Study of Emotional Intelligence and Its Impact on Student's Life

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Abstract:
The objective of the study is to find out Emotional Intelligence (EI) of engineering students (N=138) (age:18-20 years) at IIT, Roorkee, India. It is a quantitative and empirical study conducted through questionnaire administration. The descriptive statistics, regression analysis, correlations, F-test and ANOVA were used to analyse the sample data collected. The study aims to analyse EI of students as it is imperative to understand their abilities and traits through their emotions. From the study it was found that female students had higher score for EI and its components (Sensitivity, Competency and Maturity). Also, it was observed that Competency impacts Maturity more than Sensitivity, thereby suggesting that Maturity is also defined by the abilities which are skills learned and experienced in a student's life. Also, the responses for the three components of EI did not show any significant variation with age, meaning thereby age as a factor does not impact EI as a personality trait for students.

Keywords: Emotional intelligence, sensitivity, maturity, competency

1. Introduction

Wellbeing and success in young adults is related to their social and emotional learning skills since they need to negotiate life challenges productively as well as to reduce the risks of mental health problems (Cherniss & Adler, 2000). Therefore, the current demands of society require additional skills in the area of emotional awareness, conflict resolution, decision-making and social interaction for a successful life (Romasz et al., 2004). It is evident that the role of EI in emotional adjustments and academic achievements of student is important and impactful (Humphrey et al., 2007).Therefore, it is imperative to judge and analyse these emotional attributes which are essential part of defining the abilities of students. Since 1980s, Emotional Intelligence (EI) has been widely researched, and has emerged as essential attribute for forecasting success in terms of management and leadership. EI is related to various traits that have high correlation with effective Leadership (Yukl, 2006). These traits help in problem solving and decision making. Also many researches have been done for analysis of EI for males and females. It has been found that ability EI is scored more for females than males(Brackett & Mayer, 2003; Brackett, Mayer, & Warner, 2004; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Day & Carroll, 2004; Mayer, Caruso, & Salovey, 1999).Women often tend to place greater value upon being humanistic, social, inclusive and being cooperative and collaborative (Collins & Singh, 2006). Also many studies show that leaders (managers, team heads) who are emotionally intelligent have higher performance ratings (Goleman, 1998). Also it has been found that higher EI scoring tend to have effective leadership qualities (Rosener, 1990). On the basis of the above mentioned research works, the study was conducted to analyse EI for males and females on the basis of components of Emotional Quotient (EQ) .The emotional quotient was defined by its three basic components which are Emotional Competency, Emotional Maturity and Emotional Sensitivity.

Emotional intelligence is the ability to sense, assess, understand and control the emotions of oneself, others or groups. EI is taken as distinct group of mental abilities. This is one of the basic tools which facilitate high levels of collaboration and productivity. It justify that that human is a social animal. EI helps in maintaining the ability to solve social problems and surviving in social environment. The EI has a wide application in several areas like it impacts job performance & productivity, mental stability, artificial intelligence. It is an integral part of Leadership and various differences in EI responses can be seen on the basis of Gender, job position and experience. EI impacts the use of drugs in kids and adults. There are certain issues with analysis of EI such asit is still not universally accepted that emotional intelligence is a real intelligence, it is has little face and predictive value and there are certain questions raised on its importance over IQ. Therefore, there are certain assumptions taken for the present study where EI is considered as a real intelligence which has ability to solve problems and second assumption that EI can be measured.

It is seen that the young adulthood is the stage of life that is the base for focussing and managing personal and academic life for preparing for coming future (for a student). It is the stage in which a person is either at threshold of a job or is in the middle of training for a job. At this stage, a student faces a number of challenges and his/her abilities and traits help to define the success in near future. Since the young adults are in continuous process of making friends and relations as well as consciously attempting to get well with their colleagues, it becomes important for them to understand their(colleagues) emotions and feelings with their competencies. These emotional competencies are important for work, academic and personal life. The EI further improves the social and emotional skills of

young adults leading to their self-acceptance, positive relation and personal growth. Given the above facts, it becomes imperative to analyse, understand and study the EI of students and this is the main objective of the present study.

2. Literature Review

Emotional Intelligence is the ability sense, access, understand and control emotions .The skills of controlling the impulse, curbing the impatience, properly regulating mood, preventing frustration and having hope and empathy (Petrides & Furnham, 2000). EI is the ability to understand feelings, listen to others and feel them, to express in an effective manner (Goleman, 1998). In 1985, the term EI came into existence. Its association to existence of life can be collected from Darwin Evolution theory also. The first extensive use of the term EI was done by Keith Beasley in his article in British Mensa Magazine (1987). Also, it was used in the work of Beldoch (1964), Leuner (1966). Then models were presented by Stanley Greenspan (1989), Peter Salovey and John Mayer (1989). In 2000, the difference between ability EI and trait EI was given. According to *Encyclopedia of Applied Psychology* there are three major models of emotional intelligence. A) ABILITY MODEL (John Mayer and Peter salovey, 2000), B) MIXED MODEL (Daniel Goleman, 1990), C) TRAIT MODEL (K V Petrides, 2001). According to Salovey and Mayer, ability model EI is a form of new intelligence that is "The ability to perceive emotions, integrate emotions to facilitate thought, understand emotions and to regulate emotions to promote growth".This model considers emotions as good source of information that helps in sensing and navigating in social environment. This model has 4 types of abilities. They are Perceiving emotions, using emotions, understanding emotions and Managing emotions. The criticism of the above model is just on the base of absence of face and predictive value of the same. The measurement of ability EI is done by MSCEIT- MAYER SALOVEY CARUSO EI TEST (Mayer et. al.,2000).Mixed model was given by Daniel Goleman. This model states that EI is a wide array of competencies and skills that drive leadership performance. Five main constructs from HBR 1998 are Self-Awareness, Self- Regulation, Social skills, Empathy and Motivation. Goleman stated that emotional competencies are learned capabilities and not innate talent. It was measured by tools – ECI-EMOTIONAL COMPETENCY INVENTORY & ESCI-EMOTIONAL & SOCIAL COMPETANCY INVENTORY. Trait model was suggested by K V Petrides in 2001, according to which it was referred as individual's self-perception of emotional abilities. It is measured by self-report.Spielberger (2004) suggests three major basic conceptual models for EI. These are Mayer-Salovey model (1997), Goleman model (1998), Bar-On model (1997). The first two models have been discussed and the Bar-On model describes a cross-section of interrelated emotional and social competencies, skills and facilitators that impact behaviour of intelligence, measured by self-report (Neophytou, 2013).

For the present study, emotional quotient is divided into three basic components which are Emotional Competency, Emotional Maturity and Emotional Sensitivity in the questionnaire (Singh, 2006). Emotional Competency is the ability to tackle emotional upsets, maintain high self-esteem and contains tactful response to emotional stimuli& skill to handle egoism. Emotional Sensitivity in psychological perspective is the characteristic of being peculiarly sensitive and being able to judge threshold or analyse various types of stimulations, evoking feelings sensations and emotions. It is the ability to understand threshold of emotional arousal, empathy, improvement of inter-personal relations and communicability of emotions. Emotional Maturity is reflected in the behavioural pattern while dealing with the inner self and the immediate environment. It is the ability to have Self-awareness, develop others, delay gratification and to have adaptability & flexibility.

Empathetic people are more flexible to social stimulus indicating what the other people want or need (Leiberg & Anders, 2006). People with high EI tend to be more successful in all aspects of life, also vice versa is true (Carmeli et al., 2009). High EI tends to increase positive interpersonal relationships in children, adolescents and adults (Rice, 1999). High EI is positively correlated with social skills (Schutte, 2001), individual's academic success (Parker et al., 2004), ability to cope with stressful situations and cooperative interpersonal relationships (Hunt & Evans, 2004) while low EI is associated with drug and alcohol abuse, deviant behaviour and poor relationships (Imran et al., 2013).

3. Methodology

The exploratory method was chosen in which a questionnaire tool was used to get the information from the target respondent. The tool was based on the three components of EI, which were Sensitivity, Maturity, and Competency. The data was collected from engineering students(N=138) of age group of 18-20 years at Indian Institute Of Technology ,Roorkee ,India. The data collected was in form of questionnaire responses. Total sample collected was 138.Further analysis was carried in EViews and Excel.

The objectives of the present study are to find the Emotional Intelligence of the students considered for the study, to analyse the relevance of Sensitivity, Maturity and Competency for EI/EQ for the respondents, to analyse these three components of EI (Sensitivity, Maturity and Competency) in male and female students and to find significant difference between different ages of students for Sensitivity and Competency responses. As per the objectives of the study, the hypotheses formulated are H1: On the measure of Sensitivity, there would be a significant difference between students of age 17 & 19, H2: On the measure of Competency, there would be a significant difference between students of age 17 & 19, H3: Impact of competency is more on maturity than on sensitivity and H4: Females are more responsive to Competency, Maturity, and Sensitivity than males.

4. Measures

The present EI test (Singh, 2006) measures three psychological dimensions - emotional sensitivity, emotional maturity and emotional competency**.** This test has been standardized for professional managers, businessmen, bureaucrats, artists, graduate student, and adolescent population**.** The 22 situations measure the emotional responses to different situations. The tool has test-retest and split-half reliability of 0.94 and 0.89 respectively and validity of 0.89 with sample size of 150.

5. Data Analysis

	COMPETEN...	MATURITY_...	SENSITIVITY...
Mean	155.4348	105.4348	86.73913
Median	160.0000	105.0000	90.00000
Maximum	185.0000	130.0000	100.0000
Minimum	110.0000	75.00000	55.00000
Std. Dev.	17.64903	11.83028	11.77112
Skewness	-0.673854	-0.362909	-1.020797
Kurtosis	2.888998	2.787445	3.513858
Jarque-Bera	10.51466	3.288947	25.48490
Probability	0.005209	0.193114	0.000003
Sum	21450.00	14550.00	11970.00
Sum Sq. Dev.	42673.91	19173.91	18982.61
Observations	138	138	138

Figure 1
*Analysis from eviews

From the figure1, it can be seen that for the sample of 138 respondents, Competency is 155.43(SD=17.65), Maturity is 105.43 (SD=11.83) and Sensitivity is 86.74(SD=11.77). Also, it can be seen by Jarque-Bera test that problem of normality does not exist in the three EI dimensions (EI constructs)
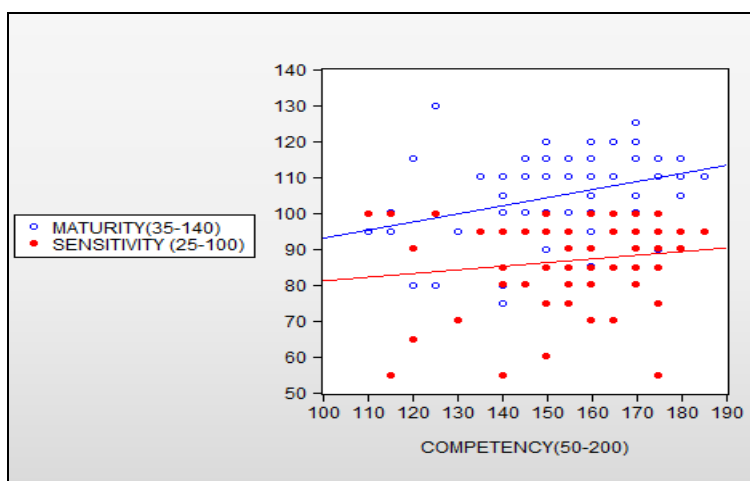

Figure 2
*Analysis from eviews

In figure2, the scatter plot on Eviews suggests that with competency, the variation of Maturity and Sensitivity exhibits a comparative study. The plot describes that with competency the variation is seen more in Maturity than Sensitivity as the slope of the Maturity is higher. Also the initial value of Maturity is higher (90-115) than sensitivity (80-85), as per graph. Due to Competency, the impact on Maturity is more than Sensitivity.

	Sensitivity	Maturity	Competency	Total Ei
Male	86.44144	105.3604	154.3243	346.1261
Female	90	107.8571	160	357.8571

Table 1: Mean values for male and female students
*Analysis from eviews

As per Table1, for Sensitivity, Maturity and Competency, females have higher score than males. It can be seen that value of Sensitivity is 86.44 for males and 90 for females, the value of Maturity is 105.36 for males and 107.86 for females, and the value for Competency is 154.32 for males and 160 for females. Thereby, the total EI for males is 346.13 and for females 357.85In table 1, mean values suggests that total EI of both male and female have extremely high EQ which is coming under 90 percentile, similar pattern for Sensitivity and Competency which both come under 90 percentile score range (As per Dr. Dalip Singh EI score test, Table2 discussed

below).But the Maturity lies under 75 percentile. The possible explanation is the young age of the respondent as they are just the students with age ranging 18 to 20 years.

EQ DIMENSIONS	P-90 (Extremely high EQ)	P-75 (High EQ)	P-50 (Moderate EQ)	P-40 (Low EQ)	P-20 (Try the Test some other Day)
SENSITIVITY(25-100)	91-100	81-90	56-80	31-55	< 30
MATURITY(35-140)	121-140	101-120	81-100	46-80	< 45
COMPETENCY(50-200)	126-200	96-125	76-95	51-75	< 50
TOTAL EQ(110-440)	311-440	271-310	201-270	126-200	< 125

Table 2
*Source: Dr. Dalip Singh(2006)

	Competency	Maturity	Sensitivity
Competency	1.00	0.34	0.15
Maturity	0.34	1.00	0.19
Sensitivity	0.15	0.19	1.00

Table 3: Correlation

Table 3 suggests that not much correlation has been found between the three components in students unlike in employees working in organizations (Sharma et.al 2014). The reason may be the young age which it is the stage of growing personality of a student, which impacts the future life.

t-Test:		
	Age 17 COMPETENCY (50-200)	Age 19 COMPETENCY (50-200)
Mean	156	158.2352941
Variance	227.1794872	87.70053476
t Stat	-0.777809397	
P(T<=t) one-tail	0.219730377	
t Critical one-tail	1.668270514	
P(T<=t) two-tail	0.439460753	
t Critical two-tail	1.996564419	

Table 4
*Analysis from excel

In table 4, the competency for students of age 17 and 19 was considered and t- test showed that both have no significant difference of the responses as value of p is greater than 0.05, p= 0.439 (P>0.05). Meaning thereby, the age for students does not come as an impactful factor for the reason for changing competency at University level.

	Age 17 SENSITIVITY (25-100)	Age 19 SENSITIVITY (25-100)
Mean	83.75	87.94117647
Variance	163.7820513	57.7540107
t Stat	-1.741312577	
P(T<=t) one-tail	0.043179977	
t Critical one-tail	1.668635976	
P(T<=t) two-tail	0.086359954	
t Critical two-tail	1.997137908	

Table 5
*Analysis from excel

In table 5, the sensitivity for students of age 17 and 19 was considered and t- test showed that both have no significant difference of the responses as value of p is greater than 0.05, p= 0.086 (P>0.05). Meaning thereby, the age for students does not come as an impactful factor for the reason for changing sensitivity at University level.

t-Test:		
	Age 17 MATURITY (35-140)	Age 19 MATURITY (35-140)
Mean	103.75	107.3529412
Variance	179.1666667	94.29590018
t Stat	-1.33786115	
P(T<=t) one-tail	0.092635974	
t Critical one-tail	1.666914479	
P(T<=t) two-tail	0.185271948	
t Critical two-tail	1.994437112	

Table 6
*Analysis from excel

In table 6, the Maturity for students of age 17 and 19 was considered and t- test showed that both have no significant difference of the responses as value of p greater than 0.05, p= 0.185 (P>0.05). Meaning thereby, the age for students does not come as an impactful factor for the reason for changing Maturity at University level.

6. Conclusion
On the basis of data analysis, it is found that female students have higher score for EI and its three separate components. Also, Competency impacts Maturity more than it impacts Sensitivity, thereby suggesting that maturity is also defined by the abilities and skills learned and experienced in student life. Also, the responses for the three components of EI does not show any significant difference for age gaps of 2years, meaning thereby age as a factor of maximum of 2 years in academic life of a students does not impact EI as a personality trait with not much change in the given span of time.
The present study has certain limitations which are that the study has less observation for females respondents, there is certain biasness or manipulation on part of respondent while filling the questionnaire and the data collected for students is from the India's top university, IIT and the students have generally higher IQ and EQ, therefore results cannot be generalized for all the students of India.

7. References
i. Ashforth, B.E. & Humphrey, R.H. (1995). Emotion in the workplace: A reappraisal. Human Relations, 48(2), 97-125.
ii. Bar-On, R. (2004). The Bar-On Emotional Quotient Inventory (EQ-i): Rationale, description and psychometric properties. In G. Geher (Ed.), Measuring emotional intelligence: Common ground and controversy. Hauppauge, NY: Nova Science.
iii. Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI). Psicothema, 18, 13-25.
iv. Bar-On, R., & Parker, J.D.A. (2000). The handbook of emotional intelligence: Theory, development, assessment and application at home, school, and in the workplace. San
v. Francisco, California: Jossey-Bass.
vi. Benjamin, M., & Hollings, A. (1997). Student satisfaction: Test of an ecological model. Journal of College Student Development, 38(3), 213-228.
vii. Brackett, M., Mayer, J., & Warner, R. (2004). Emotional intelligence and its relation to everyday behavior. Personality and Individual Differences, 36, 1387-1402.
viii. Brackett, M. A., Rivers, S., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of performance and self-report measures of emotional intelligence. Journal of Personality and Social Psychology, 91, 780-795.
ix. Butler, C. J., & Chinowsky, P. S. (2006). Emotional intelligence and leadership behavior in construction executives. Journal of Management in Engineering, 22(3), 119-125.
x. Carmeli, A., Brueller, D., & Dutton, J. E. (2009). Learning behaviours in the workplace: The role of high-quality interpersonal relationships and psychological safety. Systems Research and Behavioral Science, 26 (1), 81-98.
xi. Cherniss, C., & Adler, M.(2000). Promoting emotional intelligence in organizations. Alexandria, VA: American Society for Training and Development.
xii. Cherniss, C., & Goleman, D.(2001). The emotionally intelligent workplace . San Francisco: Jossey-Bas.
xiii. Cherniss, C., Goleman, D. Emmerling, R. Cowan, K., & Adler, M. (1998). Bringing emotional intelligence to the workplace. New Brunswick, NJ: Consortium for Research on Emotional Intelligence in Organizations, Rutgers University.
xiv. Ciarrochi, J.V., Chan, A.Y.C., & Caputi, P. (2000). A critical evaluation of the emotional intelligence construct. Personality and Individual Differences, 28(3), 539-561.
xv. Day, A. L., & Carroll, S. A. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours. Personality and Individual Differences, 36, 1443–1458.
xvi. De Lazzar, A. S. (2000). Emotional Intelligence, Meaning and Psychological well-being: A comparison between Early and Late Adolescence. Unpublished Thesis. Trinity Western University.

xvii.   Goleman, D. (1995). Emotional Intelligence, New York, NY, England: Bantam Books, Inc.
xviii.   Goleman, D. (1998). Working with Emotional Intelligence. NY:Bantam.
 xix.   Goleman, D. (2006). Social Intelligence: The New Science of Human Relationships. NY:Bantam.
  xx.   Henley, M., & Long, N.J. (1999). Teaching emotional intelligence to impulsive-aggressive youth. Journal of Emotional and Behavioral Problems, 7(4), 224-229.
 xxi.   Hermon, D.A., & Hazler, R.J. (1999). Adherence to a wellness model and perceptions of psychological well-being. Journal of Counseling and Development, 77(3), 339-343.
xxii.   Humphrey, S.E., Nahrgang, J.D. & Morgeson, F.P. (2007). Integrating Motivational, Social, and Contextual Work Design Features: A Meta-Analytic Summary and Theoretical Extension of the Work Design Literature. Journal of Applied Psychology, 92(5), 1332–1356.
xxiii.   Leiberg, S., &Anders, S. (2006). The multiple facets of empathy: a survey of theory and evidence. Progress in Brain Research,156, 419–440. doi: 10.1016/s0079-6123(06)56023-6
xxiv.   Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey and D. Sluyter, (Eds.), Emotional development and emotional intelligence. Educational Implications, 3-31. New York, NY: Perseus Book Group.
 xxv.   Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). In R. J. Sternberg (Ed.). Handbook of Human Intelligence (2nd ed), pp 396-420. New York: Cambridge.
xxvi.   Nam, J.S. (1994). Predictors of drug/alcholol abuse and sexual promiscuity of college students. Paper presented at the Annual Meeting of the Tennessee Counseling Association, Chattanooga, TN, November 20-22, 1994.
xxvii.   Neophytou, L. (2013). Emotional intelligence and educational reform. Educational Review, 65(2), 140-154.
xxviii. Palmer, S. (2013). Empathy: Why it's important, why we should nurture it in our kids. Retrieved from http://www.parentfurther.com/blog/raising-empathetic-kids
xxix.   Parker, J.D.A., Summerfeldt, L.J., Marjorie, J.H., & Majeski, S.A.(2004).Emotional intelligence and academic success: examining the transition from high school to university. Personality and Individual Differences, 36(1), 163-172.
 xxx.   Petrides, K.V., & Furnham, A. (2000a), On the dimensional structure of emotional intelligence. Personality and Individual Differences, 29, 313-320.
xxxi.   Petrides, K.V., & Furnham, A. (2001). Trait Emotional Intelligence: Psychometric Investigation with Reference to Established Trait Taxonomies. European Journal of Personality, 425–448.
xxxii.   Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. Personality and Individual Differences, 36, 277–293.
xxxiii. Romasz, T.E., Kantor J.H., & Elias M.J. (2004). Implementation and evaluation of urban school-wide social–emotional learning programs. Evaluation and Program Planning, 27, 89–103.
xxxiv.   Roseman, I.J., Dhawan, N., Rettek, S.I., & Naidu, R.K. (1995). Cultural differences and cross-cultural similarities in appraisals and emotional responses. Journal of Cross-Cultural Psychology, 26(1), 23-48.
xxxv.   Rosener, J. (1990). Ways women lead. Harvard Business Review, 68, 119-125.
xxxvi.   Salovey, P., & Mayer, J.D. (1989), Emotional intelligence. Imagination, Cognition, andPersonality,9(3), 185-211.
xxxvii. Schutte, N. S., Schuettpelz, E, & Malouff, J. M. (2001). Emotional intelligence and task performance. Imagination, Cognition, and Personality, 20, 347-354.
xxxviii. Sharma, D., & Mishra, I., & Sharma, V., (2014). Emotional Intelligence among Employees of Government and Public Sectors. International Journal of Social Sciences, III(3), 124-142.
xxxix.   Singh D, (2006). Emotional Intelligence at work (3rd e.d.). Sage Response.
  xl.   Spielberger, C.D., 2004. Encyclopedia of Applied Psychology (1st e.d.)., Academic Press, New York, ISBN: 0126574103.
  xli.   Sternberg, R.J. (1983). Components of human intelligence. Cognition, 15, 1-48.
 xlii.   Sternberg, R.J. (1985). Beyond IQ: A triarchic theory of human intelligence. Cambridge:
xliii.   Cambridge University Press.
 xliv.   Walsh-Portillo, J. (1998-2011). Raising a child with high emotional intelligence-annual workshop S.E.D.I. for parents and staff. México City, México.
 xlv.   Walsh-Portillo, J. (May, 2008). Barriers to effective communication. Broward College
 xlvi.   Professional and Technical Staff Retreat. Davie, FL.
xlvii.   Walsh-Portillo, J. (July, 2008). Emotional intelligence and student success, Sierra Nevada
xlviii. School (K-12); México City, México.
 xlix.   Walsh-Portillo, J., Hefferin, D., & Hodge, T. (June, 2011). Our new area code is 3.5.1.
    l.   How monitoring was the best thing that happened to our general education program. State Assessment Meeting; Valencia College, Orlando, FL.
   li.   Williams, W.M., & Sternberg, R.J. (1988). Why some groups are better than others. Intelligence, 12(4), 351-377.
  lii.   Yukl, G. (2006). Leadership in organizations (6th e.d.). Upper Saddle River, NJ: Prentice Hall.
 liii.   Yukl, G., & Lepsinger, R. (2005). Why integrating the leading and managing roles is essential for organizational effectiveness. Organizational Dynamics, 34(4), 361-375.