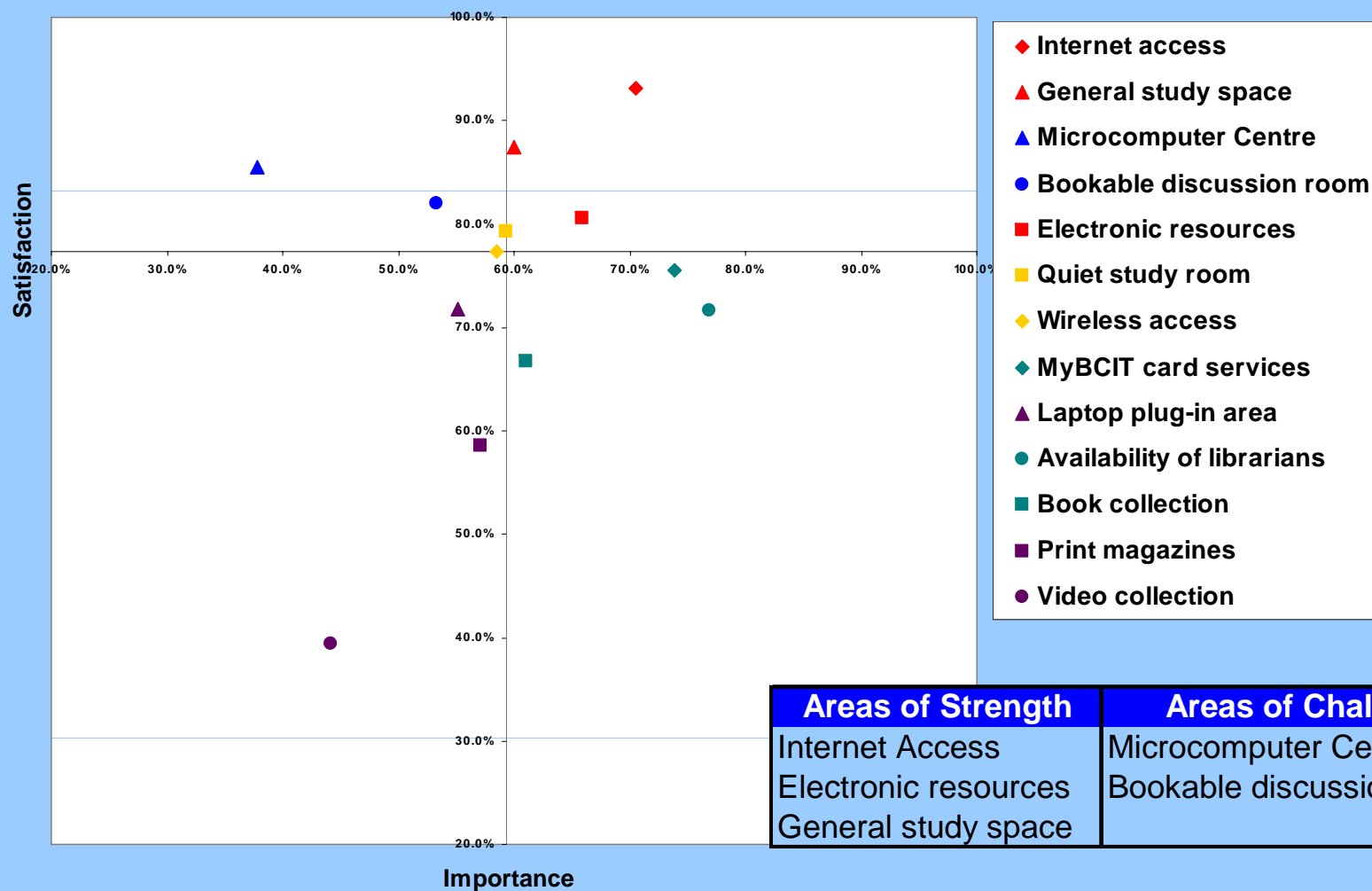
Another example (cont'd)

- Two options for importance and satisfaction ratings in Method (4)
 - a. Using percentage of importance and percentage of satisfaction
 - b. Using the mean of importance and satisfaction scores

Question Items	Importance	Satisfaction
Internet access	93.1%	70.5%
General study space	87.4%	60.0%
Microcomputer Centre	85.5%	37.8%
Bookable discussion room	82.1%	53.3%
Electronic resources	80.6%	65.9%
Quiet study room	79.3%	59.3%
Wireless access	77.4%	58.5%
MyBCIT card services	75.6%	73.9%
Laptop plug-in area	71.8%	55.1%
Availability of librarians	71.6%	76.9%
Book collection	66.7%	61.0%
Print magazines	58.5%	57.1%
Video collection	39.4%	44.2%
Median	77.4%	59.3%
Internal Benchmark	80.0%	70.0%

Another example (cont'd)

Perceived Library collections, facilities and services



Another example (cont'd)

■ Using the mean

Question Items	Importance	Satisfaction	Gap Score	Rank of gap score
Internet access	4.67	3.86	0.82	4
General study space	4.46	3.60	0.86	3
Microcomputer Centre	4.43	2.97	1.46	1
Bookable discussion room	4.31	3.42	0.89	2
Electronic resources	4.25	3.57	0.69	6
Quiet study room	4.24	3.57	0.66	7
Wireless access	4.18	3.47	0.70	5
MyBCIT card services	4.11	3.75	0.36	10
Laptop plug-in area	4.00	3.44	0.56	8
Availability of librarians	3.98	3.91	0.07	12
Book collection	3.85	3.48	0.38	9
Print magazines	3.67	3.37	0.30	11
Video collection	3.08	3.12	-0.05	13
Median	4.18	3.48		

Areas of Strength	Areas of Challenge
Internet Access General study space Electronic resources Quiet study room	Microcomputer Centre Bookable discussion room

Discussion

(1) With which method does the study provide information that best serves institutional decision-making purposes?

- Theoretical/conceptual consideration
- Statistical consideration
- Practical consideration

“What actions might be taken as a result of knowing this?”

(2) Are there other methods?

Thank you for your participation!

Contact info: qin_liu@bcit.ca