

## Research Article

# Assessing the Effect of Instructor's Emotional Intelligence (EI) on the Students' Satisfaction Index (SSI): Meta-Analysis of University Students

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Received 9 November 2021; Revised 30 December 2021; Accepted 31 December 2021; Published 12 January 2022

Academic Editor: Vijay Kumar

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The present study aims to examine the relationship of instructors' emotional intelligence (EI) with the satisfaction index of their corresponding students. For this purpose, data were collected from 650 full-time students and 6 male instructors from a major Middle Eastern University. Emotional intelligence of the instructors was measured with the help of average of students' responses with the weightage of each assessing parameter, i.e., self-awareness, self-management, social awareness, and relationship management which also reflected the students' satisfaction index (SSI). Moreover, authenticity of the data was confirmed with the help of Cronbach's alpha, and the analysis of data was carried out using descriptive statistics, correlation, and box plots. The students' satisfaction index is calculated by correlating various parameters such as comfort, skill, learning, and motivation in order to identify the most critical parameter. For identifying the most critical parameter, box plots are used. Final results reveal a strong correlation of instructor's EI with student satisfaction index ( $r=0.951$ ,  $p<0.005$ ,  $F>>F_{critical}$ ). Findings of the study can be beneficial to highlight the importance of students' satisfaction index (SSI) which is correlated with instructor's EI.

## 1. Introduction

Emotional intelligence (EI) is an ability to understand and manage own as well as others' emotions [1]. Although, EI is a relatively new concept, but widely considered as a predictor of psychological well-being and overall performance [2]. People with high emotional intelligence not only distinguish between different emotions but also utilize them in a beneficial way [3]. Due to multifacet integration of personal and social competencies, EI has been found to positively impact the effectiveness of team's dynamics [4]. Nowadays, organizations prefer to hire graduates with higher EI scores instead of merely focusing on their IQ and job experience [5]. Therefore, any perception gap between the employer's expectations and student's preparation not only reduces their chances of employability but also questions the credibility of academic institutions [6]. Under these circumstances, the instructor's emotional competency and his/her efficacy play a pivotal role to ensure the academic success

of their students [7]. Nevertheless, factors like classroom conditions, school characteristics, administrative procedures, and instructor's knowledge are found to influence student satisfaction; however, recent studies highlighted the impact of instructor's emotional intelligence on the academic achievement of their students [8, 9]. Wu et al. studied 467 Chinese middle school teachers and found a strong impact of EI on their self-efficacy and teaching performance [10]. In a similar study conducted by Junjun et al. with 534 primary teachers, it was observed that the emotional intelligence of educational leaders significantly influenced their instructional strategies. Consequently, teachers with good EI showed more commitment towards their students compared to instructors with low EI scores [11]. Sabina et al. surveyed 559 secondary school teachers with the help of teacher efficacy scale and observed that teachers with better EI not only demonstrated a higher level of classroom management but also created a positive teacher-student relationship [9]. Corcoran et al. discovered that teachers

with high EI possessed the ability to better handle the behaviors of their respective students and subsequently helped them in showing improved academic performance [12].

Likewise, Reese recommends that teachers with high EI possess the ability to handle students' behavior reflexes and to develop interpersonal skills for improvement in their academic performance [13]. According to another study, the relationship between EI and learning strategies among Iranian EFL (English as Foreign Language) learners shows the highest correlation among the EI variables and interpersonal skill with learning strategy factors [14]. Similarly, a study conducted in Emirates of Abu Dhabi and Al-Ain focuses on the EI of university instructors; the reported results reveal the fact that EI has significant relationship with the quality of their instructional performance [15]. Although, the aforementioned studies are comprehensive in nature while considering the effect of EI aspect of teacher/instructors on their performance, job stability, dedication, and devotion to their responsibilities, but unfortunately, only most of the studies are based while looking at one side of the picture. Therefore, it is of particular importance to have opinion from both stakeholders to establish the consensus that EI of the instructor plays an important role for students satisfaction.

Current research is proposed to find the influence of instructor EI on students' academic performance as well as on overall satisfaction. Two surveys are conducted, the 1st for figuring out the EI level of instructors and the 2nd for assessing the students' satisfaction Index (SSI). Subsequent to survey, the student satisfaction index for each instructor is calculated while using the eigenvalues of the equations which are correlated with the EI level of each instructor [5]. Finally, box plot analysis is performed to explore if there is any significant difference between the instructor EI and selected parameters for student satisfaction.

Some of the major contributions that help to conduct this research work include the study by Wu et al. [10] which studied the impact of EI on self-efficacy and teaching performance on 467 Chinese middle school teachers, the study by Chen and Guo [11] which studied the impact of EI on 534 primary teachers, and the study by Corcoran and Tormey [12] which surveyed 559 secondary school teachers.

The major limitation of this work is that the work is done on a small dataset. When the dataset will increase, there may arise some other issues. Also, the parameters included are limited. When adding more parameters, the efficiency of the model can be improved.

The next section of the study includes the Materials and Methods section involved in the work. The third section introduces the final results obtained. The fourth and fifth section includes discussion and conclusion part. Finally, data availability statements are included in the study followed by references.

## 2. Materials and Methods

Current research is based upon three theories which describe important factors that contribute to students' satisfaction. Motivational system theory (MST) depicts that achievement

is the outcome of motivation, skill, personal adaptability, and responsive environment. On the other hand, Walberg's theory of academic achievement posits that students' individuals and their psychological environments have a great impact on academic performance. Similarly, Tinto's model focused on social context, academic context, commitment, satisfaction, and interaction important for academic progress. At the base of these three theoretical frameworks, four factors, comfort, motivation, learning, and skills, are selected to access students' satisfaction index as given in Table 1.

Table 1 details the connection of the proposed framework with prebuild framework. So, it is an extension of these models. In the same way, at the base of self-efficacy theory, instructors' EI is measured from these four skills: self-awareness, self-management, social awareness, and relationship management.

The study's population is 650 students and 6 male instructors from a major Middle Eastern University. However, before approaching to instructors and students for questionnaires, a proper consent from all relevant authorities has been taken. A demographic detail of the instructor is given in Table 2, and each instructor is labeled with alphabet for the sake of privacy as per university policy.

Two questionnaires to measure the EI level of instructors (Perera and DiGiacomo 2013; MacCann et al., 2020) with 20 questions, five questions for each skill are added, and to measure the factors that affect the student satisfaction index, a questionnaire (Echachaicherdchoo, 2011; Ngamkamollert and Ruangkanjanases, 2015) with 16 questions, four for each factor with a scale from 1 to 5, 1 means ok and 5 excellent, were designed.

Afterward, reliability tests were conducted to ensure the validity of the data. Table 3 provides the validity of the data by showing that the values of Cronbach's alpha ( $\alpha$ ) are higher than 0.7. Equivalently, Bartlett's test  $<0.05$  and  $>0.5$  in the KMO analysis (Kaiser-Meyer-Olkin) confirms the authenticity of data.

Different parameters and scales are used for calculating students' satisfaction, such as nine-point parameter's conversation scale, preferences of parameters for assessing students' satisfaction index, and pairwise comparison through the square box matrix. After calculating students' satisfaction index, the correlation of various parameters is investigated to explore for the most critical parameter of EI as far as students' satisfaction is concerned, and box plots are used to check if there is a significant difference between learning, comfort, skills, and motivation based on the EI level of instructors. Design of the study (Figure 1) shows that how it consists of independent, mediating, and dependent variables for the better understanding of the process. From Figure 1, it can be seen that the independent variables including the teacher's EI and student satisfaction index is a dependent variable. From the figure, it can be concluded that the satisfaction of the students depends on teacher's emotional intelligence. The emotional intelligence of the teacher is based on four factors including comfort, motivation, skill, and learning. Based on these factors, the correlation between the teachers and the students can be formed.

TABLE 1: Proposed theoretical framework for academic performance index (API).

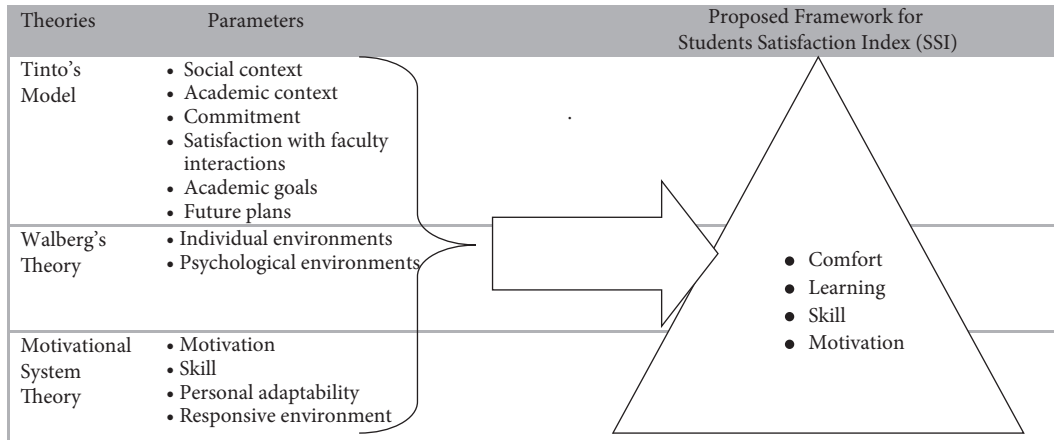


TABLE 2: Demographic details of the instructors.

Instructors	Experience	Qualification
A	10 years	PhD
B	12 years	PhD
C	9 years	PhD
D	13 years	PhD
E	8 years	PhD
F	11 years	PhD

TABLE 3: Reliability and validity tests of EI and SSI subscales.

Demography	Questions	Cronbach's coefficient	KMO	Bartlett test
Self-awareness	5	0.79	0.52	0.003
Self-management	5	0.74	0.50	0.015
Social awareness	5	0.82	0.68	0.000
Relationship management	5	0.69	0.49	0.022
Comfort	4	0.81	0.59	0.034
Learning	4	0.72	0.51	0.012
Skill	4	0.74	0.62	0.025
Motivation	4	0.71	0.53	0.014

The study follows the above plan for the accurate results in students' satisfaction index in relation to instructor EI.

### 3. Results

3.1. *Assessment of the Instructors EI.* This research depicts the strong connection of instructors' EI and students' satisfaction index (SSI). Although this research is limited to the selected populations, it induces important results.

Table 4 provides the EI level of each instructor along with the weightage of each assessing parameter, i.e., self-awareness, self-management, social awareness, and relationship management. It can be seen from the table that the instructor A has the highest level and F has the lowest level of EI with a net score of 91 and 65 out of 100, respectively. The score for each EI assessing parameter for the instructor A is above 85%, while it is 70% for instructor F. It seems from the above

results that the most self-aware instructor is smart in managing his tasks, managing the relations with merit, and always shows concern about things going around in his family and friend circle.

Table 5 provides the average of the students' each factor individually, and each average is out of 20. Then, the last column represents the students' satisfaction index of the four factors for each instructor individually.

3.2. *Correlation between EI Skills and Student Satisfaction Index (SSI).* For the correlation, the EI level and students' satisfaction factors (SSF) are needed to apply the technique.

Figure 2 shows the correlation between the students' satisfaction factors (SSF) and the EI level score. Each point represents an instructor. The correlation is equal to 0.9620, which means a strong positive relationship. Therefore, there is a strong

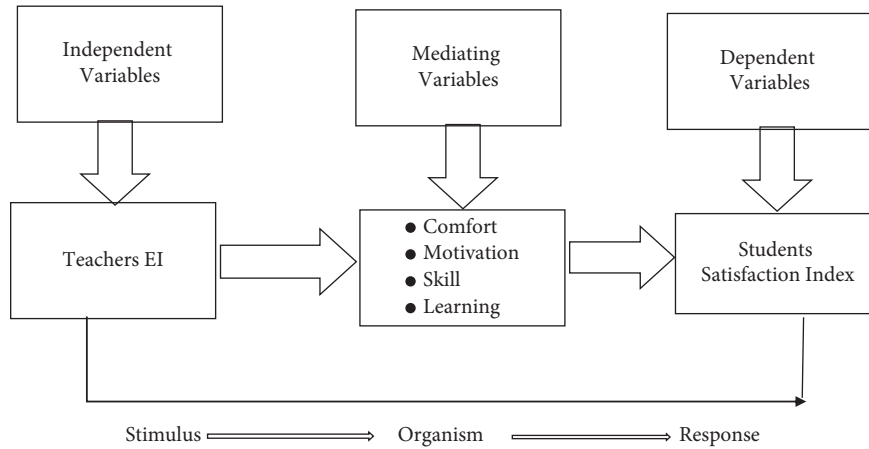


FIGURE 1: Schematic plan for the study.

TABLE 4: Instructor EI and weightage of each assessing parameter.

Instructor	EI	Self-awareness	Self-management	Social awareness	Relationship management
A	91	25	22	22	22
B	88	23	19	21	25
C	87	22	23	22	20
D	82	22	18	21	21
E	69	18	16	18	17
F	65	16	17	17	15

TABLE 5: Average of students' responses and SSI.

Instructor	Comfort	Motivation	Learning	Skills	EI level	Students satisfaction index (SSI)
A	18.46	18.81	18.42	17.19	91	18.220
B	17.42	17.76	17.29	16.56	88	17.259
C	17.57	16.27	15.83	15.47	87	16.283
D	13.73	14.67	15.10	14.22	82	14.434
E	13.23	12.81	12.91	12.37	69	12.829
F	12.78	11.91	12.09	12.17	65	12.239

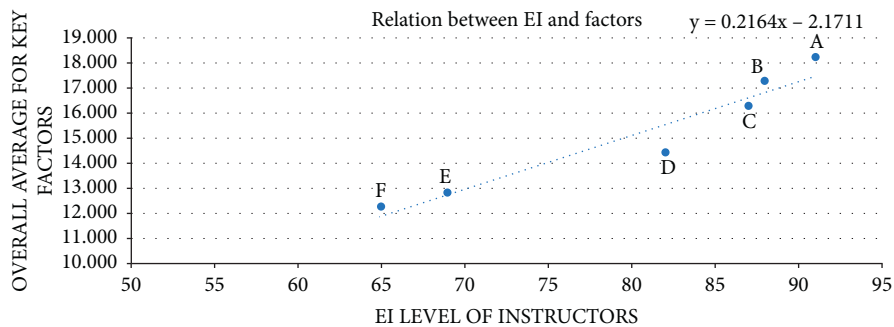


FIGURE 2: The relationship between the EI level of the instructors and the four factors of SSI.

relationship between the EI levels of the instructors on the students' satisfaction index (SSI). When the EI level is high, the score of students' satisfaction index (SSI) is also high. However, the next equation  $y = 0.2164x - 2.1711$  can be used to predict (y) for any value of the EI level of instructor (x). To go deeper into this relationship, the correlation is also applied for the factors

and each skill of emotional intelligence to understand which skill of EI is more critical for the students' satisfaction index (SSI).

Figure 3 shows the correlation between EI skills and the factors that influence students' satisfaction index (SSI). The first part of the table shows how strong the relationship between the

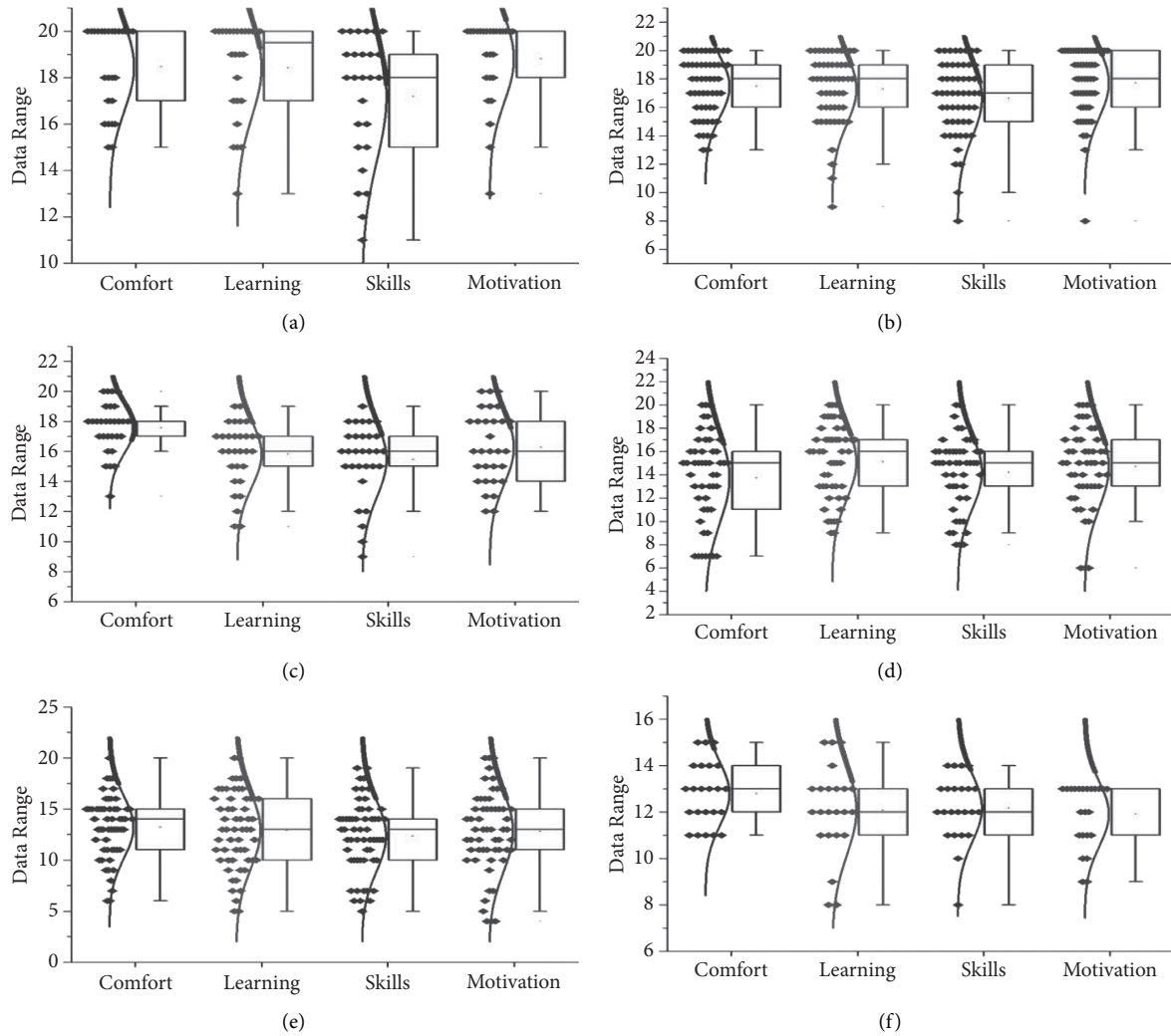


FIGURE 3: Students' assessment regarding each instructor from the dispersion of parametric data for SSI.

comfort factor and the skills of emotional intelligence. It appears there is a strong positive relationship in all skills. However, the correlation between comfort and self-management is 0.878, and it is the strongest. The second part of the table shows the correlation between motivation and skills of emotional intelligence. Now, it is clear that motivation has the strongest relationship with self-awareness. The correlation between them is 0.956. The third part of the table shows the relationship between learning and skills of EI. The strongest correlation is with self-awareness; the correlation is 0.976, which is a strong positive relationship. The fourth part of the table shows the correlation between the skills of the student and the four skills of the EI of the instructor. The strongest correlation is 0.951 with self-awareness. Self-awareness of the instructor is the maximum that can control the factors of students' satisfaction. Self-awareness of the instructor affects the comfort, learning, motivation, and skills of students. Self-awareness of the instructor came from his recognition when he was stressed or anxious. Anger cannot affect him quickly, so it does not reflect on his dealing with students.

3.3. Assessing Students' Satisfaction by Associated Factors Relating to Student' Satisfaction Index (SSI). For the assessment of students' satisfaction index, the feedback of each parameter from the students of six instructors is plotted as box plots along with the distribution of data and representation distribution curve, as shown in Figure 3. The following trends are evident as far as the student's assessment regarding each instructor from the dispersion of parametric data and box plots.

Figure 3 shows the assessment of students regarding each instructor using the parametric data for student satisfaction index. There are total of six instructors used, and each instructor uses four parameters, i.e., comfort, learning, skills, and motivation, to conduct student assessment. All six instructor assessments are discussed in detail.

Instructor A:

The medians of comfort, learning, and motivation are close to each other; however, there is a significant difference as far as opinions about the skill level according

to student opinion as its mean and median values are lower.

The larger lengths of boxes belonging to each parameter suggest the higher dispersion of data for instructor A, and within the group, the higher dispersion of opinion related to skills is also evident from the figure.

The whiskers for all parameters are negatively skewed, and this negatively skewing trend is higher as far as accessing the skills of the instructor is concerned.

#### Instructor B:

The mean and medians of all assessing parameters overlaps each other, which means that there is no significant difference as far as comfort, learning, skills, and comfort level of students with instructor B is concerned

The larger lengths of boxes are smaller in length compared to the instructor A, which means that the student's opinions are more centered compared to instructor A. However, students seem to be a bit careful or one can say thoughtful for scoring skills and motivation levels as the dispersion of data is slightly larger as compared to comfort and learning levels.

The top and bottom whiskers for comfort and learning levels for this particular instructor is approaching to symmetry; however, larger bottom whiskers is the evident of negatively skewing of skills and learning levels as per students' opinions.

#### Instructor C:

The mean and medians of learning, skills, and motivation levels are overlaps, while the comfort level has higher mean and median values.

The size of boxes is smaller, which means that student opinion is more centered and the dispersion of data is small. However, a careful trend of opinion is there for the motivation level of the students as dispersion of data is slightly larger as compared to the other three parameters for this particular instructor.

The almost equal lengths of top and bottom whiskers reveal the symmetric nature of scores for all parameters for this particular instructor.

#### Instructor D:

The mean and medians of all parameters are lower compared to others, but there is not much difference in student's opinion as values (mean and median) are not outside the boxes.

The dispersion of data is larger than instructors B and C; more specifically, the dispersion in comfort and learning level is higher. However, as opposite to other instructors, the dispersion for scores in skill level is smaller as evident from the size of boxes, as shown in Figure 3(d).

The almost equal lengths of top and bottom whiskers reveal the symmetric nature of the scores for all parameters for instructor D as well

#### Instructor E:

The mean and medians of all parameters are comparable with instructor D; however, these data are more reliable than instructor D as all parameters for this instructor follow the normal distribution.

The dispersion in the learning level is high as suggested by the size of the box; however, other parameters follow the same trend as for instructor D.

As the top and bottom whiskers are equal in lengths, the data are symmetric for all parameters

#### Instructor F:

The mean and medians of all parameters are lower as compared to all above, which means that instructor F is rated lower among. There is a difference within the scores for comfort, learning, skills, and motivation as well. The learning and skill levels have lower mean and median values.

The dispersion in data is lower; however, a negative skewing of skill and satisfaction score is evident in addition to the lowest mean and median values, thus complementing the results of EI levels, as given in Table 2.

The mean, median values, top and bottom whisker lengths, and negative skewing and dispersion in data as evident from Figure 1 for instructors B, C, D, and E are complementing the results of EI levels given in Table 1; however, the larger dispersion of data with significant higher negative skewing of some factors needs further investigation. All responses of students regarding the four parameters are summed up into one number called here as students' satisfaction index (SSI), which is then correlated with the instructor's EI.

## 4. Discussion

The current research brought to surface important factors for the educational management and instructors. Results demonstrate a positive relationship between instructors' EI and students' satisfaction index (SSI). In the present situation where only collaboration between instructors and students can ensure, it is important to ensure the students' satisfaction index (SSI) [16]. During survey, it was revealed that students demand flexibility in instructors' conduct which is closely connected with instructor EI. As the world is struggling for improvement in every walk of life, therefore with a significant improvement in EI, the initiative for the development of instructors EI would strengthen students' satisfaction index which would play a supportive role in the present demanding situation [17]. 65% of the students who took part in the survey showed dissatisfaction with their instructors due to lack of social management, social awareness, and skills. Furthermore, it is illustrated from the results that instructors whose students have a good ratio of SSI are those who have a good level of EI and can use their skills in a positive way [18]. However, the current deficiency can be minimized through effective training and mutual development programs. In other words, the increase in

instructors' EI level raises the students' satisfaction index (SSI). Moreover, instructors' self-awareness is the most influential factor in students' learning, motivation, and skills. In the same way, Turkish studies put forward the view that teachers' good EI enables them to practice multiple strategies and techniques for improvement in students' satisfaction. This shift from conventional methods to measurement of EI manifests strong validity between students' satisfaction and teachers' EI [19]. Therefore, teachers with stability in their emotions have a healthy relationship with their students [20]. Thus, emotional management and stability lead towards strong social networking.

## 5. Conclusion

The final results depict that there is a positive connection between student satisfaction index and instructors' emotional intelligence. This positive connection between emotional intelligence of the instructor and the satisfaction index of students is measured through four factors which are comfort, learning, skill, and motivation as shown in Figure 3. The connection between instructors' EI and students SI can be proven very effective for the improvement of the education system. The results suggest that it demands revision which can be ensured by educational management. Furthermore, the findings show an evident strong connection between instructors' EI and SSI. Therefore, it is depicted that students' satisfaction factors (SSF) are positive predictors to improve SSI. Subsequently, management can promote the ways where the development of instructors' EI among instructors would be discussed to ensure the flexibility towards students for the empowerment of SSI. Instructors would facilitate students taking into account the four students' satisfaction factors (SSF): comfort, learning, motivation, and skill have their own value as the results indicate.

It is suggested that instructors would be flexible in their approach to ensure SSI which are found close to better teaching and obviate deficiencies. Therefore, it is awareness of the factors influencing SSI that can lead towards the improvement in SSI as well as can empower instructors' EI. These results obtained from this work can be applied in future everywhere to develop a good relation between the student and the teacher in order to improve the education system as well as all-round development of the student.

## Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Conflicts of Interest

The author declares that there are no conflicts of interest.

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