

**Quality of school service
and satisfaction perceived by parents:
validation study of a questionnaire
measuring the “customer satisfaction”
in scholastic field**

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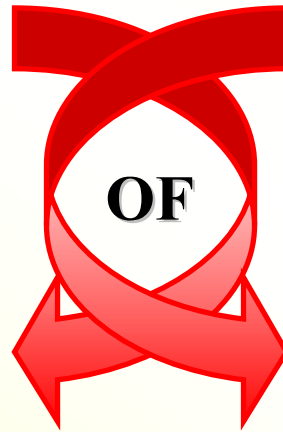
University of Verona

PERCEIVED SATISFACTION



DEPENDS ON

presence/absence



OF

CONCRETE

ASPECTS

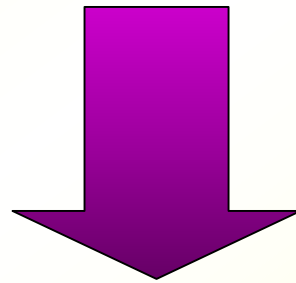
(organization)

ABSTRACT

ASPECTS

(relationships)

Construction and validation of a questionnaire measuring the customer satisfaction in scholastic field



- tests before application**
- tests after application**

Construction and validation

3 stages

1. Pre-test

2. pilot study (little survey)

3. Tool application



**Tests before
application**



**tests after
application**

CONSTRUCTION

preliminary steps

- **Bibliography research**
- **Interviews:** 4 experts in making tools for measurement (such as psychometricians);
10 people coming from the same population of the final survey
- **list of a not-final number of items**

CONSTRUCTION

pre-test



10 parents

3 steps

1. Questionnaire administered to parents
2. Observations on items by parents
3. Questions to parents: Are the items and topics relevant and pertinent? (face and content validity); Is the questionnaire too long? (cognitive load); Are category ratings suitable in order to express your opinion?

C O N S T R U C T I O N

results of pre-test

- 1. Elimination of items considered superfluous or unfit for the specific survey context**
- 2. Union of specific items, with similar meanings, in more general items**
- 3. Shift of items belonging to certain Areas to other Areas judged as more suitable and right for them**
- 4. Insert of blanks for observations and suggestions at the end of each Area**

In this way – and according to scientific literature (Bohrnstedt, 1983; Favretto, Meneghini e Sartori, 2002) – it was possible to abridge the number of items, from **66 in the first version to **57** in the second**

**Of these 57,
only 33 want a judgement,
referring to perceived satisfaction,
on a rating scale from 1 to 10;
and of these 33,
only 27 regard all the parents.
Thus, it is on this group of 27 items
that statistical analyses were
conducted in order to test the
construct validity of the questionnaire**

The items are grouped in 6 areas

Area 1: facilities - building, spaces, etc. (5 items)

Area 2: organization - lesson time, communication with parents, etc. (4 items)

Area 3: relations - parent/teacher relationship (7 items)

Area 4: methodology and teaching (6 items)

Area 5: school environment - relationships between teachers, students and teachers/students (4 items)

Area 6: relationship between the school and the environment in which it is (1 items)

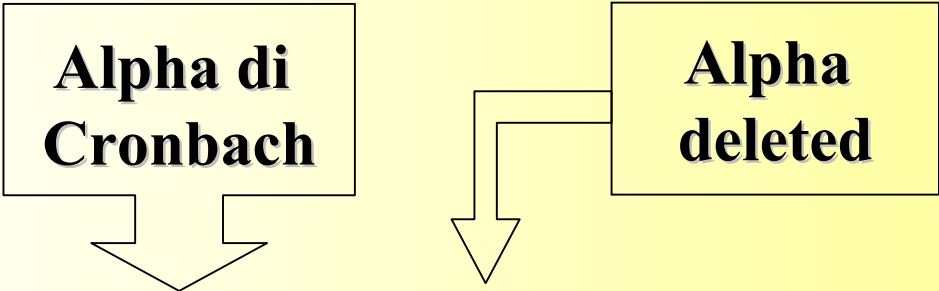
CONSTRUCTION/VALIDATION

pilot study

- **120** parents, 60 for the elementary school and 60 for the middle school
- **96** questionnaires given back (80%)

**Alpha di
Cronbach**

**Alpha
deleted**



AREA 1	.88	→	.89 without item 13
AREA 2	.74	→	.75 without item 17
AREA 3	.85	→	.86 without item 25 .87 without item 31
AREA 4	.86	→	.88 without item 35
AREA 5	.79	→	---

Alpha 27 items = .93

Exploratory Factor Analysis

6 Principal Components - 72,5% of variance

All the items correlate with the first factor with correlation coefficients which are higher than .40 (Kline, 1994), except item 31 and item 35

So, 25 items out of 27 seem to refer all to the same construct (satisfaction towards the scholastic service)

Confirmatory Factor Analysis (2 factors)

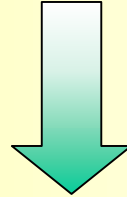
Method of Principal Components
Varimax Rotation

FACTOR 1: 18 items (Areas: 3, 4, 5, 6)

FACTOR 2: 9 items (Areas: 1, 2)

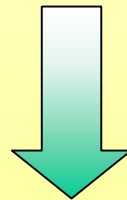
} 52,5%

FACTOR 1



Satisfaction for abstract aspects

FACTOR 2

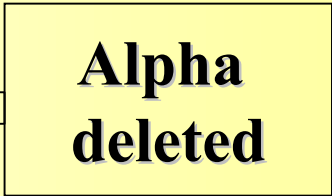
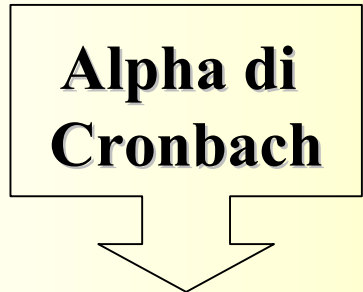


Satisfaction for concrete aspects

VALIDATION

tool application

698 parents



AREA 1	.80	→	.81 without item 16
AREA 2	.71	→	.74 without item 20
AREA 3	.88	→	.89 without item 31
AREA 4	.90	→	---
AREA 5	.83	→	---

Alpha 27 items = .95

Exploratory Factor Analysis

4 Principal Components - 62,2% of variance

All the items correlate with the first factor with correlation coefficients which are higher than .40 (minimum: .47)

So, all the items seem to refer all to the same construct (satisfaction towards the scholastic service)

After Varimax Rotation, the factor structure is the one presented in next slide:

FATTORI = FACTORS

ASPETTI INTANGIBILI = ABSTRACT ASPECTS

ASPETTI TANGIBILI = CONCRETE ASPECTS

**Two factors (Didattica-Clima, Relazione) belong to
ABSTRACT ASPECTS**

**Two factors (Struttura, Organizzazione) belong to
CONCRETE ASPECTS**

FATTORI				
ASPETTI INTANGIBILI		ASPETTI TANGIBILI		
1	2	3	4	
Didattica-Clima	Relazione	Struttura	Organizzazione	
Item 45	.815			
Item 36	.781			
Item 46	.765			
Item 35	.709			
Item 34	.708			
Item 47	.700			
Item 30	.622			
Item 44	.611			
Item 37	.585			
Item 49	.504			
Item 32	.504			
Item 31		.716		
Item 27		.703		
Item 17		.655		
Item 28		.646		
Item 29		.586		
Item 26		.548		
Item 25		.532		
Item 33		.520		
Item 12			.818	
Item 14			.784	
Item 15			.676	
Item 13			.588	
Item 16			.480	
Item 18				.836
Item 19				.675
Item 20				.407
alpha	.93	.88	.82	.70

Confirmatory Factor Analysis (2 factors)

Method of Principal Components
Varimax Rotation

FACTOR 1: 19 item (Areas: 3, 4, 5, 6) }
FACTOR 2: 8 item (Areas: 1, 2) } **52,2%**

The questionnaire seems to measure two super-factors in a valide and reliable way:

1. A factor which refers to abstract aspects such as the ones regarding relationships;

2. A factor which refers to concrete aspects such as the ones regarding the organization