

# Investigation of Pre-Service Teachers' Attitudes Towards Measurement and Evaluation Course with Q Method

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**Abstract:** *In this study, pre-service teachers' attitudes towards measurement and evaluation course, and which aspects of their attitudes towards measurement and evaluation course were emphasized were examined by using Q method. Using the inductive design model, 18 Q sentences were created and data were collected with a quasi-normal distribution design. The research data were collected from 30 pre-service teachers. The collected data were analyzed in PQMethod 2.35 program. As a result of the analysis, it was seen that 26 pre-service teachers were grouped under 3 factors. 16 pre-service teachers were grouped under the first factor, 7 pre-service teachers under the second factor and 3 pre-service teachers under the third factor.*

**Keywords:** *Q method, Measurement and evaluation*

## 1. Introduction

This study aims to reveal how the measurement and evaluation course is perceived by pre-service teachers and their common attitude towards this course through Q method. In this context, answers to the following questions are sought:

1. Do pre-service teachers have a common attitude towards the measurement and evaluation course?
2. What are the factors affecting pre-service teachers' attitudes towards measurement and evaluation course?

## 2. Method

Q methodology was used in this study. Q methodology is a method in which the strengths of quantitative and qualitative methods are used and the data analysis process is carried out with a special computer software (Brown, 1996; Demir & Kul, 2011). In this study, qualitative methods were used to investigate pre-service teachers' attitudes towards the measurement and evaluation course and quantitative methods were used to analyse the collected data. It is thought to be an original and important study in terms of examining the attitudes of pre-service teachers towards the measurement and evaluation course with this method.

## 3. Results

As a result of the analyses, it was seen that 26 pre-service teachers were grouped under 3 factors. 16 pre-service teachers were grouped under the first factor, 7 pre-service teachers under the second factor and 3 pre-service teachers under the third factor.

TABLE I: Factor Loadings Table for Participants

| Participant/Factor | 1              | 2              | 3               |
|--------------------|----------------|----------------|-----------------|
| p1                 | 0.4705         | <b>0.7571X</b> | 0.1142          |
| p2                 | -0.0080        | <b>0.6827X</b> | -0.5334         |
| p3                 | <b>0.6897X</b> | -0.1125        | -0.0969         |
| p4                 | 0.0121         | 0.5552X        | -0.2862         |
| p5                 | <b>0.7179X</b> | 0.4255         | 0.4128          |
| p6                 | 0.1616         | <b>0.6073X</b> | -0.2560         |
| p7                 | 0.5186         | 0.4489         | -0.3748         |
| p8                 | <b>0.6557X</b> | 0.0582         | 0.3977          |
| P9                 | 0.3340         | 0.2143         | <b>0.6474X</b>  |
| p10                | 0.5301         | 0.5138         | -0.1692         |
| p11                | -0.0255        | -0.2341        | <b>0.6145X</b>  |
| p12                | <b>0.6099X</b> | -0.3655        | -0.3083         |
| p13                | 0.4795         | 0.2061         | <b>-0.6305X</b> |
| p14                | 0.1620         | <b>0.7118X</b> | -0.2137         |
| p15                | 0.3248         | <b>0.8337X</b> | -0.0180         |
| p16                | <b>0.6280X</b> | 0.0818         | -0.2586         |
| p17                | -0.2557        | <b>0.8671X</b> | -0.1655         |
| p18                | <b>0.7467X</b> | -0.1478        | -0.2955         |
| p19                | -0.0018        | <b>0.7092X</b> | 0.4681          |
| p20                | <b>0.6601X</b> | -0.0144        | -0.1823         |
| p21                | <b>0.5182X</b> | -0.1240        | 0.1351          |
| p22                | <b>0.6337X</b> | -0.0093        | -0.4147         |
| p23                | <b>0.6108X</b> | 0.4106         | -0.0270         |
| p24                | <b>0.7365X</b> | -0.3086        | -0.2818         |
| p25                | <b>0.7604X</b> | 0.0494         | -0.2376         |
| p26                | <b>0.6076X</b> | -0.1589        | -0.3544         |
| p27                | <b>0.8590X</b> | -0.0646        | -0.1757         |
| p28                | 0.5106         | 0.3366         | -0.3553         |
| p29                | <b>0.7087X</b> | 0.5891         | 0.0142          |
| p30                | <b>0.6729X</b> | 0.2834         | 0.2541          |

TABLE II: Z Values for the Items and Importance Ranking of the Items

| Item    | Factor 1 |      | Factor 2 |      | Factor 3 |      |
|---------|----------|------|----------|------|----------|------|
|         | Z        | Rank | Z        | Rank | Z        | Rank |
| Item 3  | 1.39     | 1    | -1.00    | 15   | 0.72     | 6    |
| Item 2  | 1.30     | 2    | 1.37     | 2    | -0.66    | 14   |
| Item 12 | 1.23     | 3    | 0.50     | 6    | -0.48    | 13   |
| Item 18 | 1.11     | 4    | -0.10    | 9    | -1.75    | 17   |
| Item 1  | 1.06     | 5    | 1.31     | 3    | -1.76    | 18   |
| Item 17 | 0.77     | 6    | -0.58    | 11   | 1.25     | 2    |
| Item 9  | 0.49     | 7    | 1.56     | 1    | 1.29     | 1    |
| Item 5  | 0.28     | 8    | -1.17    | 17   | 0.70     | 7    |
| Item 8  | -0.05    | 9    | -1.30    | 18   | -0.03    | 12   |
| Item 16 | -0.15    | 10   | 1.06     | 5    | 0.72     | 6    |
| Item 6  | -0.16    | 11   | -1.10    | 16   | -1.73    | 16   |
| Item 15 | -0.51    | 12   | 0.43     | 7    | 0.28     | 9    |

|         |       |    |       |    |       |    |
|---------|-------|----|-------|----|-------|----|
| Item 10 | -0.70 | 13 | -0.14 | 10 | 0.30  | 8  |
| Item 14 | -0.83 | 14 | -0.89 | 14 | 0.98  | 3  |
| Item 7  | -1.06 | 15 | 1.27  | 4  | -0.03 | 12 |
| Item 11 | -1.10 | 16 | -0.85 | 13 | 0.25  | 10 |
| Item 13 | -1.49 | 17 | -0.72 | 12 | 0.75  | 4  |
| Item 4  | -1.58 | 18 | 0.34  | 8  | -0.80 | 15 |

The fact that 7 positive Q sentences out of 9 positive Q sentences used in the study are the sentences approached positively by the people in factor 1 shows that pre-service teachers' attitudes towards the measurement and evaluation course are positive. The fact that the pre-service teachers gathered under this factor gave importance to the negative sentences “*I think that I need to take different trainings other than the measurement and evaluation course in this field in order to reach the competence to develop a measurement tool.*” and “*I prefer scientific activities in my field to scientific activities in the field of measurement and evaluation.*” shows that these participants prioritize their own fields even though they give importance to the measurement and evaluation course.

In Factor 1, where there were 16 respondents, the most positive sentence was “*I think that prospective teachers should receive advanced training on measurement and evaluation.*”, while the most negative sentence was “*I think that the knowledge I gained from the measurement and evaluation course is information that will remain in theory.*”

The sentence “*Having to deal with mathematical formulas in the measurement and evaluation course disturbs me.*”, which is one of the most preferred sentences by the participants under the second factor, shows that the participants gathered under this factor have a negative approach to the course due to the mathematical aspect of the measurement and evaluation course; however, their positive approach to the sentence “*I think that I need to take a measurement and evaluation course in order to be able to make appropriate measurement and evaluation.*” shows that they are aware of the necessity of the measurement and evaluation course.

#### 4. References

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