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Investigating the Relationship Between Emotional Intelligence and Academic Performance Amongst Secondary Students in Tsirang Dzongkhag

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Abstract

Understanding and managing one's own emotions has manifold advantages for the success of an individual in life. Considering the importance of Emotional Intelligence (EI), this research, aims to investigate the relationship between EI and the Academic Performance (AP) of Secondary School studets in Tsirang dzongkhag. Data was collected from 140 participant using self-assessment questionnaire. The mid-term test score for 2023 was used to analyze the AP in relation to EI of each student. Results showed positive correlation between EI and AP indicating that students with higher EI score higher in academic test score. It is therefore important to consider students EI while teaching subject matter for better performance academically. The finding would be useful for the school curriculum division to design the teaching material accordingly which may facilitate and design interventions for teaching subject matter in relation to EI.

Keywords: Academic Performance. Emotional Intelligence, School Education

Introduction

Understanding and managing our own and other's emotions has emerged as a critical factor in different aspects of life including educational parlance. In recent years, educators alike have increasingly acknowledged the relationship between Emotional Intelligence (EI) and Academic Performance (AP) of students. It is believed that individual with emotional and social competencies perform better in life. Similarly, students with emotional and social competencies also perform better in academic activities. The role of EI is even crucial when students in the age category of 15 to 18 years are in the adolescent stage and they experience significant emotional and psychological changes. Such changes significantly affect the intellectual abilities of students concerning APs. EI is the subset of social intelligence that involves 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, thus be able to make better decisions in daily life (Mayer et. Al, 2004). It entails the capacity to accurately identify emotions, understand emotions and relate to emotional and intellectual progress. Although the definitions of EI may be contextual, however, in academic contexts, EI can be related to understanding, feeling, regulating and influencing emotions that affect oneself as individual and also influence social interaction eventually affecting all spheres of life (Goleman, 1995; Mayer, 2004).

It is vital to consider EI, atleast to young students, as it is significant influence AP and also personal development in the future (Iqbal et al,2021). Although significance of EI is highlighted but globally how EI can be used to improve students' performance academically is largely overlooked (Musaetal., 2021). In Bhutan, the Royal Government of Bhutan, led by the erstwhile Ministry of Education, initiated professional development program for school teachers to better understand students' AP yet the study concerning EI is sparse, hence, there exists a lack of understanding on influence of EI to AP of students in Bhutan let alone in Tsirang Dzongkhag. While at school, the students are expected to be emotionally competent as the study environment is becoming increasingly challenging. Therefore, this study was conducted to assess the relationship between the EI and AP of students in Tsirang dzongkhag. Such relationship may guide leaders and managers to understand how EI can be improved to enhancing the students' AP (Salovey & Mayer, 1990; Mayer et al., 2008).

Background and Objectives of the Research

The education sector is increasingly tasked to understand and design ways to enhance the performances of students. Such approach may enhance the overall success of the students. Accordingly, EI is gaining the attention especially in schools that has paramount role in impacting the students' AP.

Therefore, the objectives of the research are:

- a. Examine the correlation between EI and AP of secondary school students in Tsirang Dzongkhag.
- b. Investigate gender differences in EI and AP.
- c. Assess the relationship between EI and varied learning abilities amongst students.
- d. To evaluate the influencing element/elements of EI on the AP of learners.

Research Question

This study intends to answer the following research question:

Overarching Question: How does the relationship between Emotional Intelligence and Academic

Performance interact among students in Tsirang Dzongkhag? **Sub-question**

- a. What is the correlation between EI and the AP of secondary school students in Tsirang Dzongkhag?
- b. How do EI and AP differ between male and female students in Tsirang Dzongkhag?
- c. How does EI relate to the AP of high, average, and low achievers in Tsirang Dzongkhag?
- d. Which of the key elements of EI influences the AP of learners the most Tsirang Dzongkhag?

Research Methodology

Since the intention of the study was to explore the relationship between EI and AP, compare EI and AP by gender, and examine EI's impact across different learning abilities, a quantitative approach with a purposive sampling strategy was employed. This was relevant as it enables the researcher to measure systematically with statistics on the relationship between EI and AP through objective data revealing correlation.

Sample

Sample selection followed was purposive sampling strategy since the target group was the students from four secondary schools (two middle secondary and 2 higher) of Tsirang Dzongkhag. The sample size was 200 with a class range of IX to XII.

Classes were divided into three categories in the context of 10 high, average 10 and then 10 low achievers. A minimum of5studentswere selected from each category, resulting in a total sample size of at least 15 participants from each class. This comprised 50 percent of the total class size assuming a class size of 30 learners.

Instrument

The 50-item open-access quantitative Intelligence Questionnaire-Leadership (IQL) was used as a data collection instrument. It is a self-assessment questionnaire (EI Questionnaire 2014). This self-assessment questionnaire is designed to measure the various elements of EI including self-awareness, motivating oneself, managing emotions, empathy and social skills are in line with Daniel Goleman's EI comprising the five components. They are:

- a. Self-awareness: Understanding your own emotions and their focus on how they impact your behaviour.
- b. Managing emotions: It is being able to manage your own emotions when one is carried away by strong emotions and save us from problems.
- c. Motivating oneself: It is about using our emotions to guide us towards achieving our goal despite the setbacks.
- d. Empathy: It is about understanding and responding to what other people are going through of their emotions.
- e. Social Skills: It is being able to influence other's emotions in relationships that would help inspire others for effective teamwork.

The researcher adapted the IQL as per the convenience of the respondent without making changes to the

essence of the items in the questionnaire.

Questionnaire Administration

The selected participants were informed about the research purpose and the confidentiality of their responses. They were provided with the questionnaire and instructions while responding using the Google Doc platform. Approvals were sought from concerned stakeholders. Adequate time was allocated for participants to complete the questionnaire. It was administered through the Google Doc platform by the researcher using the Likert type scale 1 to 5, 1 as the least relevant to 5 as the most relevant. Of the 200-sample size, only 140 respondents were able to meet the standard of respondents.

Data Analysis

Pearson correlation was applied to determine the relationship between academic achievement and EI. Further, a *t*-test was used to examine the mean differences concerning demographic variables like the gender of the participants. One factor ANOVA was used to test the significant differences between academic achievement and EI for three categories of students (high, average and low achievers).

Literature review

As researchers become more aware of how it may affect students' academic performance, the significance of EI in the field of education has increased. Over the years, EI has garnered significant attention in the educational context. Salovey and Mayer (1990) presented a thorough model that suggested that people with higher EI possess better skills to understand and regulate their emotions, which in turn positively impacts their AP. Numerous investigations revealed informative data about any potential connections between these two domains. Petrides and Furnham (2003) analyze the connection between AP and numerous EI components. Self-awareness, a crucial facet of emotional intelligence, was found to positively correlate with students' AP. This implies that students who have a high level of self-awareness and are aware of their own emotions and how they affect their behaviors and learning may be better prepared to perform well academically. Studies by (SaloveyandMayer,1990; Van Rooyand Viswesvaran, 2004) report that people with higher levels of EI are better at understanding and managing their emotions. Hence as a result higher EI can be better off with AP. For instance, Van Rooyand Viswesvaran (2004) showed the four dimensions of EI such as (a) the ability to perceive emotion involves identifying emotions in themselves and others with an accuracy, (b) the ability to use emotions to facilitate thought to guide their thinking, (c) ability to change the emotions, and (d) ability to manage not only one's mood and emotions but also of others. These dimensions of emotions appear strongly linked to skills that impact social interaction and self-awareness. Managing one's own emotions and also those of others is pivotal for maintaining a positive learning environment on which the whole of academic performance is dependent. Austin et al (2005), reveal students with higher EI had a higher chance of excelling academically, especially when paired with higher levels of intrinsic drive. Extremera and Fernandez-Berrocal (2006) report the correlation between greater levels of EI and students' better grades and test scores. Not only can EI have a direct impact on academic achievement, but it also can regulate the association between other variables and academic outcomes. Bradberry & Greaves (2009) mention that different strategies adopted as interventions can foster EI to the heightened stage that impacts the productivity of an individual positively.

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Akbar et al (2011) also revealed a similar finding of a positive correlation between EI and AP. Furthermore, the study showed better economic status, and literate parents have a positive correlation to EI consequently affecting AP. Other study also report that good classroom behavior also meant both self-control and social awareness among students (Davis and Humphrey, 2012). The report further elaborates that student behaved better when they showed effective self-regulation, controlling their emotions and urges. Similarly, students with social interaction skills tended to interact positively with others and exhibit good behavior in the classroom. The relationship between EI and classroom behavior among students was already established Brackett et al., 2012;Yahaya et al.,2012). These studies imply that the level of EI contributes to and enhances the cognitive abilities of students.

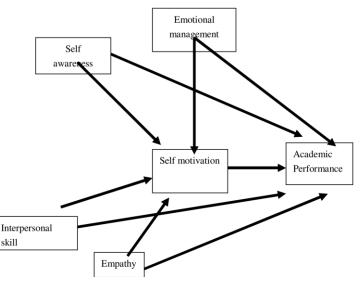


Figure 1. Model to represent the relationship between Elements of EI and AP (*Adapted from Yahaya et al*, 2012)

The relationship among variables (Figure 1) summarizes the key elements of EI and how it influences students AP (Yahaya et al., 2012). Thus, Educators and policymakers must develop strategies and tools to improve students' EI, thereby boosting their general well-being and AP. The policymakers may initiate the moderating impact of EI that enhances the AP of the learners. This could be done by acknowledging the moderating impact of EI. On the contrary, it is often understood that EI may not have a direct impact on IQ affecting AP. However, understanding and being able to manage emotions and other factors that affect people's capacity to comprehend and efficiently regulate their emotions are included in EI. These elements consist of relationship management, social awareness, self-regulation, and self-awareness. Further, Antonopoulou (2024) reveals that researchers, over a period came up with the four dimensions, on the contrary, five key elements of EI by Goleman are widely accepted. The essential elements are self-awareness, managing emotions, motivating oneself, empathy, social skills and their connections to academic success which may include improvement in academic grades.

Previous studies have looked at how these factors relate to students' academic success and emphasized the

unique impacts that each one has. Hailu Herut et al., (2024) explain that notably self-regulation, empathy, motivation, and self-awareness, emerge as robust predictors of students' scholastic accomplishments.

Significance of the Research

Education system in Bhutan has been very dynamic and has evolved significantly since the inception of modern education system in the country since the year 1914. Today, with the technological advancement, the teaching learning modality has been significantly influenced. Therefore, it is necessary to refine the education system to equip school students who can be a contributory citizen. Such goal can be achieved by integrating EI development programs in educational practices. Although, the professional development program for the teachers was in place, however, such program did not consider EI as important concept. It was for the first time the importance of emotional wellbeing was initiated, with the nation-wide PD program on Neuro-science, in 2019. Furthermore, it is expected that other ongoing program such as social emotional learning to teachers could also be added advantage for enhancement of emotional wellbeing. It would consequently, enhance general wellbeing of students. It is imperative that academic performance shall be improved too. From the Current study we draw the following significance:

- a. Policy makers and other stakeholders may remain convinced by realizing the pivotal role of EI, and design programs incorporating strategies that can enhance EI among the students. It would ultimately impact academic performance of students.
- b. School leaders and teacher can manage the emotional well-being of the learners by using the EI skills. Furthermore, by understanding the importance of EI over AP through this research, may also help to build rapport among students, teacher-students by helping improve emotional wellbeing of teachers and the taught creating more supportive and emotionally healthy educational ambience.
- c. Examining the relationship through gender and EI parameters, can help develop gender-based educational intervention which may prove to be more insightful to the educators and policy makers. In general, significance of this research is vested in its potential to scaffold education system by incorporating the strategies to enhance emotional intelligence into educational policy ultimately enhancing emotional and academic outcome.

Results

Demographic information

The result includes five sections such as demographic information of the participants, relationship between the EI and AP, role of EI in influencing gender-based AP, and the mean scores of academic scores and their corresponding EI's five dimensions. Eventually, the ANOVA test was performed to the students' APs amongst and within the gender categories of male and female.

Gender/Age	Frequency (%)
Male	70 (50.0)
Female	70 (50.0)
Less than 14	4 (02.9)
15-19	129 (92.1)
Above 20	7 (05.0)

Table 1. *Distribution and percentage of respondents according to gender and age (n=140)*

The descriptive analysis shows that there are equal male and female participants (Table 1). The distribution of participants age indicates that most of the students are in the age range of 15-19 years followed by a lesser proportion of students above 20 years old and below 14 years. The relationship between EI and the AP of the students indicated positive correlation ($r=0.830^{**}$, n=140, p=.001). Similar, findings were reported by (MacCann et al., 2020) where a meta-analysis of 158 studies and found an overall effect of p=.20, meaning that students with higher EI tend to achieve higher grades and test scores. Most academics concur that there is a strong correlation between academic performance and EI; however, academic performance also requires a high IQ and the drive to succeed (Singh et al., 2011). In the case of Tsirang, gender-specific mean scores for AP and EI were performed and the result indicate females with significantly higher score than males. This means that females performed better than males on average (Table 2).

Variables	Gender	Ν	Mean ±SD	t	df	р
EI	Male	70	3.28±1.23	.324	1	0.0031
	Female	70	3.40±0.57			
AP	Male	70	67.88±2.35	1.065	1	0.0063
	Female	70	69.3			

Table 2. Gender-wise Comparison in EI and AP

Additionally, females appear better than male students in the areas of self-awareness, self-motivation, and

relationship management. These findings suggest that females have a more positive self-perception and are more capable of self-motivation (Joshi & Dutta, 2014).

Similarly, the five dimensions concerning AP indicated higher scores among students with high mean in self-awareness (Table 3). This means that low achievers tend to show low mean in self-awareness as a result reflecting low AP.

Student	Self-	Managing	Motivating	Empathy	Social	Total	Academic
learning style	awareness	emotions	oneself		Skills	mean	marks (%)
	1	3.5	3.7	3.9	3.6	3.74	79.3
High achievers	4	5.5	5.7	5.9	3.0	5.74	19.5
Average	3.5	3.3	3.3	3.4	3.4	3.38	68.1
achievers							
Low	3.6	3.4	3.4	3.4	3.4	3.43	59.1
achievers							

Table 3. *Mean Scores of Students with varied learning abilities and their corresponding EI (five dimensions) and AP.*

This reveals that the self-awareness dimension has a significant role in impacting the academic achievement of the learner. Similar findings were reported by Petrides and Furnham (2003) associated to how students' grades and self-awareness are related. Further, self-regulation and social awareness were shown to be related to good behaviour in the classroom (Davis and Humphrey, 2012). High achievers correspondingly have high mean in the other four dimensions too.

In some instances, the average score concerning AP can be affected by few high archivers or vice versa. Therefore, the ANOVA test is necessary to validate the claim in the relationship between EI and AP. Single-factor ANOVA amongst three categories of learners (high, average and low achievers) reveals that students with high, average and low AP differ significantly from one another on their EI (Table 4).

It makes it abundantly evident that a student will perform well in academics when they are emotionally intelligent. It also means there is a direct correlation between EI and AP: the higher the EI, the higher the academic success, and vice versa. It stands to reason that raising students' EI would improve their AP (Suleman et al., 2019).

Source of Variation	Ss	Df	MS	F	P-value	F Crit
Between Groups	6404.9115	1	6404.9115	124.992	0.000364	7.7086
Within Groups	204.97026	4	51.242566			

Table 4. ANOVA test Result for Among and within Categories

Total

6609.881 5

Discussion

This study was carried out to see the relationship between EI and the AP of the students, examine the genderspecific of EI on AP, see the contributing factor among the five elements to the AP of the students and determine significant differences amongst three categories of learners (high, average and low achievers).

The finding shows that EI is positively correlated to AP. Students with higher EI have achieved higher test scores. Similar, findings were reported by (MacCann et al., 2020) where students with higher EI tend to achieve higher grades and test scores. Most academics concur that there is a strong correlation between academic success and EI; however, academic success also requires a high IQ and the drive to succeed (Singh et al., 2011). This is possible because the students with higher EI are able to manage their emotions and can easily manage stress, anxiety, apprehension and may remain focused that ultimately foster AP. In addition, higher IQ is always an advantage for AP. Additional finding in the Spanish school also has the similar finding with EI as predicting factor to AP. Students with high EI is found to be more prosocial and performs better in school (Márquez et al., 2006). This supports the theory of EI impacting AP. It is possible that integrating the understanding of EI in the form of life skills among the students have impacted the AP that gives similar finding despite the geographical, socio-economic differences among Spanish and Bhutanese context.

This study also reveals the significant difference in EI and AP between gender where on average female students outperform their counterpart. It was reported a decade ago that females have performed better than males in the areas of self-awareness, self-motivation and relationship management (Joshi and Dutta, 2014). Also, the difference between male and female were reported during the similar period indicating that females are outperforming males (Fayombo, 2012). However, the study conducted in Manipur schools in India contradicts the finding. It is explained that Manipur is a unique place with a diverse culture where males play crucial roles in various social and cultural occasions that imposes several pressures on males catering the welfare of entire family and society. This lead to improve emotional management skills. Apparently, making the males out performing females in terms of EI (Singh et al., 2023). While the study conducted in the Egyptian school shows the levels of EI relatively similar across male and female students. This finding may be explained by the gender in the Egyptian society. Possibly, Egyptian society are equally socialized that leads to requiring similar emotional skills. It may also be due to age and experiences and openness of social media where women have the ability to express emotion equally (Khalaf Ali, 2016).

All these findings are inconsistent with current finding which shows that EI differs by gender. It interprets female outperforming males. Inconsistency may be due to socio-cultural diversity among the samples selected for the study or could be age level or the national policy that varies in terms of empowering females in the society. National policy is currently towards empowering girls or women in the society that must have impacted the EI of females positively. It is, however, difficult to conclude specifically and warrants more research to support or refute the claim.

In an attempt to see the contributing factor among the five key elements of EI to the academic achievement of the learners, findings show that students with higher EI mean have higher mean of AP. This reveals that the self-awareness element has a significant role in impacting the AP of the learner. Similar findings of the

association between students' grades and self-awareness were reported by Petrides and Furnham (2003). Further, self-regulation and social awareness were shown to be related to good behaviour in the classroom (Davis and Humphrey, 2012). Students who are self-aware are good at managing their emotions impacting their behaviour that would help them remain focused. They are motivated to set the realistic goals and also know their strengths and weaknesses. It is also felt that the students who are self- aware are more aware of their learning strategies. Hence, it is imperative that self-awareness impacts AP more profoundly than others. It is also obvious from the finding that high achievers have correspondingly high mean in the other four dimensions too. Thereby, confirming that EI and AP have a direct positive correlation.

To determine significant differences amongst three categories of learners- high, average and low achievers, the findings reveal that students with high, average and low AP differ significantly from one another on their EI. It makes it abundantly evident that a student will perform exceptionally well academically if s/he is emotionally intelligent. This indicates that there is a direct correlation between academic success and EI: the higher the EI, the higher the academic success, and vice versa. It stands to reason that raising students' EI would improve their AP (Suleman et al., 2019).

Conclusion

Since the start of the twenty-first century, people's perceptions of success and intelligence have changed. The conventional theory of intelligence is gradually being replaced by new theories. The concern now revolves around the full child or student, considering not just his or her capacity for reasoning but also their creativity, emotions, and social skills. According to (Goleman, 1985), EI is a master aptitude that has a profound impact on all other abilities, either enhancing or impeding them. For this reason, research on the relationship between students' academic achievement and EI is necessary.

Thus, in the present investigation, it is found that there is a significant influence on students' EI with selfawareness being the most influential element of EI impacting the AP of learners. The gender-wise comparison also revealed that girls have higher EI levels in comparison, thereby performing better than boys.

Limitation and Recommendation

It is evident that finding of this study increase our understanding regarding the relationship between EI and AP of students, it has the limitation too. Some of the limitation and recommendation are:

- Respondents are from only the four middle and higher secondary schools (Class IX-XII) of Tsirang dzongkhag that may not represent the total student population of the country. To generalize the result researcher in future may include the greater sample size capturing the other variables like socioeconomic, rural-urban, cultural background within the country. The future researcher could also examine the relationship between EI and AP across different academic levels (Primary, secondary or at college level). Understanding the importance of EI on academic achievement and towards the holistic development of learners, policymakers may come up with EI development strategies and programs to be integrated into curriculum and classroom practices.
- 2. For the first time, in Bhutanese school, this research reports whether relationship exists between EI and AP whereby the findings indicate stronger association concerning female outperforming male

however considering the sample variation, it is recommended to consider different variables to support or refute the claim in future research.

3. There are finding that reveals the positive correlation between EI and academic performances indicating variables such as better economic status and literate parents having positive relation to EI. However, weakness in the study is that such variables are not taken into consideration in the Bhutanese context of the students coming from varying socio-economic status. Therefore, it may be meaningful to look into such variables in future research.

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