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Emotional intelligence, working job satisfaction and academic results: managing a relationship in Education sector

Qurrat Ul Ain[1], Asrar Khattak [2] & Anwar Fazil Chishti[3]

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ABSTRACT

This paper aims at to evaluate whether educational institutional heads' emotional intelligence can be managed to affect their respective subordinate teachers' work job satisfaction and students' academic performance. Study involved 110 educational institutional heads and asked them to evaluate whether they exercise their emotional intelligence leadership styles while performing their services to effectively manage to affect their respective 550 subordinate teachers' work job satisfaction. To cross-check the institutional heads referred claim, subordinate teachers were asked to validate the claim of their respective institutional heads to affect their work job satisfaction. Subordinate teachers were further asked to evaluate their own work job satisfaction and its effects on students' academic performance. Results showed that all eighteen competency-component variables of Emotional intelligence were found statistically existing, in practice, and institutional heads believed they had been exercising their emotional intelligence leadership style-skills to manage their subordinates' working. Additionally, the statistically existing nine competency-variables which come under Transformational leadership styles were tested and found existing in practice and were more substantial in significance than that of its counterpart Transactional style of leadership. The subordinate teachers were found satisfied from their work job satisfaction, as well as their work Job satisfaction positively contributing towards determination of their students' academic performance. However, the mediational effect tested between teachers' work job satisfaction and students' academic performance was found insignificant but moderation effect of the role of teachers' level of rewards was found significant. Salaries of teachers on mean were found low while the incremental effect of salaries' level was found increasing with an increasing rate. Study concluded that both institutional heads and subordinate teachers were found agreed that emotional intelligence competencies of the former could be managed to affect the latter's work job satisfaction which in turn helped teachers to manage the academic performance of their students; the study also pinpointed the need of certain improvements in managing the work job satisfaction of subordinate teachers by the institutional heads who in turn are expected to manage students' academic performance.

INTRODUCTION

In earlier times, it was largely believed that leaders (rulers administers, managers and supervisors, etc.) are born with God gifted capabilities and intelligence, and the successes of the organizations they led depended on their born abilities and intelligence they carried from their parents and grandparents. With the passage of time, as far as the processes of training and education developed, the think-tanks and researchers identified that, in addition, certain skills and capabilities could be developed and acquired as a result of employing certain needed processes and tools, aiming at to achieve the intended

[1]Ph. D Scholar, Department of education,City university of science & information technology Peshawar q.scholar_h@yahoo.com
[2]Professor , Department Of Education,City University Of Science & Information Technology, Peshawar.
[3]Professor , Department of Management Sciences City University of Science & Information Technology, Peshawar

outcomes; they also tried to measure such human abilities and intelligence, employing terms and concepts including the well-known term intelligence quotient (IQ) and emotional intelligence (EQ). In 1983, Howard Gardner's Frames of Mind: The Theory of Multiple Intelligences introduced the idea that traditional types of intelligence, such as IQ, fail to fully explain cognitive ability (Gardner, 1983). He introduced the idea of multiple intelligences which included both interpersonal intelligence (the capacity to understand the intentions, motivations and desires of other people) and intrapersonal intelligence (the capacity to understand oneself, to appreciate one's feelings, fears and motivations (Smith, 2002). The term subsequently appeared in Wayne Payne's doctoral thesis, A Study of Emotion: Developing Emotional Intelligence in 1985 (Payne, 1983/1986). The first published use of the term 'EQ' (Emotional Quotient) is an article by Keith Beasley in 1987 in the British Mensa magazine (Beasley, 1987). In 1989 Stanley Greenspan put forward a model to describe EI, followed by another by Peter Salovey and John Mayer published in the following year (Salovey and Mayer 1989).

However, the term Emotional Intelligence became widely known with the publication of Goleman's book: Emotional Intelligence – Why it can matter more than IQ. It is to this book's best-selling status that the term can attribute its popularity (Goleman, 1995). Goleman has followed up with several further popular publications of a similar theme that reinforce use of the term.

According to Goleman (2011), Emotional intelligence is the ability to control own emotions along with strong awareness about circumstances which can be considered a powerful mean for guiding a group of subordinates; is the process of perceptive, sympathetic, and reacting to emotions, prevailing over anxiety and being conscious of the effect your statements and deeds on yourself and others. According to Goleman, Emotional intelligence consists of the five major attributes of leadership, including awareness about self, persons' management, rapport management, effective communication and empathy. According to Petrides et al. (2016), Emotional intelligence as social intelligence facilitates a person to get on with others. EI is a management of emotions operating in a sensible and smart style.

Job satisfaction is linked to the organization, organizational commitment, motivation and absenteeism of employees. The importance of emotions in organizational settings is persistent. Both employers and managers need to learn to understand their emotions as well as others' feelings. This enables them to effectively communicate, make decisions and solve problems. It is believed that high Emotional intelligence is important for academicians as it reflects high social skills which help them in their interactions with students (Badwy & Magdy 2015).

The above reported discussion portrays the emotional intelligence an important tool of the supervisors

to affect their subordinates' behavior and performance. If this is true then it is the need of the hour to check whether emotional intelligence of institutional heads can manage to affect their subordinate teachers' behavior and work performance as well as the students' academic achievements and performance. For this purpose, this research paper would pursue the following focal research question in general and the stated research objectives, in particular.

Focal research question

Do educational institutional heads carry enough Emotional intelligence (EI) for fostering subordinate teachers work job satisfaction aiming at achieving greater students' academic performance?

Research objectives

To find out Emotional Intelligence level of existence at secondary school and college institutional head levels, in KP.

To find out the impact of institutional heads Emotional Intelligence managing subordinate teachers work job satisfaction and student academic achievements.

To evaluate mediation-effect of self-efficacy and moderation-effect of the level of rewards on teachers work job satisfaction.

METHODOLOGY

Methods and Materials

A statement of objective-wise hypotheses set and the relevant statistical tools used is provided, as follows.

Research objective 1

To find out Emotional Intelligence level of existence at secondary school and college institutional head levels, in KP.

This objective would be achieved testing the hypotheses listed below.

Hypothesis 1(a)

Educational institutional heads carry appropriate level of Emotional intelligence (EI), as per perception of educational institutional heads themselves.

Hypothesis 1(b)

Educational institutional heads carry appropriate level of Emotional intelligence (EI), as per perception of subordinate teachers.

Hypothesis 1(c)

Educational institutional heads' and subordinate teachers' perceptions regarding the existence and use of Emotional intelligence at institutional head-levels are comparable.

Hypothesis 1(d)

As a consequence of carrying out Emotional intelligence, educational institutional heads exercise appropriate leadership styles.

Data collected from institutional heads through the questionnaire on eighteen EI competencies (Annexure tables 1 & 2) were analyzed, applying descriptive statistics and One-Sample t-test, in cases of hypotheses 1(a) and 1(b). Whereas descriptive statistics provided mean values of variables, One-sample t test statistically further confirmed whether respective mean value is higher or lower than the midpoint value, indicating that mean value of the variable is statistically significant and show a clear-cut No or Yes response of the respondents.

In case of hypothesis 1(c), in addition to Descriptive statistics, Independent-sample t-test was also

applied. For hypothesis 1(d), in addition to evaluating the nine EI competencies which directly relate with leadership styles, a separate test of inspirational/transactional leadership was also applied.

Research objective 2

To find out the impact of educational institutional heads Emotional Intelligence managing subordinate teachers work job satisfaction and student academic achievements.

Two hypotheses have been set to pursue this objective, namely:

Hypothesis 2(a)

Educational institutional heads Emotional intelligence/leadership styles positively impact subordinate teachers work job satisfaction.

Hypothesis 2(b)

Subordinate teachers work job satisfaction positively impacts student academic achievements.

For testing hypothesis 2(a), variable subordinate teacher work job satisfaction (WJS) was regressed on institutional heads Emotional intelligence/leadership styles in terms of transformational leadership (TFLE) and transactional leadership (TSLE), while for hypothesis 2(b), variable students' academic performance (SAP) was regressed on teacher work job satisfaction (WJS).

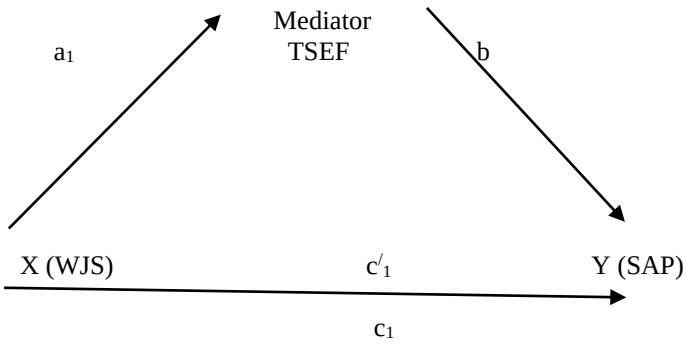
Research question 3

To evaluate mediational-effect of self-efficacy and moderational-effect of the level of reward on teachers work job satisfaction.

Hypothesis 3(a)

Subordinate teachers' self-efficacy (TSEF) mediates between teachers' work job satisfaction and students' academic performance.

Well recognized model on mediation by Baron and Kenny (1986) along with Kenny's (2012, 2018) amendments were used to test hypothesis 2(a); the model applied is:



Accordingly, the following regression was run.

$Y \text{ (or SAP)} = c_0 + c_1X \text{ (or WJS)} + e_1$

$M \text{ (or TSEF)} = a_0 + a_1X \text{ (or WPJS)} + e_2$

$Y \text{ (or SAP)} = c'_0 + c'_1X \text{ (or WJS)} + bM \text{ (or TSEF)} + e_3$

Based on estimated coefficients from the above model, the following equation would provide the magnitude of mediation effect (equal to 'ab'), provided 'ab' would turn out statistically significant.

$c_1 = c'_1 + ab$

Hypothesis 3(b)

1. Subordinate teachers' level of reward (RELE) moderates between teachers' work job satisfaction (WJS) and students' academic performance (SAP).

Baron and Kenny (1986, 2012 & 2018) model was used to test hypothesis 2(b); the model has two versions, linear and non-linear, namely:

Linear model: $SAP = i + aWJS + bRELE + c(WJS \times RELE) + e_1$

Non-linear model: $SAP = d + a_1WPJS + b_1RELE + b_2RELE^2 + c_1(WPJS*RELE) + c_2(WPJS*RELE^2)$

Estimated coefficient 'c' in linear and '$\mathbf{c_2}$' in non-linear model would be statistically significant in case moderator was working.

Sample and Sample size

Six districts of KP, having relatively greater number of schools and colleges, namely Swat, Mardan, Peshawar, D. I. Khan, Mansehra and Abbottabad were selected for data collection, and 110 institutional heads along with 5 teachers from each selected institution were selected as respondents.

Variables and scales used

Since the purpose of this piece of research is to see the effect and use of Emotional Intelligence (EI) of educational institutional heads on the work job satisfaction (WJS) of subordinate teachers and academic performance of their respective students (SAP), well-recognized scales and subscales, especially of the first two variables were adopted and used. The work job satisfaction of subordinate teachers (WJS) included 11 variables while Emotional Intelligence (EI) included 4 clusters and 18 competencies-variables. Number of elements varied from variable to variable. Data on elements/questions were collected from two types of respondents (Institutional heads and Subordinate teachers) and used as base to generate data on variables of our interest. Before generating data on each variable, reliability tests were performed to ensure the consistency and stability of the variables.

RESULTS AND DISCUSSION

Research objective 1

Three hypotheses (1a, 1b & 1c) pursue Research objective 1 which is meant "to find out Emotional intelligence level of existence at secondary school and college institutional head levels). Hypothesis 1(a) tests whether "Educational institutional heads carry appropriate level of Emotional intelligence (EI), as per perception of educational institutional heads themselves", while hypothesis 1(b) counterchecks the same facts from subordinate teachers. The results of Descriptive statistics computed of eighteen EI competencies, provided in both Annexure table I(a) and Annexure table 2(a) reveal that mean-values of perceptions of both institutional heads and subordinate teachers are averaged towards the agreeing side of the perception measuring scale. To further confirm whether means-values of the perceptions expressed are statistically far away from the scales' mid-point values (value 3 on a scale of 1 to 5) and are placed at/within respondents' agreement side, One-sample t test was applied on each of the eighteen competencies of both respondents (institutional heads and subordinate teachers) and results thereof, provided in Annexure table 1(b) and 2(b), further confirmed that mean-values already computed are statistically significant, indicating that Emotional intelligence-competencies practically exist. Hence, hypothesis 1 (a & b) are accepted.

Hypotheses 1(a & b) were accepted, showing that both types of respondents, institutional heads and subordinate teachers are agreed on the statistically significant level of EI existence at educational institutional heads level, question remain whether the perceptions of two types of respondents are comparable. Hypothesis 1(c) attempts this question, using Independent-sample t-test. This hypothesis states that "the perception of institutional heads regarding existence of emotional intelligence at institutional heads level is comparable to the perception that of their subordinate teachers" was tested, and rejected in seventeen EI competencies, with the exception of one competency, namely Self-

confidence-SCON (Annexure table 3). The statistical difference between the perceptions of Institutional heads and subordinate-teachers were due to self-reporting nature of the perceptions of Institutional heads which indicated that there was some scope of improvement in the Emotional Intelligence competencies, on part of educational institutional head.

Hypothesis 1(d), stating "as a consequence of carrying out Emotional intelligence, educational institutional heads exercise appropriate leadership styles', was tested through evaluating the nine EI competencies (three and six relating to EI cluster 'Social awareness' and cluster 'Relationship management', respectively), out of total eighteen already discussed (Annexure table 1 and 2). These nine EI competencies have already found statistically significantly existing, suggesting that hypothesis 1(d) is accepted. To reinforce these results, another test of transformational/inspirational and transactional leadership was also applied, the results of which also supported to accept hypothesis 1(d).

Research objective 2

Mediation analysis

As per hypothesis 2(a), subordinate teacher work job satisfaction (WJS) was regressed on institutional heads transformational leadership (TFLE) and transactional leadership (TSLE) styles; the results were found, as follows.

Regressing WJS on TFLE and TSLE

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	1.696	.109		15.494	.000
Transformational Leadership (TFLE)	.188	.027	.250	7.026	.000
Transactional Leadership (TSLE)	.328	.024	.489	13.733	.000
$R^2 = 0.384$	F = 170.462 (Sig: 000.00)				

Both transformational leadership (TFLE) and transactional leadership (TSLE) styles of educational institutional heads appeared to be statistically significantly contributing towards subordinate teacher work job satisfaction (WJS); hence, hypothesis 2(a) is accepted.

In case of hypothesis 2(b), students' academic performance (SAP) was regressed on teacher work job satisfaction (WJS); the results were found, as follows.

Regressing SAP on WJS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	-.009	.213		-.040	.968
WJS	1.039	.060	.596	17.381	.000
$R^2 = 0.355$	F = 302.055 (Sig: 000.00)				

Teacher work job satisfaction (WJS) was turned out statistically significantly affecting student academic performance; hence, hypothesis 2(b) is accepted.

Research objective 3

For testing hypothesis 3(a), the required regression was carried out, as follows.

SAP = -0.009 + 1.039WJS

TSEF = 2.040 + 0.507WJS

SAP = -0.373 + 0.949WJS + 0.178TSEF

Substituting values in equation:

$c = c^{/} + ab$

1.039 = 0.949 + (0.507*0.178)

Out of total effect (c) of WJS on SAP, direct effect $c^{/}$ = 0.949 and indirect (mediation effect is ab = (0.507*0.178) = 0.09025; in percentage terms, mediation effect estimates as 8.66 percent and direct effect as 91.34 percent. Mediation effect is not only very meagre but it is also statistically insignificant Sobel test ($Z_{ab} = ab/s_{ab} = 0.95$). Hence, hypothesis 2(a) is rejected, suggesting that indirect/mediational effect of subordinate self-efficacy is not working and there is a strong need of improving it.

Moderation analysis

For testing hypothesis 3(b), both linear and non-linear models were applied. Linear model remained statistically insignificant, while non-linear model yielded significant results; the results of the later model are reproduced, as follows.

Moderation analysis (non-linear)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.182	.802		2.722	.007
WPJS	.492	.221	.282	2.224	.027
RELE	.000	.000	-3.393	-3.116	.002
(WJS*RELE)	2.603E-005	.000	3.149	2.835	.005
$RELE^2$	1.022E-009	.000	3.619	3.272	.001
($WJS*RELE^2$	-2.626E-010	.000	-3.402	-3.026	.003

Representing results in regular econometric format:

SAP = 2.182 + 0.492WJS + 0.000RELE + $.00000000102RELE^2$

+ 000026(WJS*RELE) - $.00000000026(WJS*RELE^2)$

Taking derivative of SAP, with respect to WJS, we get:

$\partial SAP/\partial WPJS = 0.492 + .000026RELE + .0000000026RELE^2$

Substituting three levels of reward, namely 'mean-salary-1 SD', 'mean-salary' and 'mean salary+1 SD', that is:

Mean-salary-1 SD = 20674

Mean-salary = 41563

Mean salary+1 SD = 62452

Putting values of mean-salary-1 SD

$\partial SAP/\partial WJS = 0.492 + .000026*20674 + .0000000026*427414276 = 2.1408$

Putting values of mean-salary

$\partial SAP/\partial WJS = 0.492 + .000026*41563 + .0000000026*1727482969 = 6.0640$

Putting values of mean-salary+1 SD:

$\partial SAP/\partial WJS = 0.492 + .000026*62452 + .0000000026*3900252304 = 12.25640799$

Marginal increase in Student Academic Performance (∂SAP) with respect to Teachers' Work Job satisfaction (∂WPJS) estimates at 2.1408 at an average salaray level of 'mean-salary-1 SD' = Rs. 20674.00 per month; marginal increase of SAP with respect to WJS enhances to 6.0640 and 12.2564 at salary-levels 'Mean-salary' and 'Mean-salary + SD', respectively; results suggest that moderating variable, level of reward, help increase the effect of WJS towards furthering the effect in the form of SAP. Hence, respective hypothesis 3(b) is accepted.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The above-reported results of the study and discussion thereon helped draw the following conclusions.

First, all the 110 institutional heads and 550 subordinate teachers agreed on the existence and use of emotional intelligence. However, the institutional heads and subordinate teachers agree that there exists some need for improvement in their heads leadership styles and its use for enhancing teachers' job satisfaction.

Second, study did not reveal that which leadership style, transformational or transactional, better performed to enhance work satisfaction and job performance of teachers. Generally, inference of the research is that Institutional heads must raise job satisfaction of teachers by selecting a blend of transformational and transactional leadership style. Work performance and Job satisfaction of the teachers also positively contributed to the determination of their students' academic performance.

Third, computation of mediational effect of subordinate teachers' self-efficacy mediates between teachers' work performance–cum-job satisfaction and students' academic performance suggested that their indirect (mediational) effect was statistically insignificant and there was strong need of improving self- efficacy of teachers in the area of study (KP). However, moderation effect of reward level was found significant and was found working as a good moderator. It should, however, be noted that salaries as a whole were the low and incremental effect of salaries level were higher at higher levels, meaning that the effect of an increase in salary increases with an increasing rate. Hence result suggested improvements in salary levels.

Recommendations

1. Though both respondents, Institution-heads and subordinate-teachers, agreed on the existence of Emotional Intelligence, the perception of the earlier was found relatively higher in value (mean value) than that of the latter; hence, the emotional intelligence capabilities of Institutional heads should be further enhanced, especially through better managing themselves while dealing with their subordinate teachers.
2. The leadership styles were also found existing; however, in almost all competency-variable cases, the majority of the respondents opted for Likert-scale option 4 (suggesting: I agree) instead of option 5 (I strongly agree), meaning that the leadership style capabilities of institutional heads should be further enhanced, using training, organizing workshops and seminars.
3. The perceptions of the two types of respondents (Institutional Heads and Subordinate-teachers) of leadership style were found not comparable. Transformational leadership style should preferably be adopted by the Institutional heads for greater job satisfaction of the teachers.
4. Strangely, the mediational effect of subordinate teachers' self-efficacy between teachers' work performance–cum-job satisfaction and students' academic performance, were found missing. The reasons and causes of this aspect should be explored and rectified through adopting suitable means.
5. In contrast, the moderation effect of teachers' level of rewards between teachers' work performance–cum-job satisfaction and students' academic performance was found significant and increases with the increasing rate; hence should be noted and applied as a guiding tool.
6. This research will help institutional leaders to perform their duties in a way that teachers are satisfied with their attitude and skills. This research will help further investigation on this topic at higher levels. These study findings contribute to understanding the level of emotional intelligence and leadership styles transformational/transactional and teachers' job satisfaction at school and college level. Further research in this area could be extended in other fields of education.

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