
**EMOTIONAL INTELLIGENCE AND TEACHING EFFICACY: THE CASE OF ISABELA STATE UNIVERSITY
MATHEMATICS PRE-SERVICE TEACHERS**

^[1]Liezl Joy Lazaro-Quilang

Isabela State University, Cauayan City, Isabela, Philippines^[2]

ABSTRACT

Evidences have shown that emotional intelligence is associated with job performance. However, emotional intelligence has not been proven to be a factor for good teaching performance. In view of this, the author correlated the emotional intelligence and teaching efficacy of mathematics pre-service teachers of Isabela State University. Forty (40) mathematics pre-service teachers from the six campuses of Isabela State University, School Year 2010-2011 were considered as subjects of the study. The emotional intelligence of the mathematics pre-service teachers was measured through the use of the EQ Map™ while their teaching efficacy was assessed through the use of the NCBTS-based rating scale to determine efficacy of pre-service teachers. The author concludes that a negative correlation exists between resilience and the domains teachers' personality and lesson planning, and between intuition and teachers' personality; and a positive correlation was observed between interpersonal connection and the domains content, teaching methods, classroom management and questioning skills, and between trust radius and questioning skills. Therefore, the universities should provide Mathematics pre-service teachers with programs and activities such as training courses, seminars, workshops, and conferences that would help the student teachers overcome their resilience and strengthen their interpersonal connection.

Keywords: *Correlation, Emotional Intelligence, Teaching Efficacy, Mathematics, Pre-Service Teachers*

INTRODUCTION

Over the past 20 years, a vast amount of evidence has accumulated demonstrating that a different set of factors, related to emotional intelligence, can play a more important role in our ability to succeed at work and at home. This is due to the fact that cognitive theory could simply not explain the questions we wonder about most: why some people just seem to have a gift for living well; why the smartest kid in the class will probably not end up the richest. Cognitive intelligence without EI can get one a "1.0" on a test but will not get him ahead in life. This is the dilemma that concerns most of the educators for EI may actually be a greater indicator of lifelong success than cognitive intelligence.

Research tracking over 160 high performing individuals in a variety of industries and job levels revealed that emotional intelligence was two times more important in contributing to excellence than intellect and expertise alone^[11].

The development of EI is in the formative years of a person. Hence, the role that teachers play is crucial since they can affect inadvertently the students under their care. The level of the teachers' EI provides a kind

of barometer for the social values of the students and can contribute to the development of the students' EI. It is the responsibility of every teacher to develop students in their highest potential. ^[5]Emotion has the power to increase retention and learning. One tends to remember and learn more those that strike his heart! In fact the more emotionally involved the students become in his lesson, the greater is the impact to him. Thus, they encourage educators to add an emotional touch to learning. They stressed that without the emotional dimension, our subject matter will remain cold and lifeless. They cited the statement of Wolfe (2001) that "our own experience validates that we remember for a longer time events that elicit emotion in us." His pedagogical advice is for us to recognize the power of emotion to increase, and plan instruction accordingly.

Thus according to EI models, man's affective acumen is significant in attaining success in almost all aspects of human endeavors. EI, however, is a concept that has not been fully explored and that is often overlooked. Its significance in the life of man especially in determining how well one performs is often ignored. In fact, public education itself has given little attention to the promotion of emotional competency among students. It has been observed that educators focus

themselves in nurturing the cognitive development of students, and give little attention in students' affective development.

The same scenario is observed in the teaching efficacy (TE) construct which has proven its importance in an educational setting that has further significance beyond the impact it has on student achievement. Furthermore, majority of studies that examine student teacher efficacy has largely been limited to the United States with only two universities accounting for 40% of the total population sampled^[2]. Little research into student teacher efficacy has been conducted in the Filipino context. Thus, further research priority for studying teacher efficacy in student teachers in the universities in the Philippines is warranted and the present study seeks to gain such insight.

Moreover, no study has examined the EI of mathematics student teachers as the variable possibly affecting teaching efficacy levels at the secondary level. It is for these reasons that the writer was encouraged to undertake this study to find out the relationship of EI and TE of mathematics student teachers.

Statement of the Problem

The study aimed to determine the emotional intelligence of the mathematics student teachers in Isabela State University and relate this to their teaching efficacy.

Specifically, this study sought to:

1. Determine the emotional intelligence of mathematics student teachers;
2. Determine the teaching efficacy of mathematics student teachers;
3. Determine the difference between the teaching efficacy of the mathematics student teachers as rated by their cooperating teachers, themselves; and
4. Determine the relationship between their emotional intelligence and teaching efficacy.

METHODOLOGY

This study applied the descriptive correlation method. The subjects of this study are the

mathematics student teachers of Isabela State University, School Year 2010 – 2011. The emotional intelligence of the mathematics student teachers was measured through the use of the EQ Map™ which is an extensively researched, norm-tested and statistically reliable instrument that was developed in 1996 by Orioli, working in collaboration with Cooper which was validated in the Philippines [10]. On the other hand, their teaching efficacy was assessed through the use of the Criteria for Judging Efficacy of Student Teachers which is based from the Experiential Learning Handbook. The researchers personally went to the different cooperating schools to administer the EQ Map™ to the mathematics student teachers during their off campus and to ask them to rate their own teaching efficacy. Furthermore, the researchers also asked their cooperating teachers to assess the teaching efficacy of the mathematics student teachers under them.

The researchers utilized the weighted mean to gauge the level of emotional intelligence and teaching efficacy of the mathematics student teachers, standard deviation to represent the spread of the distribution, Independent Samples t-Test to compare the mean differences in the teaching efficacy as perceived by themselves and their cooperating teachers, and Pearson-product moment correlation coefficient to determine the relationship between emotional intelligence and teaching efficacy. The gathered data were processed through the use of the Statistical Package for Social Sciences (SPSS).

RESULTS AND DISCUSSIONS

Emotional Intelligence of the Mathematics Student Teachers

The mathematics student teachers have an optimal outlook (mean = 3.50, sd = 0.31), and interpersonal connections (mean = 3.32, sd = 0.30). They are least proficient and most homogeneous in terms of personal power (mean = 2.96, sd = 0.18), and emotional expression (mean = 2.81, sd = 0.27). The mathematics student teachers have a proficient emotional intelligence (overall mean = 3.05, sd = 0.18). The strength of mathematics student teachers in terms of outlook can be credited to the fact that in the realm of Filipino psyche, Filipinos are religious thus they devote time to reconnect with God. They have strong faith, believing that problems and adversities in

life will surpass with the help and providence of God [13]. Positive outlook is innate to the Filipinos for we are born in a developing country which experiences a lot of problems due to poverty and even natural disasters. Even if we experience a lot of dilemma in life, we still manage to hang on and move on no matter what happen and cling on to the idea that God is always there to help us though this difficulties.

Moreover, relationship management, or social skills, is the core competency put forth [9] and describes one's adeptness at effectively handling interpersonal relationships. Thus, the strength of the Filipinos in terms of interpersonal connection can be rooted to the fact that an absence of kapwa is viewed by the Filipino as a most negative state a person can have: Pakikipagkapwa is much deeper and profound in its implications. It also means the Filipino way of accepting and dealing with the other person as an equal. The company president and the clerk in an office may not have an equivalent role, status, or income but the Filipino way demands and implements the idea that they treat one another as fellow human beings (kapwa-tao). This earns a regard for the dignity and being of others^[6].

Weighted Mean of the Perceptions of the Student Teachers and their Cooperating Teachers on the Teaching Efficacy of the Mathematics Student Teachers

The 4.22 overall mean indicates that the student teachers have a very satisfactory performance in mathematics teaching. Furthermore, they are most efficacious in the domain teacher's personality with a mean of 4.46 and least efficacious in questioning skills (mean = 4.08). This indicates that they possess the necessary competencies needed in the teaching field. In support to the fact that they are most efficacious in terms of teacher's personality^[11,7] and others, chose the personality/ability constructs to add to a growing inventory of effective teaching characteristics. The long-term objective is to link personality/ability data with the actual outcomes of teaching performance, even though this approach may take many years to evolve.

All in all, the mathematics student teachers of Isabela State University are extremely efficacious. Hence it can be said that teaching efficacy includes

being organized/well-prepared, selecting appropriate objectives, aligning teaching activities to meeting those goals, time management, communication, explaining difficult topics in simple terms, and assigning useful tasks and homework.

t-Test for Equality of Means between the Mean Perceptions of the Mathematics Student Teachers and their Cooperating Teachers

There is a significant difference in the teaching efficacy of mathematics student teachers as perceived by themselves and their cooperating teachers as tested in the 0.05 level of significance in the domain questioning skills with 0.005 value of significance. This implies that the mathematics student teachers of Isabela State University are consistently judged as efficacious in terms of personality, lesson planning, content, teaching methods and classroom management. Furthermore, the mathematics student teachers obtained the lowest rating from the cooperating teachers in the domain questioning skills compared to their self rating has negative mean difference of -0.207. This indicates that the cooperating teachers' judgment on the questioning skill of the mathematics student teachers is significantly lower than their own judgment. In view of the broad-spectrum, the 0.693 value of significance implies that both the mathematics student teachers and cooperating teachers perceived that the mathematics student teachers are highly efficacious as tested in the 0.05 level of significance.

Correlation between the Emotional Intelligence and Teaching Efficacy of the Mathematics Student Teachers

Resilience

The significance values of 0.021 and 0.016 imply that resilience is negatively associated with teachers' personality and lesson planning as tested in the 0.05 level of significance with a moderately low correlation based on their Pearson r values of -0.419 and -0.434, respectively. This indicates that the mathematics pre-service teachers who are less flexible to retain a sense of curiosity and low level of hopefulness in the face of adversity have better teachers' personality and are more skilled in lesson planning.

Interpersonal Connection

In terms of interpersonal connection, the 0.001, 0.016, 0.000 and 0.000 values of significance indicates that interpersonal connections is positively associated with content, teaching methods, classroom management, and questioning skills, respectively, as tested in the 0.05 level of significance. Moreover, moderately high correlation exists between interpersonal connection and the three domains of teaching efficacy, questioning skills, classroom management, and content, with Pearson r values of 0.617, 0.600, and 0.593 respectively, while moderately low correlation can be observed between interpersonal connection and teaching methods as shown in their Pearson r value of 0.438.

Hence, it is a manifestation that the mathematics pre-service teachers who have high efficacy in terms of content, teaching methods, classroom management and questioning skills have high ability to create and sustain a network of people with whom they are in their real and whole self. To whom they can express caring and appreciation with whom they can share their vulnerabilities and hopes.

Intuition

The significance value of 0.044 entails that intuition is negatively associated with teachers' personality as tested in the 0.05 level of significance. Furthermore, the Pearson r value of -0.370 means that there is a moderately low association between intuition and teachers' personality. This indicates that the mathematics pre-service teachers who are less efficacious in terms of teachers' personality have a higher ability to notice, trust and actively use their hunches, gut-level reactions senses and other non-cognitive responses produced by the senses, emotions, mind and body.

Trust Radius

Trust radius is also positively associated with questioning skills with a 0.039 value of significance as tested in the 0.05 level of significance. In addition, the 0.379 Pearson r value marks a moderately low correlation between trust radius and questioning skills. This means that the mathematics pre-service teachers who are highly efficacious in their questioning

skills have a higher degree to which they expect other people to be trustworthy, to treat them fairly, and to be inherently "good", their inclination to trust until they have specific reason not to.

However, none of the domains of teaching efficacy is significantly associated with emotional quotient in general with significant values of 0.228, 0.310, 0.808, 0.712, 0.422 and 0.748 as tested in the 0.05 level of significance. This implies that emotional intelligence did not significantly relate to the teaching efficacy of the mathematics student teachers.^[14] Emotional intelligence and teaching performance are not related. Hence, emotional intelligence is not significant factor for good teaching performance.

One of the reasons may be the reality that EI, though a crucial ability for human beings as a whole, is just one human ability among many. Human beings exhibit a marvelous capacity to adapt to their own skills and preferences in the face of a complex environment. That is, a person will compensate for low EI by building on other strengths. This may also be attributed to the fact that one factor underscoring the method of student teacher assessment is the routine inflation of student teachers' grades^[3].

CONCLUSIONS

The result of the study revealed the following statements:

The Mathematics student teachers demonstrated steady balanced emotional intelligence effectiveness in most situations. The Mathematics student teachers are equipped with the necessary competencies needed in teaching. The perceptions of the Mathematics student teachers do not differ with the perception of their cooperating teachers in terms of teaching efficacy. Emotional intelligence is not the only factor in attaining a very satisfactory teaching efficacy.

RECOMMENDATIONS

In the light of the study, the following recommendations were made:

1. The university should provide Mathematics student teachers with programs and activities such

as training courses, seminars, workshops, and conferences in emotional intelligence.

2. Mathematics student teachers must keep an on-going professional development in accordance with the needs of students and society.
3. The higher education institutions should strengthen the connection with their chosen cooperating schools so that the cooperating teachers are given more opportunities to share their insights regarding the efficacy of the student teachers.
4. Further study should be conducted to investigate the relationship between emotional intelligence and other aspects such as leadership styles, leadership qualities, and job satisfaction.

References

- [1] Balaba, C. (August 2003). Qualities of an ideal teacher. *The Philippine Journal of Education*. Volume LXXXII No. 3., p. 105.
- [2] Brookhart, S., & Freeman, D. (1992). Characteristics of entering teacher candidates. *Review of Educational Research*, 62(1), 37-60.
- [3] Brucklacher, B. (1998). *C o o p e r a t i n g teachers' evaluations of student teachers: All "A's"?* *Journal of Instructional Psychology*, 25(1), 67-72.
- [4] Cooper, R., & Sawaf, A. (1997). *Executive EQ*. New York: Orient Books.
- [5] Corpuz, B. B. & Salandanan, G. G. (2003). *Principles and strategies of teaching*. Lorimar Publishing Co., Inc. p 13.
- [6] Enriquez, V.G. (1994). *From colonial to liberation psychology: The Philippine experience*. Manila: De la Salle University Press.
- [7] Fernandez, J. & Mateo, M.A. (1992). Student evaluation of university teaching quality: Analysis of a questionnaire for a sample of university students in Spain. *Educational and Psychological Measurement*, 52(3), 675-686.
- [8] Gibbs, N. (1995). The EQ factor. *Time Magazine*. Retrieved May 12, 2010 from <http://www.time.com/time/classroom/psych>.
- [9] Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.
- [10] Guilon, a. C. (2001). *Study orientation and emotional intelligence: A correlational study*. PACE Graduate School of Christian Education. Cubao, Quezon City.
- [11] Kemper, C. L. (1999). EQ vs. IQ - emotional intelligence, intelligence quotient." *Communication World*. Retrieved from http://findarticles.com/p/articles/mi_m4422/is_9_16/ai_57786889
- [12] Morada, P. (2005). Ideal traits that teacher should posses. *The Philippine Journal of Education*. January 2005. Volume LXXXIII. Number 8.
- [13] Mckey, S. (2009, October 16). *Philippine - Filipino Values*. Retrieved February 4, 2011, from <http://ezinearticles.com/?Philippine---Filipino-Values&id=3101614>
- [14] Navarro, H.C. (2001). *Profile, emotional intelligence and teaching performance of the faculty of a higher education institution: An interrelational study* (Unpublished Dissertation). Saint Mary's University, Bayombong Nueva Ecija.
- [15] Witcher, A.E., Onwuegbuzie, A.J., & Minor, L.C. (2001). Characteristics of effective teachers: Perceptions of preservice teachers. *Research in the Schools*, 8(2), 45-57.