A Study of Artificial Emotional Intelligence Issues among the Faculty Members

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Abstract— *The research and development activities on Artificial Intelligence (AI) with Artificial Emotional Intelligence (AEI) issues and associated challenges is fast coming up as an emerging area of research. The current research and development activities on AI based systems do not have enough data on the emotional aspects of human intelligence. Therefore, all the emotional issues are to be incorporated in future artificial intelligence based systems. In this paper, we have studied emotional intelligence issues from various respondents, the faculty members of different background, different locations, different experiences, different designations and different age groups.*

Keywords— *Artificial Emotional Intelligence, Artificial Intelligence, Human Intelligence, Faculty members.*

I. INTRODUCTION

The research activities on Artificial Intelligence (AI) has been able to include several important components like the recognition of pattern and voice, identification of face and machine learning. However, it has been observed that AI should be able to include various emotions like surprise, happiness, anger, fear, frustration, impatience, disappointment, frustration etc. Human emotions are deeply associated with several parameters shown in Fig. 1 (Kumar et al. 2018) [1], [2]. The status of AI has been reviewed recently [1].
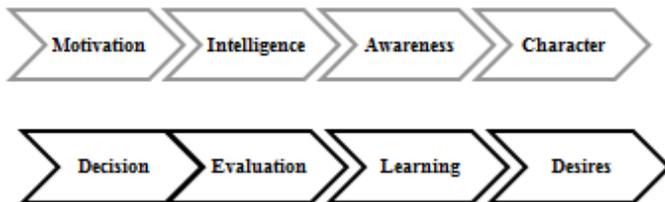

Fig. 1. Components of human emotions.

It has been well established that emotional influences and excitation depend on human psychological activities.

It is the Emotional Intelligence which separates us from the machines. The functions of emotional intelligence are defined in Fig. 2(a). It includes the activities and functions of artificial emotional intelligence as shown in Fig. 2(b) and Fig. 2(c).

Thus, the recognition and understanding of human emotions is of paramount importance for artificial emotional intelligence systems not only to behave in most appropriate ways according to the situation but also smoothly integrate with all the different aspects of human life as observed by Kumar et al. (2018) [2].
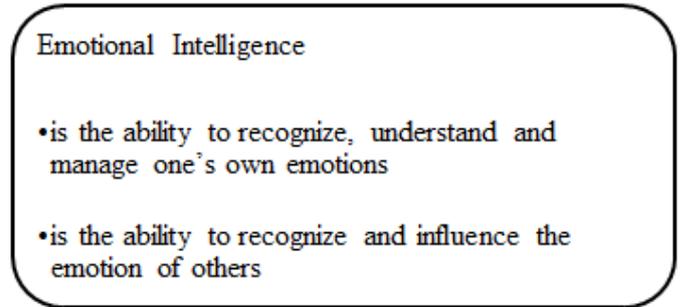

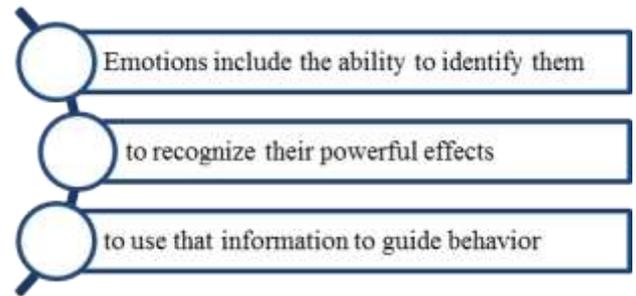Fig. 2(a). Emotional intelligence.
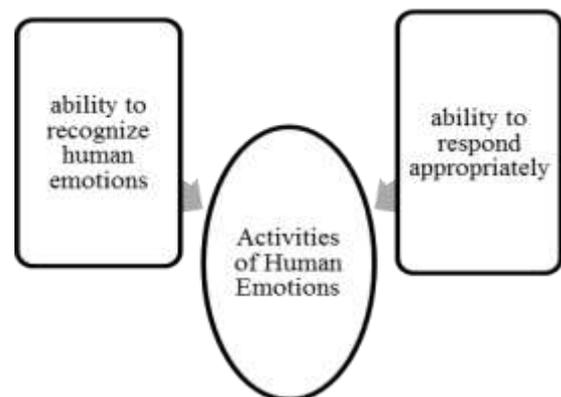

Fig. 2(b). Functions of human emotions.

Fig. 2(c). Activities of human emotions.

The research and development activities in the recent years have made it possible to include emotions into machine intelligence. It is possible to develop a system that allows the computer to recognize human feelings using physiological reactions and facial features. The possible ways of data communicating the emotional state of a person to a machine are many and are shown in Fig. 3. Thus, understanding emotions of large section of the people will help in artificial

intelligence for future machines [1], [2]. In this paper, we have studied emotional intelligence issues from the faculty members.
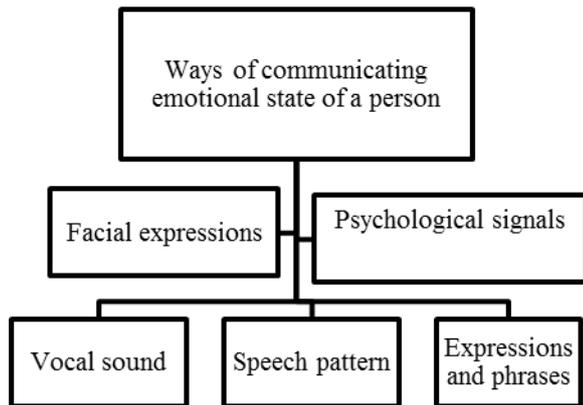

Fig. 3. Ways of data communicating the emotional state of a person to a machine.

II. CHARACTERISTICS OF THE RESPONDENTS

We have conducted research on the faculty members of different gender, age group, teaching experience, discipline and location. A suitable questionnaire was developed and is given in Annexure. The data at 6 different locations (Ranchi, Patna, Lucknow, Indore, Noida, Chennai) was collected from 1000 faculty members. The distribution of the faculty members at these locations is shown in Fig. 4. The faculty members belong to six disciplines as shown in Fig. 5. The male faculty members were 75%. The majority of the faculty members were young (<40 years of age). About 38.5 % of the faculty members chosen were Ph.D holders.
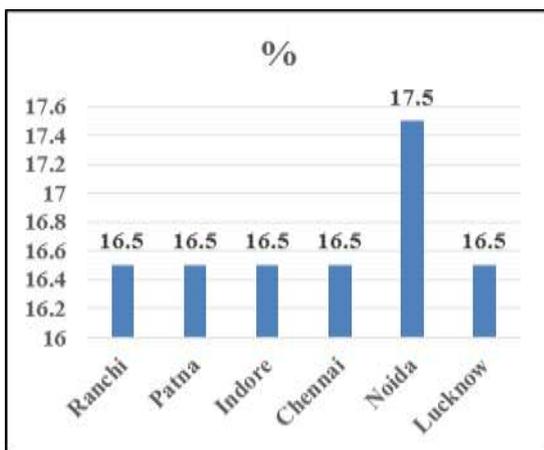

Fig. 4. Distribution of faculty members among different locations (%).

III. RESPONSES OF THE FACULTY MEMBERS

The responses of the faculty members to the questions were obtained on a five-point scale (1-strongly disagree, 2-disagree, 3- undecided, 4-agree, 5-strongly agree). The results are shown in Figs. 6 to 11. Since majority of the faculty members have not opted for other options except option 5 (strongly agree). Therefore, we will discuss only this option. The responses to the different questions is discussed below:

(1) I always pay proper attention to my feelings.

The responses to the first question "*I always pay proper attention to my feelings.*" is shown in Fig. 6 for all the locations considered. The percentage of the faculty members shown in the figure and in the subsequent figures is of those who strongly agree with the statement.
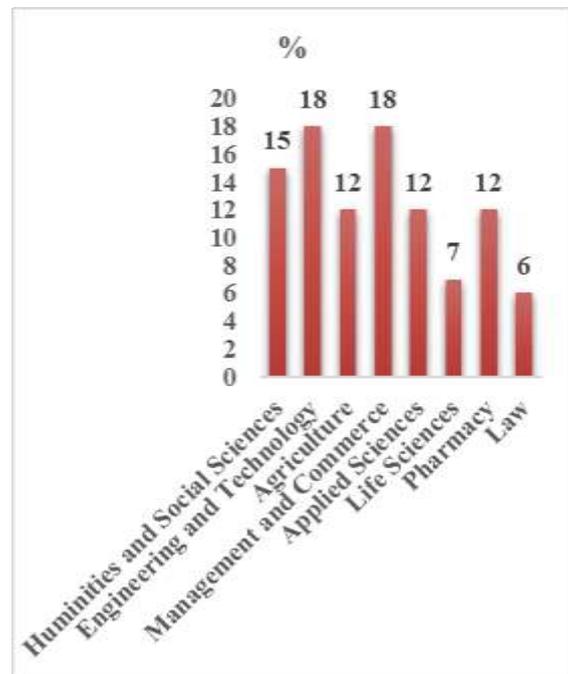

Fig. 5. Distribution of disciplines of faculty members (%).

It can be seen that the percentage varies from 90% to 96%. It is in Chennai where the response of all the faculty members was 96% for all the three designations.

(2) I worry about what I feel.

The responses to the question "*I worry about what I feel.*" is shown in Fig. 7. It can be seen that the percentage varies from 91 % to 96 %. Here also, it is in Chennai where the response of all the faculty members was 96% for all the three designations.

(3) Feelings affect my thoughts.

The responses to the question "*Feelings affect my thoughts.*" is shown in Fig. 8. It can be seen that the percentage varies from 94 % to 97 %. Here also, it is in Chennai where the response of all the faculty members was highest for all the three designations.

(4) I can define my feelings and emotions.

The responses to the question "*I can define my feelings and emotions*" is shown in Fig. 9. It can be seen that the percentage varies from 92 % to 97 %. Here also, it is in Chennai where the response of all the faculty members was highest for all the three designations.

(5) I know my feelings about people

The responses to the question "*I know my feelings about*

people" is shown in Fig. 10. It can be seen that the percentage varies from 92 % to 97 %. Here also, it is in Chennai where the response of all the faculty members was highest for Assistant and Associate Professors while for Professors, it was in Indore where the percentage was highest (97%).

(6) I can notice feelings in different situations.

The responses to the question "*I can notice feelings in different situations*" is shown in Fig. 11. It can be seen that the percentage varies from 94 % to 97 %. Here also, it is in Chennai where the response of all the faculty members was highest for Assistant and Associate Professors while for Professors, it was in Lucknow where the percentage was highest (97%).

Fig. 6. Responses of the faculty members to question 1 (%).

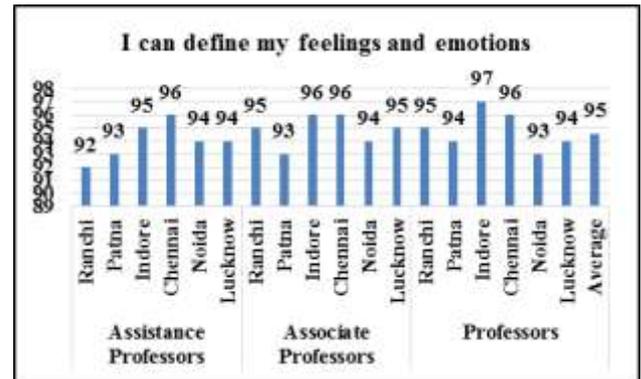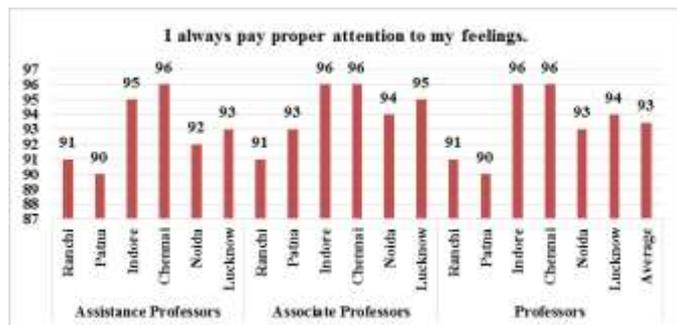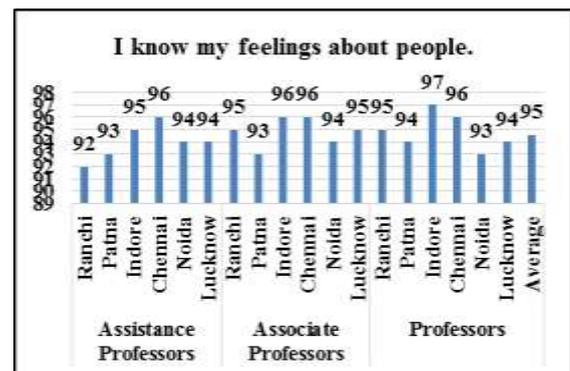Fig. 7. Responses of the faculty members to question 2 (%).

Fig. 8. Responses of the faculty members to question 3 (%).

Fig. 9. Responses of the faculty members to question 4 (%).

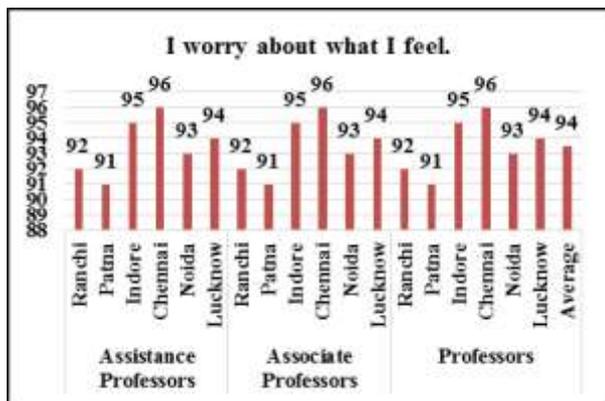Fig. 10. Responses of the faculty members to question 5 (%).

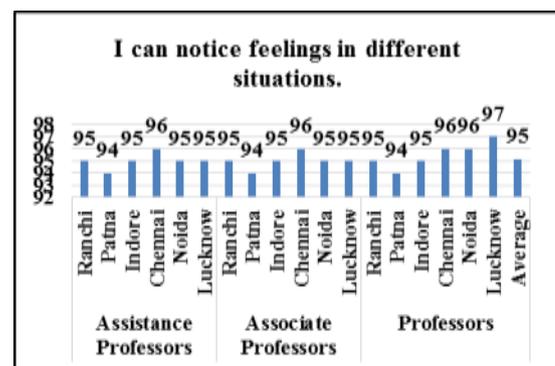Fig. 11. Responses of the faculty members to question 6 (%).
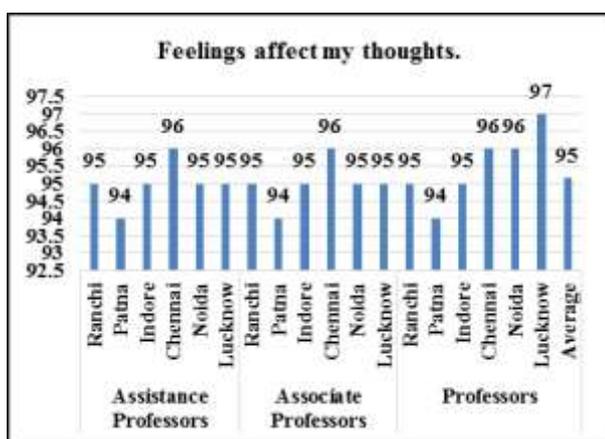
IV. CONCLUSIONS

We have studied emotional intelligence issues from various respondents, the faculty members of different disciplines and teaching experiences. It has been observed that responses of the faculty members vary with their locations, experiences. This indicates that future intelligent machines based on artificial emotional intelligence have to consider emotional intelligence deeply covering all major aspects.

REFERENCES

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