

Construction of Emotional Intelligence Test Scale

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Abstract

Emotional intelligence), a vital psychological construct since the 1990s, encompasses the ability to perceive, understand, regulate, and manage emotions effectively in oneself and others. This study aimed to construct and standardize an Emotional Intelligence Test Scale suitable for assessing prospective secondary school teachers. A 43-item pool covering five dimensions—empathy, self-awareness, motivation, social skills, and self-regulation—was developed through literature review and expert validation, then refined to 37 items and piloted among 89 participants. Item analysis using the t-test led to a final 31-item scale. Reliability was confirmed through Split-Half, Guttman, and Cronbach's Alpha methods, yielding high coefficients (0.870, 0.866, and 0.990 respectively), demonstrating strong internal consistency. Scoring followed a 5-point Likert scale, with norms established using stanine grading to categorize emotional intelligence levels. This standardized tool addresses limitations of existing measures by offering contextual relevance, psychometric robustness, and practical applicability for research and educational settings.

Keywords: Emotional Intelligence, Likert Scale

1. Introduction

Emotional intelligence (EI), recognized as a significant psychological concept since the 1990s, refers to the capacity to understand and manage one's own emotions and those of others. It encompasses self-awareness, empathy, effective communication, and the ability to handle interpersonal relationships judiciously and empathetically. Emotionally intelligent individuals can regulate their emotions, especially under stress, and demonstrate cooperation, reliability, and intrinsic motivation. Daniel Goleman (1995) emphasized that emotional intelligence accounts for 80% of success, surpassing general intelligence. It enhances creative and effective functioning across various life domains, fostering kindness, empathy, and strong social bonds. People with high emotional intelligence can identify, interpret, and respond to emotional cues, making them more adaptive in both personal and professional contexts.

2. Emotional Intelligence Test Scale

Emotional intelligence is commonly assessed using a range of tools designed to evaluate an individual's ability to recognize, understand, manage, and utilize emotions effectively. Some of the common methods include self-report questionnaires, 360-degree feedback, performance assessments, and ability tests. Self-

report questionnaires are among the most widely used methods, where individuals rate themselves on various emotional Intelligence dimensions such as empathy, self-awareness, and interpersonal skills. The Emotional Intelligence Appraisal is a well-known example of this type. Meanwhile, 360-degree feedback gathers evaluations from peers, supervisors, and others to offer a more rounded view of an individual's emotional competence. Performance assessments focus on observing behaviour in real-life scenarios, offering potentially more objective insights into how individuals actually manage emotions. Ability tests, on the other hand, are performance-based and simulate emotional situations requiring participants to apply emotional reasoning and regulation skills.

Despite these tools, no single method can fully capture the complexity of emotional intelligence. Factors like self-perception bias and the desire to present oneself positively may affect the accuracy of results, especially in self-reports and interviews. While face-to-face interviews may appear direct, they often prompt individuals to withhold or modify their responses to maintain a favourable self-image. Thus, self-report questionnaires, when carefully constructed and standardized, are often considered the most practical method for measuring Emotional Intelligence in research contexts. It provides a level of confidentiality and psychological safety that encourages honest reflection.

For this reason, the present article employed self-report questionnaires as the primary method for assessing participants' emotional intelligence. Among several types of scales that can be constructed, the present Emotional Intelligence Test Scale use Likert Scale with five (5) options ranging from strongly Agree to Strongly Disagree. From the scores of the scale, the respondents can be classified as high or low in their emotional intelligence.

3. Rationale

As emotional intelligence influences how individuals manage stress, build relationships, and make decisions, it becomes essential to develop reliable and valid tools to measure these competencies accurately. A well-constructed emotional intelligence scale allows researchers and practitioners to assess individuals' emotional functioning in various contexts, enabling better understanding and development of emotional skills.

A standardized emotional intelligence scale is essential for research studies, especially in educational and organizational settings, where understanding emotional competence can support interventions, training programs, and performance evaluations. By constructing a customized emotional intelligence scale, researchers can provide more accurate data to inform policy and practice, ultimately contributing to the holistic development of individuals. This rationale underlines the importance of developing a precise, context-sensitive tool to measure emotional intelligence effectively.

4. Objective: To construct and standardize emotional intelligence test scale

In order to construct and standardize test scale, the investigator follows steps in the construction of scale as – selection of statements, try out, establishment of reliability, establishment of validity, scoring procedure, norms and interpretation of Emotional Intelligence Test Scale.

Selection of Statements:

The investigator reviewed literature on emotional intelligence by exploring a variety of sources, including books, manuals, academic journals, and research studies conducted on diverse populations through both online and offline platforms. Thereafter, the researcher framed 43 statements covering various dimensions like empathy, self-awareness, motivation, social skill and self-regulation.

Validation:

A panel of three experts in teacher education was given a set of items to review and asked to assess the inherent qualities and suitability of each item for measuring emotional intelligence. They were also requested to examine the items for clarity, relevance, and appropriateness within the domain of emotional intelligence and test development, and to offer constructive feedback and suggestions for possible improvements.

Preparation of Pilot Scale:

Based on the experts' review, the number of items was refined and reduced to 37 statements by eliminating those that were unclear or repetitive. As a result, six items were removed from the original version, leading to the development of a draft emotional intelligence test scale comprising 37 carefully selected statements. Each statement includes five response options, ranging from "strongly disagree" to "strongly agree." The distribution of items, revised according to the experts' feedback, is presented in Table 1. Additionally, instructions and a personal information sheet were included in the test booklet to guide respondents effectively.

Table 1 Distribution of statements over various dimensions

| Sl. No | Dimensions | No. of Items |
|--------------|-------------------|--------------|
| 1 | Empathy | 5 |
| 2 | Self – Awareness | 7 |
| 3 | Motivation | 8 |
| 4 | Social Skill | 7 |
| 5 | Self – Regulation | 10 |
| TOTAL | | 37 |

Try out:

The finalized draft of the emotional intelligence test scale, comprising 37 statements, was initially administered to prospective secondary school teachers in Aizawl city to determine the discriminative value of each item. The sample for the try-out included 89 participants, consisting of 65 female and 24 male prospective teachers. During the pilot testing, participants were clearly instructed to carefully read and respond to every statement without leaving any item unanswered. They were also informed that there were no objectively right or wrong answers, and that their responses should genuinely reflect their personal views and judgments. Participants were encouraged to respond to each item based on their individual perspectives.

After the test was completed, the response booklets were collected and evaluated using a 5-point Likert scale. Each statement was scored from 1 to 5, corresponding to the following response options:

1. Strongly Agree,
2. Agree,
3. Neutral,
4. Disagree, and
5. Strongly Disagree.

Item discrimination:

The participants' responses were scored and arranged in descending order to identify the highest and lowest performers. From the total of 89 students, the top 27% with the highest scores and the bottom 27% with

the lowest scores were selected, resulting in two criterion groups of 25 students each. These groups were used to evaluate the effectiveness of each item on the test scale. For both groups, the Mean and Standard Deviation were calculated for every item, and the t-value was used to determine each item's discriminative ability. Only items that were statistically significant at the 0.05 level were retained for the final version of the emotional intelligence test scale.

Out of the original 37 statements, 6 items were excluded as they did not meet the required level of statistical significance. As a result, the final version of the emotional intelligence test scale included 31 items that effectively distinguished between the high and low scoring groups, confirming their relevance and validity in measuring emotional intelligence.

Table 2 Final distribution of statements over various dimensions

| Sl. No | Dimensions | No. of Items |
|--------------|-------------------|--------------|
| 1 | Empathy | 5 |
| 2 | Self – Awareness | 5 |
| 3 | Motivation | 6 |
| 4 | Social Skill | 7 |
| 5 | Self – Regulation | 8 |
| TOTAL | | 31 |

Establishment of reliability:

For the establishment of reliability of the test scale 'Split-half method' was applied. The split-half method is a psychometric technique used to evaluate the internal consistency and reliability of a measurement tool, such as a psychological test or questionnaire. It involves dividing the test items into two equal parts and then comparing the scores from each half to assess the level of consistency between them. By using Spearman-Brown formula, reliability was test through splitting it into two halves. The coefficient of reliability in this method is 0.870 which indicates that the reliability for emotional intelligence scale is exceptionally high.

Again, another split-half method, Guttman Reliability was applied for testing the reliability of the scale through split-half method. The score shows a high degree of 0.866 which indicates strong relationship between the two halves of the test. Another statistical technique, i.e. Cronbach's Alpha was also used for testing the reliability of the test. This test also revealed the score of 0.990 which indicates an exceptionally high level of internal consistency and reliability.

Norms and interpretation:

The scoring of the emotional intelligence test scale was carried out using the methodology proposed by Likert. Each item on the scale included response options ranging from "strongly agree" to "strongly disagree," adhering to the standard Likert format. Scores were assigned as 5, 4, 3, 2, and 1, respectively, for each response category. As a result, the maximum possible score for the test was calculated by multiplying the total number of items (31) by the highest score per item (5), resulting in a maximum score of 155. Similarly, the minimum score was obtained by multiplying the number of items by the lowest score (1), giving a minimum score of 31. This structured scoring method provides a clear, quantifiable way to assess emotional intelligence and allows for detailed evaluation of participants' responses within a consistent framework.

Table 3

Stanine Grade, Level of Emotional Intelligence and Range of Score for Emotional Intelligence Test

| Stanine Grade | Level of Emotional Intelligence | Range of Score |
|---------------|---------------------------------|----------------|
| 1 | <i>Very Low</i> | 91 and below |
| 2 | | 92-97 |
| 3 | <i>Low</i> | 98-102 |
| 4 | | 103-108 |
| 5 | <i>Average</i> | 109-114 |
| 6 | <i>High</i> | 115-119 |
| 7 | | 120-125 |
| 8 | <i>Very High</i> | 126-129 |
| 9 | | 130 and above |

The Stanine Grade categorization provides a structured framework for interpreting emotional intelligence test scores by dividing them into nine distinct levels, each associated with specific score ranges. The lowest levels, Stanine Grades 1 and 2, represent very low emotional intelligence, with score ranges of 91 and below, and 92 to 97, respectively. Stanine Grades 3 and 4 indicate low emotional intelligence, with scores ranging from 98 to 108. Stanine Grade 5, covering scores from 109 to 114, is considered average emotional intelligence. This grading scale offers a clear progression in emotional competence, with each successive stanine reflecting a higher level of emotional intelligence.

As the stanine levels increase, so does the assessed level of emotional intelligence. Stanine Grade 6 (115–119) and Grade 7 (120–125) fall under the category of high emotional intelligence. Stanine Grade 8, with scores from 126 to 129, represents very high emotional intelligence, while Stanine Grade 9, for scores of 130 and above, marks the highest level within the classification system. This detailed categorization allows educators, psychologists, and researchers to interpret results more effectively and use them to guide intervention strategies, support development, and enhance understanding of emotional intelligence across individuals and groups.

Emotional Intelligence Test Scale:

The final form of Emotional Intelligence Test Scale, then, comprised 31 statements as stated in Table 2. It includes 5 dimensions of emotional intelligence. Each statements had 5 options ranging from ‘strongly agree’ to ‘strongly disagree’ with a score assigned from 5 to 1 which should be used for further interpretation of the score of the respondents.

| Sl. No. | STATEMENTS | 5 | 4 | 3 | 2 | 1 |
|---------|--|---|---|---|---|---|
| 1 | I clearly understand all my feelings. | | | | | |
| 2 | I can define which emotions and feelings I am experiencing. | | | | | |
| 3 | Even when I feel sad, I try to think about positive thoughts. | | | | | |
| 4 | I normally try to calm myself down even when complicated things come in my mind. | | | | | |

| | | | | | | |
|----|---|--|--|--|--|--|
| 5 | I used to pay a visit to my friends when they are admitted in the hospital, and spend a good long time for him/her. | | | | | |
| 6 | I can understand their feelings when I see someone in distress. | | | | | |
| 7 | I always lend a helping hand to others when they are not feeling well. | | | | | |
| 8 | I use to compliment others when they get achievement in their efforts. | | | | | |
| 9 | I can tell other people's feeling when I look at their face and body movements. | | | | | |
| 10 | I can motivate myself upon the tasks if the outcome seems to be good to me. | | | | | |
| 11 | I can encourage others even when the situation is not favourable for them. | | | | | |
| 12 | I can make intelligent decisions every time under critical circumstances. | | | | | |
| 13 | I can handle multiple demands easily. | | | | | |
| 14 | I am able to keep promises. | | | | | |
| 15 | I am aware of my strengths and weaknesses. | | | | | |
| 16 | I respect others' opinions, even when I think their opinions are wrong. | | | | | |
| 17 | I am good at motivating other people. | | | | | |
| 18 | I can help other people to get in the right emotional frame of mind. | | | | | |
| 19 | I can understand many sides of a disagreement before forming an opinion. | | | | | |
| 20 | I can cheer people up when they feel sadness. | | | | | |
| 21 | I know the situation when others do not mean what they say. | | | | | |
| 22 | I can control my own emotions and feelings when the situation requires such control. | | | | | |
| 23 | I have ability to see the bright side of the situation even at the time of crisis. | | | | | |
| 24 | I can manage to handle my feelings about other people in a positive manner. | | | | | |
| 25 | I use to think about life's pleasure when I am sad. | | | | | |
| 26 | I have the capacity to stand up in my beliefs. | | | | | |
| 27 | I have ability to inspire myself to reach the goals in spite of disturbances. | | | | | |
| 28 | I have ability to maintain integrity and honesty to other people. | | | | | |
| 29 | I use to pay attention to the feelings of others at the time of happiness and sorrow. | | | | | |
| 30 | I never let unattended when I see others in distress. | | | | | |
| 31 | I am able to make sound decisions despite many disturbances and uncertainties. | | | | | |

*Note: 5 = Strongly Agree; 4 = Agree, 3 = Normal, 2 = Disagree, 1 = Strongly Disagree

5. Conclusion

The construction of the emotional intelligence test scale was a systematic and methodical process aimed at developing a reliable and valid tool for assessing emotional competencies. Through an extensive review of literature, expert validation, item analysis, pilot testing, and statistical evaluation, a refined scale consisting of 31 well-structured statements was finalized. The use of a 5-point Likert scale enabled a clear, quantifiable assessment, while the application of stanine grading provided a meaningful interpretation of individual scores. This tool not only ensures accurate measurement of emotional intelligence but also serves as a valuable resource for educators, psychologists, and researchers in understanding, identifying, and fostering emotional development across diverse populations.

6. References

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