

The Relationship between Emotional Intelligence and Transformational Leadership in Information Systems Managers: An Exploratory Study

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Abstract

In these volatile economic times, it is often the quality of leadership in organisations that determines their success or failure. Emotional Intelligence (EI) has been topical in the last few years, especially its importance as a skill in business leaders. Various EI research has revealed that a high level of EI is vital for successful leadership. In the Information Systems (IS) field, many professionals may be technically brilliant but often lack the EI required to move into successful leadership positions. These EI skills are essential for successful leadership in all spheres of business and therefore the IS field should be no different. It is also well documented that transformational leaders motivate employees to achieve more than expected and beyond their self-interests for the good of the group. This type of leadership is particularly relevant in the current economic climate. This exploratory research aims to investigate whether a relationship exists between IS managers' EI traits and their transformational leadership abilities and whether this could influence an IS professional's progression from a technical role into a successful IS leadership role. Sixteen South African IS managers completed research questionnaires which comprised an Emotional Intelligence test, a Leadership test and a researcher-designed questionnaire. The hypotheses were H⁰ - There is no correlation between IS managers' EI and their transformational leadership abilities and H¹ - There is a positive correlation between IS

managers' EI and their transformational leadership abilities. The two variables under investigation were Emotional Intelligence (independent variable) and transformational leadership (dependent variable). Correlation analysis was performed on the data and revealed significant positive correlations between various pairs of EI and transformational leadership variables. Because EI is not 'fixed' like IQ, it can be improved through training and practice and, as such, IS businesses may encourage their IS managers/potential IS managers to work on the improvement of their EI competencies in order to become better leaders. This research was done on a small sample and in a small geographic area and is therefore not generalisable. A similar research project conducted on a much larger sample and a broader geographic area would be worthwhile.

Keywords: Emotional Intelligence (EI or EQ), transformational leadership

Problem statement, Objectives and Research Questions

This exploratory research aims to investigate the relationship between IS managers' EI and their transformational leadership abilities.

The questions which the research aimed to answer were:

- Is there a relationship between IS managers' EI traits and their transformational leadership abilities?
- Is there a correlation between IS managers' EI and variables such as gender, age, education, salary, job type and number of years IS experience?
- Is there a correlation between IS managers' transformational leadership abilities and variables such as gender, age, education, salary, job type and number of years IS experience?
- Are there implications of the research for IS professionals wanting to progress into, or already in, IS leadership positions?

Literature Survey

Introduction

EI is the ability to monitor one's own and others' feelings and emotions and to differentiate amongst them and to use this information to guide one's thoughts and actions. The five main components of EI are self-awareness, self-regulation, motivation, empathy and social skill (Goleman 1995).

EI has been very topical in the last few years, especially its importance as a skill in business leaders. Various EI research studies have been conducted and have shown that a high EI is vital for successful leadership (Goleman 1995; Darnell 2005; Salovey & Mayer 1990; Murensky 2000; Rankin 2005/2006). In the IS field, many professionals may be technically brilliant but often lack the EI required to move into successful leadership positions. These EI or people skills are essential for successful leadership in all spheres of business and therefore the IS field should be no different.

Emotional Intelligence

EI and its relationship with leadership are very topical at the moment. In essence, EI refers to 'people skills' such as self-awareness, self-control, motivation, decision making, handling stress, empathy, assertiveness, insight, conflict resolution and social skills. The term emotional intelligence was coined by Israeli psychologist Bar-On in 1985. The concept was only popularised ten years later in 1995 when psychologist Goleman wrote his book *Emotional Intelligence: Why it can matter more than IQ* (Goleman 1995). The book became an instant best-seller and looked at the relationship between success and being able to motivate oneself and persist in the face of frustrations, to control impulse and delay gratification, to regulate one's moods and keep distress from swamping the ability to think, to empathise and to hope.

EI has been defined as

the ability to monitor one's own and other's feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions (Salovey & Mayer 1990).

In 1997, they updated this approach with the four-branch model:

Emotional intelligence is the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth (Mayer & Salovey 1997).

Goleman (1995) cites an interesting example of how important EI is in the workplace. At Bell Labs, which is the world-famous scientific think-tank near Princeton University, a study was done of star performers. The staff at Bell Labs are all highly intelligent (high IQ) engineers and scientists. Within this organisation, some people emerged as stars, while others were only average in their performance. Many of the projects at Bell Labs are too complex for one individual to do alone, often requiring ad-hoc teams to solve a problem. The stars were studied and compared with others to try and determine what made the difference. IQ, personality tests and other tests showed no major differences between the groups. However, 'after detailed interviews, differences emerged in the internal and interpersonal strategies stars used to get their work done' (Goleman 1995). The most important strategy was rapport with a network of key people. These stars put time into nurturing good relationships with people whose services they may need as part of an ad-hoc team to solve a problem. When they need help, these networks of people are willing to oblige quickly. Not so for the non-stars, who may also try to get help from colleagues in an emergency, but don't get the same level of co-operation as the stars. What made the difference between the stars and the others was not their IQ, but their EI because they were better able to motivate themselves and better able to set up informal networks of colleagues that they could call on when needed.

Leadership

Leadership is the art of persuading people as opposed to dominating them (Goleman 1995). According to Bass and Avolio (2000) in their Multifactor Leadership Theory, there are three broad leadership styles, namely transactional, transformational and laissez-faire. Transactional leaders motivate employees by offering rewards for acceptable performance and as a

result achieve expected deliverables (Bass 1997; Bass & Avolio 1990). Transformational leaders, on the other hand, motivate employees to achieve beyond what was thought possible and beyond their self-interests for the good of the group (Sivanathan & Fekken 2002). Laissez-faire leadership is hands-off where no attempt is made to motivate others or to recognise or satisfy individual needs. These leaders avoid decision-making, dodge responsibility and do not reward employees or give feedback, either positive or negative (Bass & Avolio 1997). There are however, instances or situations where a laissez-faire leadership style is appropriate. Transformational style is largely associated with leadership success (Gardener & Stough 2002). Bass (1990) suggests that the attributes which enable a leader to exercise transformational leadership include vision and the ability to inspire others to that vision, even if going against popular opinion.

Emotional Intelligence and Leadership

Goleman (1998a) found in research done on leaders that the most effective leaders all had a high degree of EI. He states that a person can have a high IQ, the best training, an analytical mind and many good ideas, but without a high EI he will not make a great leader. Goleman refers to research done by McClelland (1998) where he studied a global food and beverage company and found that where senior managers had a critical mass of EI competencies, their divisions exceeded annual earnings goals by 20%. By contrast, managers without that critical mass of EI underperformed by about 20%. Research has also shown that a person's EI is not fixed (like IQ), but EI can be developed and improved with the right approach (Goleman 1998a).

Cooper and Sawaf (1997) state that leaders need the capacity to create excitement. This confirms Goleman's (1995) belief that EI includes the ability to motivate oneself and others and that charisma is an important quality for successful leadership. Research done by Stuart and Paquet (2001) focused on EI as a determinant of leadership potential. The research was done in a large South African financial institution and compared the EI scores of a group of employees who displayed leadership potential with a group that did not display leadership potential. The results showed that factors such as optimism and self-actualisation were significantly higher for the leader group. The research concluded that there is a link between the

fundamentals of transformational leadership theory and EI. Boyatzis (1982) studied over 2000 supervisors, middle managers and executives in 12 American organisations and found that 14 out of the 16 competencies that set star performers apart from the rest were emotional competencies.

Bailie and Ekermans (2006) conducted EI research on 111 middle managers from a life assurance company in South Africa. The EI test results were compared with archived leadership assessment material. The results showed significant relationships between various EI dimensions and leadership qualities such as customer focus, building working relationships, developing others, gaining commitment, problem solving and stress tolerance. These results point to the fact that, given the correlation between EI and leadership, it may be wise for organisations to screen for EI when hiring managers or when promoting staff into managerial positions.

Emotional Intelligence and Information Systems

Not much research has been done on EI and professionals in the IS field specifically. However, one study did find that the more customer facing an IS professional was, the higher their EI (O'Sullivan 1998).

Smith (2002) emphasises EI as an important skill for IS students. Goleman and Dalziel (1999) stated that an effective project manager needs to be strong in six or more of the 20 EI competencies. The most important eight competencies are self-awareness, self-control, achievement drive, initiative and optimism, empathy, leadership, team capabilities and conflict management. These eight competencies always appear in project manager competency models. Smith (2002) states that a high EI leads to increased productivity in individuals, projects and teams. Given the project and team-based nature of many IS projects, Smith (2002) suggests that these eight competencies should be integrated into final year IS curricula so that students can develop their EI skills.

Peterson et al (2003) suggest that in order to succeed, today's IS professional requires multidisciplinary awareness and the ability to deliver the value of technical skills to clients, to work as members of a team and to solve problems. Peterson et al (2003) state that in order to prepare IS students for the realities of the working world, 'value-delivery' should be taught along with technical skills. They identify

value-delivery skills as encompassing EI skills, namely personal competence, such as self-awareness, self-regulation and self-motivation; and social competence, such as social awareness and social skills (Peterson *et al.* 2003).

Raccoon (2006) emphasises the importance of leadership and EI competencies for IS software engineers.

Research Methodology

Introduction

The research aims to investigate the relationship between Information Systems (IS) managers' Emotional Intelligence (EI) and their leadership abilities. The research is applied and quantitative. The research is also exploratory in nature.

Correlation research was done in order to determine whether there was a relationship between the two variables under investigation, namely:

- Emotional Intelligence = independent variable and
- Leadership ability = dependent variable

By investigating the relationship between EI and leadership abilities of IS managers, the research will indicate whether a high level of EI competencies could influence an IS professional's progression from a technical role into a successful IS leadership role.

Data Collection

Participants

The participants in this study were sixteen IS managers/ project managers/ team leaders from both private and public organisations in Pietermaritzburg, Durban and Cape Town and their staff/ peers/ superiors. This population was very specific and small and the researcher had to initially seek out a sample that fitted the criteria. Non-probability judgment sampling was used for the first phase and accounted for half the sample. The remainder of the sample

was obtained by non-probability snowball sampling, whereby participants identified by judgment sampling were asked to recommend other IS managers who might be willing to take part in the research. It would have been preferable that the IS manager participants had qualifications in the IS field and had progressed from a technical role into a more managerial role, but this was not always the case. A gender-balanced and race-balanced sample would also have been preferred, but this was not possible due to the IS management field being white-male-dominated.

Measuring Instruments

The research instruments were a researcher-designed questionnaire, an EI questionnaire and a leadership questionnaire. More detail on each of these questionnaires follows.

Researcher-designed Questionnaire for Managers

The questionnaire determined facts such as the length of time the person had been in the IS field, their qualifications, their current position and length of time in current position, their previous position and tenure therein and whether the post was with their current employer. Demographic information such as age group, gender, race and salary were also obtained.

TEIQue-Long Form Emotional Intelligence Questionnaire

The TEIQue LF is a self-report inventory that covers the sampling domain of trait EI comprehensively. It comprises 153 items, measuring 15 distinct facets, 4 factors, and global trait EI (Petrides & Furnham 2003). The 15 distinct facets of Trait Emotional Intelligence are:

Facets	High scorers perceive themselves as...
Adaptability	flexible and willing to adapt to new conditions.
Assertiveness	forthright, frank, and willing to stand up for their rights.
Emotion perception (self and others)	clear about their own and other people's feelings.
Emotion expression	capable of communicating their feelings to others.

Emotion management (others)	capable of influencing other people's feelings.
Emotion regulation	capable of controlling their emotions.
Impulsiveness (low)	reflective and less likely to give in to their urges.
Relationships	capable of having fulfilling personal relationships.
Self-esteem	successful and self-confident.
Self-motivation	driven and unlikely to give up in the face of adversity.

Social awareness	accomplished networkers with excellent social skills.
Stress management	capable of withstanding pressure and regulating stress.
Trait empathy	capable of taking someone else's perspective.
Trait happiness	cheerful and satisfied with their lives.
Trait optimism	confident and likely to 'look on the bright side of life'.

Trait Emotional Intelligence Research Program (2006)

Multi-Leadership Questionnaire (MLQ)

The MLQ measured respondents' leadership abilities. The MLQ is scored according to 9 categories, broken down by the three main leadership styles, namely transformational leadership, transactional leadership and passive / avoidant behaviour. The three main leadership styles are listed below as described in the MLQ Manual and Sampler Set (Avolio & Bass 2007).

Transformational Leadership

Transformational leadership is a process of influencing in which leaders change their associates' awareness of what is important, and move them to see themselves and the opportunities and challenges of their environment in a new way. Transformational leaders are proactive: they seek to optimise individual, group and organizational development and innovation, not just achieve performance 'at expectations'. They convince their associates to strive for higher

levels of potential as well as higher levels of ethical standards (Avolio & Bass 2007).

Transactional Leadership

Transactional leaders display behaviours associated with constructive and corrective transactions. The constructive style is labelled contingent reward and the corrective style is labelled management-by-exception. Transactional leadership defines expectations and promotes performance to achieve these levels. Contingent reward and management-by-exception are two core behaviours associated with ‘management’ functions in organizations. Full range leaders do this and more (Avolio & Bass 2007).

Passive / Avoidant Behaviour or Laissez-faire

Another form of management-by-exception leadership is more passive and ‘reactive’; it does not respond to situations and problems systematically. Passive leaders avoid specifying agreements, clarifying expectations, and providing goals and standards to be achieved by followers. This style has a negative effect on desired outcomes—opposite to what is intended by the leader-manager. In this regard it is similar to laissez-faire styles—or ‘no leadership’; both types of behaviour have negative impacts on followers and associates. Accordingly, both styles can be grouped together as ‘passive-avoidant leadership’ (Avolio & Bass 2007).

Each test included provision for up to 25 raters (staff/peers/superiors) to be nominated. The researcher required only two to three per participant, but some invited up to 15 raters which resulted in an even more accurate assessment of their leadership abilities.

Data Analysis

Correlation analysis was performed using SPSS statistical software to determine whether there was enough evidence to infer that the two variables,

namely EI and leadership were related. Results revealed positive relationships between many of the EI and MLQ Items which are significant at the 5% ($p < 0.05$) level.

Statistical Analysis

Tests of Correlation

The correlations between variables were investigated with the use of Pearson’s correlation coefficient for the comparison of EI and MLQ data. For the researcher-designed questionnaire variable correlations with both EI and MLQ data, Spearman’s correlation coefficient was used.

Selected Pearson’s Correlation Coefficients for Selected Leadership (MLQ) and EI Items

Table 1 below was reduced to show only those variables that had significant positive correlations (significant at the 5% ($p < 0.05$) level or less.

Table 1: Selected Pearson’s Correlation Coefficients for Selected Leadership (MLQ) and EI Items

		MLQ Inspires Others	MLQ Acts with Integrity	MLQ Extra Effort	MLQ Effective ness	MLQ Satisfact ion
EI Happiness	Pearson Correla- tion	.516(*)	.187	.208	.398	.050
	Sig. (2- tailed)	.041	.489	.440	.127	.855
	Sum Sq & Cros- prod	5.361	1.954	2.355	3.920	.526
	Covarian- ce	.357	.130	.157	.261	.035
	N	16	16	16	16	16
EI	Pearson	.552(*)	.515(*)	.597(*)	.625(**)	.529(*)

		MLQ Inspires Others	MLQ Acts with Integrity	MLQ Extra Effort	MLQ Effective ness	MLQ Satisfact ion
Empathy	Correla- tion					
	Sig. (2- tailed)	.027	.041	.015	.010	.035
	Sum Sq & Cros- prod	3.219	3.025	3.798	3.455	3.147
	Covaria- nce	.215	.202	.253	.230	.210
	N	16	16	16	16	16
EI Social Awareness	Pearson Correla- tion	.541(*)	.141	.382	.227	.067
	Sig. (2- tailed)	.030	.603	.145	.397	.807
	Sum Sq & Cros- prod	3.751	.980	2.881	1.492	.470
	Covarian- ce	.250	.065	.192	.099	.031
	N	16	16	16	16	16
EI Low Impulsive- ness	Pearson Correla- tion	.491	.388	.506(*)	.315	.306
	Sig. (2- tailed)	.053	.137	.046	.235	.248

		MLQ Inspires Others	MLQ Acts with Integrity	MLQ Extra Effort	MLQ Effective ness	MLQ Satisfact ion
	Sum Sq & Cros- prod	3.144	2.501	3.531	1.913	2.002
	Covarian- ce	.210	.167	.235	.128	.133
	N	16	16	16	16	16
EI Stress Manage- ment	Pearson Correla- tion	.535(*)	.156	.262	.303	.115
	Sig. (2- tailed)	.033	.563	.326	.255	.670
	Sum Sq & Cros- prod	3.709	1.090	1.980	1.987	.816
	Covarian- ce	.247	.073	.132	.132	.054
	N	16	16	16	16	16
EI Emotion Manage- ment	Pearson Correla- tion	.668(**)	.276	.486	.502(*)	.178
	Sig. (2- tailed)	.005	.300	.056	.047	.510
	Sum Sq & Cros- prod	4.095	1.704	3.245	2.916	1.111
	Covaria- nce	.273	.114	.216	.194	.074
	N	16	16	16	16	16

		MLQ Inspires Others	MLQ Acts with Integrity	MLQ Extra Effort	MLQ Effectiveness	MLQ Satisfaction
EI Assertiveness	Pearson Correlation	.569(*)	.340	.469	.410	.142
	Sig. (2-tailed)	.021	.197	.067	.115	.599
	Sum Sq & Cross-prod	3.626	2.183	3.255	2.475	.926
	Covariance	.242	.146	.217	.165	.062
	N	16	16	16	16	16

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

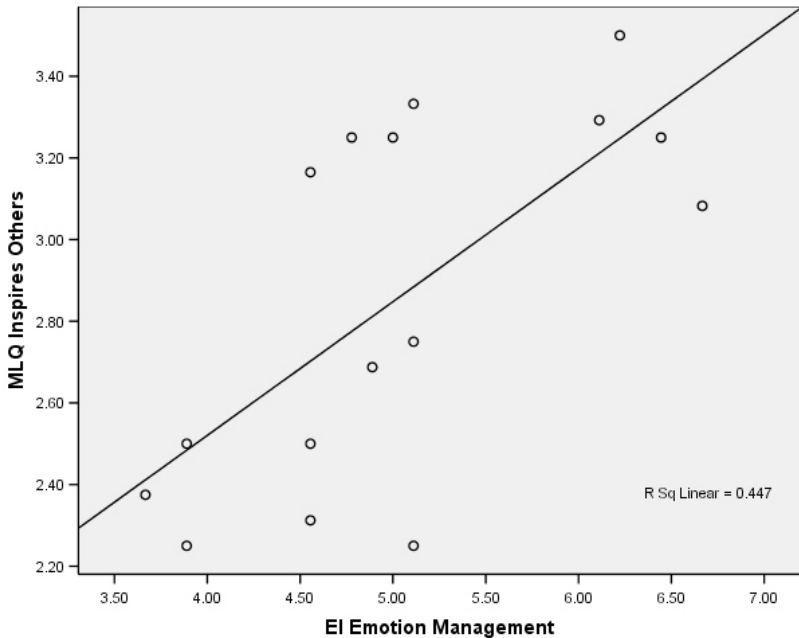
Table 2: Means and Standard Deviations for Selected EI and MLQ Variables

	Mean	Std. Deviation	N
MLQ Inspires Others	2.8592	.44714	16
MLQ Acts with Integrity	2.7456	.44987	16
MLQ Extra Effort	2.8104	.48719	16
MLQ Effectiveness	3.3130	.42377	16
MLQ Satisfaction	3.2384	.45624	16
EI Happiness	5.6875	1.55054	16
EI Empathy	5.2361	.87006	16
EI Social Awareness	5.1080	1.03291	16
EI Low Impulsiveness	5.3333	.95495	16
EI Stress Management	5.2063	1.03310	16
EI Emotion Management	5.0347	.91329	16
EI Assertiveness	5.1181	.95017	16

Table 2 above shows the means and standard deviations for selected EI and MLQ variables.

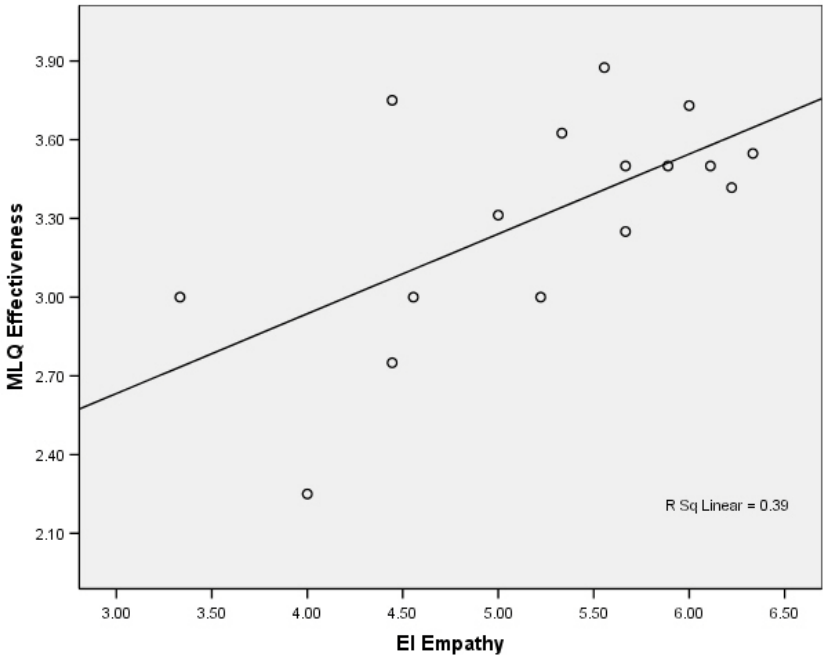
As can be seen from Table 1, the analysis revealed significant positive correlations between:

- MLQ Inspires Others and six EI Items: EI Happiness, EI Empathy, EI Social Awareness, EI Stress Management, EI Emotion Management (see Graph 1) and EI Assertiveness. Clearly managers possessing all of the above EI subscales would be highly likely to Inspire Others, this being one of the transformational leadership categories.



Graph 1: Scatter Graph Showing Relationship between MLQ Inspires Others and EI Emotion Management

• EI Empathy and five MLQ items: MLQ Inspires Others, MLQ Acts with Integrity, MLQ Extra Effort, MLQ Effectiveness (see Graph 2) and MLQ Satisfaction. Clearly, the Empathy EI subscale is an important one as managers strong in Empathy were also strong in two of the six transformational leadership categories (MLQ Inspires Others and MLQ Acts with Integrity). In addition, these managers were strong in all three of the Outcomes of Leadership categories (MLQ Extra Effort, MLQ Effectiveness and MLQ Satisfaction) which would indicate that they are very effective leaders and also perceived to be so by their colleagues.



Graph 2: Scatter Graph Showing Relationship between MLQ Effectiveness and EI Empathy

• EI Low Impulsiveness and MLQ Extra Effort ($p = 0.046$). This is an interesting one, perhaps an indication that a manager who thinks before acting, is calm and is not impulsive is more likely to encourage others to want to exceed expectations.

- EI Emotion Management and MLQ Effectiveness ($p = 0.047$). Emotion Management is the ability to influence other people’s emotional states, for example calming them down, motivating them or making them feel better. It is therefore not surprising that managers strong in Emotional Management are also high in MLQ Effectiveness, which indicates effectiveness in meeting other’s job-related needs, sticking up for staff, meeting organisational requirements and leading a group that is effective. Staff would want to please a manager who understands them, motivates them and has their best interests at heart.

Selected Spearman’s Correlation Coefficients for Selected EI and Researcher-designed Questionnaire Items

			EI Low Impulsive-ness	EI Emotion Perception
Spearman’s rho	Manage Staff Well	Correlation Coefficient	.545(*)	.049
		Sig. (2-tailed)	.029	.856
		N	16	16
	IST/CS Degree/Diploma	Correlation Coefficient	.506(*)	-.192
		Sig. (2-tailed)	.046	.476
		N	16	16
	No. of Years in IS	Correlation Coefficient	-.031	-.646(**)
		Sig. (2-tailed)	.910	.007
		N	16	16

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 3: Selected Spearman’s Correlation Coefficients for Selected EI and Researcher-designed Questionnaire Items

Table 3 reveals significant positive correlations between the following pairs of items:

- EI Low Impulsiveness with Manage Staff Well ($p = 0.029$). This correlation confirms the EI Low Impulsiveness and MLQ Extra Effort correlation described above. Managers who are not impulsive seem better able to manage their staff and get the best out of them.

- EI Low Impulsiveness with IST/computer science (CS) Degree/Diploma ($p = 0.046$). Only two respondents did not hold degrees or diplomas of any kind, while three had qualifications in fields other than IST/CS such as Engineering, History and Town Planning. It is tempting to state that this correlation would indicate that those who are less impulsive are more likely to follow through with the completion of a qualification in IST/CS, but this is probably an anomaly that may be explained by some other factor.

Selected Spearman’s Correlation Coefficients for Selected Leadership (MLQ) and Researcher-designed Questionnaire Items

			MLQ Inspires Others	MLQ Rewards Achievements	MLQ Builds Trust
Spearman’s rho	Age	Correlation Coefficient	-.268	.032	-.047
		Sig. (2-tailed)	.315	.906	.862
		N	16	16	16
	Project Mgt Course	Correlation Coefficient	.017	.506(*)	.541(*)
		Sig. (2-tailed)	.949	.046	.030
		N	16	16	16

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4: Selected Spearman’s Correlation Coefficients for Selected Leadership (MLQ) and Researcher-designed Questionnaire Items

Table 4 reveals significant positive correlations between the following pairs of items:

- MLQ Rewards Achievements with Project Management Course. This is an unexpected correlation. One could assume that those who have completed a Project Management course are more likely to have learnt how to better manage staff by rewarding achievements. High scores in Rewards Achievements would indicate a tendency towards Transactional Leadership which is a large part of how a Project Manager would be required to operate thus ensuring that a project is completed on time, within budget and according to specification.

- MLQ Builds Trust with Project Management Course ($p = 0.03$). Builds Trust falls within the transformational leadership genre. Managers who build trust have earned the respect of their staff, go beyond self-interest for the good of the group and display power and confidence. Irrespective of whether these traits were learned before or on a project management course, the fact remains that there appears to be a strong relationship between these two variables.

Answers to Research Questions

As described above, the analysis of the data reveals that there are strong positive correlations between various EI variables (such as Happiness, Empathy, Social Awareness, Stress Management, Emotion Management, Assertiveness, Low Impulsiveness and Emotion Management) and transformational leadership variables such as Inspires Others, Acts with Integrity, Extra Effort, Effectiveness and Satisfaction with Leadership. This begs the question as to whether strong correlations between EI and transformational leadership abilities is the reason why these managers are managers or whether they have had to develop these abilities, in addition to their technical skills, in order to be successful leaders within the IS environment.

Conclusion

The relatively small sample and limited geographic areas comprising only Pietermaritzburg, Durban and Cape Town are limitations. The results are therefore not generalisable and are limited to the individuals surveyed. Two

other limitations were gender and race. Fifteen of the sixteen IS managers were white and only three respondents were female.

The EI testing done was subjective as managers rated themselves. A more accurate measure of EI would probably be obtained with the use of 360 degree EI testing where managers, staff, superiors, peers and clients complete EI evaluations per manager. Although all managers were asked to recommend raters for the MLQ leadership test, about a quarter did not and in some instances less than half of these raters actually completed the questionnaires on the managers. For this reason, the results for the MLQ leadership questionnaire probably yielded biased management results.

It may be suggested that organisations looking to promote IS people into management positions should be tested for leadership and EI in order to determine their suitability for a management post. Alternatively, these tests could be used to identify where existing or potential managers have weaknesses in either of these areas and provide training or coaching in order to attempt to remedy any weaknesses.

Future research, similar to this current research, could be conducted on a broader geographical scale and using a much larger sample. It would also be relevant to conduct the research on a more gender- and race-balanced sample as these two factors may have noticeable differences on leadership and EI correlations. The use of 360 degree EI and leadership instruments, with minimum rater numbers strictly enforced, would probably yield a more accurate assessment of managers' strengths in these areas.

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