

Science Technology and Engineering Teachers' Emotional Intelligence Vis-à-vis Classroom Management

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Abstract: *This study aimed to determine the relationship of emotional intelligence of science STE teachers' with their classroom management. This study used descriptive-correlational using survey questionnaire with total population sampling who are offering Science, Technology and Engineering curriculum in Region 1, Philippines with 113 respondents. Point-biserial was used to look at the relationship of the variables. The result was there is no significant relationship between science STE teachers EI and their classroom management. The following conclusion is drawn: Science STE teachers' classroom management approach is not affected by their EI and vice versa.*

Introduction

Learning is not solely dependent on the intellectual quotient (IQ) of teachers, learners learn from different methodologies, their motivation varies and acts differently based on what their teachers provided in the classroom. One of the factors that ranked first as a major motivating factor for learning is the Emotional Intelligence (EI) of teachers^[10] (Madhar, 2010).

Emotional Intelligence (EI) is the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions, Salovey and Mayer, 1990), and to reflectively regulate emotions so as to promote emotional and intellectual growth^[6-7] and^[17] Goleman D. as cited in Mayer, J. and Salovey, P., 1997).

Given this definition, emotions can guide thinking and actions and that emotion can enhance rationality. An emotion is a complex psychological state that involves three distinct components: a subjective experience, a physiological response, and a behavioral or expressive response^[8] (Hockenbury & Hockenbury, 2012). Emotions then can affect or almost govern all our decisions and actions we based them when we are happy, scared, anxious, sad, bored, angry, frustrated, etc.

In the field of education, emotional intelligence is evident (Seema, 2012), because of its great

significance in teaching as it helps the teachers understand their students in a better way^[18]. That is why it is important to have teachers who are also has a high EI. According to a (Meanwell and Kleiner 2014), "teachers who describe higher levels of emotions such as pride and motivation and lower frustration are teachers who describe their teaching in terms of a focus more on what the student is doing and experiencing."^[12]

In this light of reality, EI has an impact on who a person is and what he does. In classroom management, the EI of teachers should always be considered as it affects the way they teach students and likewise, students will be more motivated to learn by specific teachers' behaviors, personalities and skills that they could identify, recognize, and act upon. Emotional Intelligence (EI) of a teacher, a whole the emotional skills, behaviors' and personality characteristics, had greater impact the on student to be a successful and desiring learners^[10] (Madhar, 2014). According to Rust (2014), during the last decade, research has shown that teachers, who work to develop relationships, while delivering relevant and rigorous instruction, demonstrate greater student achievement^[16]. Based on the study of Rust (2014), in the field of education, teachers who exhibit increased levels of emotional intelligence are significantly related to their students' academic achievement^[16].

According to Mahdar (2010), EI is also related to the way teachers manage their classroom. Classroom management approaches could be student-centered or teacher centred^[10]. In student-centered classroom management approaches, the teacher gets to know his/her students, share their ideas and their management approaches allow them and students to see one another as people^[20] (Tok, T., Tok, S. and Dolapçioğlu, S., 2013).

In a student-centered approach, students take on responsibilities and have responsible freedom and choice within the classroom. Teachers establish caring interpersonal relationships with students. The climate is warm and productive in a person-centered classroom where students feel safe to express their ideas/opinions and make mistakes. Teachers help

students to develop socially, emotionally, and academically, using responsible consequences with the goal of self-discipline. Person-centered teachers share leadership and teachers and students determine shared norms and begin to establish trust in the classroom^[5] (Freiberg and Lamb, 2009). In a Teacher-centered classroom management, the teacher is the dominant person in the classroom and has the responsibility of all on-going issues in the classroom; from students' motivation to misbehaviors. Teacher exerts control over students. Teacher's job is to mediate the environment where possible, and by incorporating a reward and punishment approach to redirect the student's behavior when needed. In these teacher-centered classrooms students are passive learners and compliance is valued rather than initiative^[22] (Yasar, 2008).

In an article in San Diego Tribune in 2012, Burgain A., noted that children reported a teacher who's doing physical and psychological attacks like hurdling of books in the classroom and openly embarrassed pupils who had body odor by spraying aerosol to them. The teacher would also persuade students to "think bad thoughts" about their classmates who behave improperly, did not pass their homework or did poorly on an assignment^[1].

The same scenarios are observed in the Philippines. Filipino teachers also face complaints on their behavior, even on social media like facebook, students who are abused by their teachers are being posted. In an article in Philippine Daily Inquirer last 2010 entitled "Teacher charged with child abuse" by Mayol, A.V., A public elementary school teacher in Southern Cebu faced a trial for alleged violation of Republic Act 7610. On the complainant, there were times the teacher would reprimand him for not doing his homework, hit his head with a book and pull his hair; the teacher was also accused of tearing the report card of the pupil in one of their confrontations.^[11]

In Agno Pangasinan, as reported in Failon Ngayon last 2011, 10 students filed a complaint against their teacher for whipping the back of their legs with a bamboo switch. In a surprise quiz conducted by the teacher in a right minus wrong scheme only six passed the quiz out of her 44 students that made her angry and punished her students by hitting their legs with a bamboo stick. The trauma caused by the incident, lead most of the students not to attend school the following days^[4]. In Urdaneta City, as reported in Sun Star Pangasinan last December 2015 A 21-year-old teacher of a private university high school is facing cases of grave threat and child abuse for slapping eight students in her classroom^[19].

EI, had long gone been neglected in hiring teachers, as manifested in the Department of Education (DepEd) guidelines in hiring new

teachers, wherein the aspect of EI is not being mention on DepEd Order No. 7 series of 2015^[2]. For this reason, the researcher's objective is to determine the relationship of emotional intelligence of Science, Technology and Engineering teachers in Region 1 in to their classroom management.

Methods

This study used the Descriptive Quantitative Correlational research design; this study has no controlled variables and explained the relationship of EI and classroom management. The sources of data were the teachers who are teaching science subjects from the twelve (12) Public National High Schools in the Philippines identified by the Curriculum and Learning Management Division of DepEd Regional Office 1 that offers Science, Technology and Engineering (STE) curriculum and belongs to Type A Schools and are directly and solely operated and supervised by DepEd, subject for their availability and willingness to participate in the study.

Further, the Regional Science High School for Region 1 was excluded in this study because they are using a separate curriculum and is only a magnet school of DepEd and is attached to Department of Science and Technology. Likewise, one of the city schools in Dagupan City did not participate in the study, the researcher tried to reach the school head personally and through phone call but to no avail for four times, thus, it was also excluded in this study.

Teachers who are teaching Science subjects from grades 7-10 are the respondents of this study. Total enumeration sampling was utilized in this study, According to Laerd Dissertation (2012); it is a type of purposive sampling technique where you choose to examine the entire population^[9]. 113 STE science teachers participated in this study^[3].

Questionnaire was the main instrument utilized in data gathering, EI scale is based on Schutte et al. (1998). This instrument, Schutte Self Report Emotional Intelligence Test (SSEIT), was used in the study of Tok, et al. (2013). The SSEIT was based on Goleman Emotional Intelligence Theory. The SSEIT instrument was used in this study because of money constraints^[20]. The original instrument is a 33-item scale addressed the EI level of the respondents. According to Petrides and Furnham (2000), SSEIT has four-dimensional factor structure namely: Optimism/Emotion Regulation, Appraisal of Emotions, Social Skills and Utilization of Emotions^[15].

The questionnaire on classroom management was adapted from the study of Yasar (2008), Classroom Management Survey. The questionnaire of Yasar was a product of his analysis on classroom management from different literature^[22]. However,

the scaling was modified to suit the need of this study.

The questionnaire has two parts. Part I measured the EI using the SSEIT and the survey was organized as, “strongly disagree (1),” “disagree (2),” “neither disagree nor agree (3),” “agree (4),” “strongly agree (5)” and will assess the respondents condition of their EI. Specific questions answered the following area: Appraisal of other’s emotion (5, 18, 25, 26, 29, 32, 33), Appraisal of owns’ emotion (2, 6, 9, 15, 19, 22), Regulation (1, 21, 23) Social skills (4, 11, 13, 14, 24, 30) Utilization of emotion (7, 12, 16, 17, 20, 27, 31) and Optimism (3, 8, 10, 28).

Part II, is the “Classroom Management Survey”. The survey was modified and organized in the form of “It does not describe me at all” and “It describes me very well.” The survey includes 26 items covering two sub-scales concerning person-centered (1, 19, 21, 23, 27, 28, 2, 4, 6, 11, 13, 17, 18) and teacher-centered (3, 5, 7, 9, 12, 14, 15, 16, 20, 22, 24, 25, 26) classroom management approaches. The highest score among the two with “Describes me very well” identified the classroom management of the respondents.

The questionnaire had undergone face validity: six (6) experts from the Philippines validated the questionnaire. Three of which are in the tertiary education who are Registered Nurses and License Professional Teachers and one of them is the Dean of the College of Midwifery in a University in Urdaneta City. One of the validators is currently employed in University of Tabuk in Kingdom of Saudi Arabia as a Lecturer and a former Dean of the College of Nursing in a College in Dagupan City. Another validator is the Dean of School of Teacher Education in one of the Universities in Baguio City. Another validator is a Principal IV in Urdaneta City Schools Division and also a Graduate School Professor in one University in Urdaneta City.

Prior to the actual data gathering a reliability test was conducted to check the internal consistency of the modified instrument and if it is suited for practice in the Philippine setting; this was conducted last November 2015 on teachers who are teaching Science subjects in non-STE schools in Urdaneta City Schools Division. Sub-scaling reliability test was conducted using Cronbach’s alpha including the variables age, sex, position and length of service: for Appraisal of Others’ Emotion, the original items stated yielded an alpha less than the acceptable parameter but items (18, 25, 26, 29, 32) yielded an alpha of 0.678, for Appraisal of Owns’ emotion results yielded an alpha of 0.741, for Mood Regulation results yielded an of 0.759, for Social skills results showed an alpha of 0.765, for Utilization of Emotion result revealed an alpha of 0.607, for Optimism original items yielded an acceptable alpha but items (3, 8, 10) yielded an alpha of 0.753. Thus, items 5, 28 and 33 were removed by

the researcher so that the instrument will suit the needs of the study. Further, with the removal of items 5, 28 and 33 sub scale consistency is achieved, according to Nunally (1978), acceptable Cronbach’s Alpha coefficient values are above 0.6^[14]. The overall test yielded Cronbach’s alpha score of 0.867 which means that the 35 items has relatively high consistency and is applicable to the Philippine setting.

Actual data collection was conducted from February to March 2016. Prior to the conduct of the study, the researcher secured permission to administer it from the DepEd Regional Office 1. The researcher complied with the conditions of some schools that are requiring permission to conduct the study in the office of the Schools Division Superintendent.

The researcher personally went to the identified schools and left the questionnaires in the care of the school heads or department of Science heads. Retrieval of the questionnaire was done one week after and done personally by the researcher.

Point-biserial Correlation was used to measure the relationship of the two variables; it measures the strength and direction of the association that exists between the respondents EI which is a continuous variable and classroom management approach which is a dichotomous variable.

Results and Discussions

Table 1. Relationship of Respondents’ EI and their Classroom Management Approach

Component of EI	r_{pb} -Value	p-Value (2-tailed)	Decision
Appraisal of Others' Emotion	-0.010	0.920	Accept Ho
Appraisal of Owns' Emotion	-0.052	0.582	Accept Ho
Emotion Regulation	0.010	0.915	Accept Ho
Social Skills	0.081	0.395	Accept Ho
Utilization of Emotion	-0.075	0.428	Accept Ho
Optimism	-0.037	0.697	Accept Ho
Over-all EI	-0.019	0.841	Accept Ho

Table 1, summarizes the relationship of STE science teachers’ EI and their classroom management approach. In this test of relationship, the researcher coded person-centered approach as 1 and teacher-centered as 2. To interpret this table, it must be made clear that the null hypothesis H₀ was tested at alpha 0.05. At this significance level in SPSS, the H₀

is to be rejected if and only if the P-Value is equal to or less than 0.05.

In appraisal of others' emotion, Point-biserial score yielded (rpb, is -0.010 p= 0.920). Therefore, the null hypothesis is accepted. There is no significant relationship between appraisal of others' emotion and classroom management and vice versa. This implicates that even if appraisal of others' emotion increases, the choice of classroom management does not change and vice versa.

In appraisal of owns' emotion, Point-biserial score yielded (rpb, is -0.052 p= 0.582). Therefore, the null hypothesis is accepted. There is no significant relationship between appraisal of owns' emotion and classroom management and vice versa. This implicates that even if appraisal of owns' emotion increases, the choice of classroom management does not change and vice versa.

In emotion regulation, Point-biserial score yielded (rpb, is -0.010 p= 0.915). Therefore, the null hypothesis is accepted. There is no significant relationship between optimism and classroom management and vice versa. This implicates that even if emotion regulation increases, the choice of classroom management does not change and vice versa. This contradicts the claim of Tok, T., et. al (2013), that that teachers with higher EI chooses student-centered classroom management approach and are able to relate to others with compassion and empathy ^[20].

In social skill, Point-biserial score yielded (rpb, is -0.081 p= 0.395). Therefore, the null hypothesis is accepted. There is no significant relationship between optimism and classroom management and vice versa. This implicates that as social skill increases; the choice of classroom management approach does not change and vice versa. This is contradicting the claim of Tok, T., et. al (2013), that teachers with higher EI chooses student-centered classroom management approach and have well-developed social skills ^[20].

In utilization of emotion, Point-biserial score yielded (rpb, is -0.075 p= 0.428). Therefore, the null hypothesis is accepted. There is no significant relationship between optimism and classroom management and vice versa. This implicates that as utilization of increases, the choice of classroom management approach does not change and vice versa. This is contradicting to the claim of Tok, T., et. al (2013), that teachers with higher EI chooses student-centered classroom management approach and uses their emotional awareness to direct their actions and behavior ^[20].

In optimism, Point-biserial score yielded (rpb, is -0.037 p= 0.428). Therefore, the null hypothesis is accepted. There is no significant relationship between optimism and classroom management and vice versa. This implicates that even if optimism increases, the choice of classroom management does

not change and vice versa. This contradicts the claim of Moghtadaie, L. and Hoveida R. (2015), which indicates that there is a positive and significant relation between academic optimism of teachers and classroom management style ^[13].

In Over-all EI, Point-biserial score yielded (rpb, is -0.019 p= 0.841). Therefore, the null hypothesis is accepted. There is no significant relationship between EI and classroom management and vice versa. This implicates that even if EI increases, the choice of classroom management does not change and vice versa. This finding contradicts the finding of Tok, T. (2013) that EI is a positive predictor of teacher-centered and person-centered classroom management with weak predictive power ^[20]. This result could maybe related to the observation of teachers as interviewed by the researcher that Higher Sections tend to be more discipline and conscious with their behavior.

Conclusion

In light of the result of this study the researcher concluded that STE science teachers' classroom management approach is not affected by their EI and vice versa.

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To God be the glory!

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