

Predicting Emotional Intelligence in Maritime Management: Imperative, Yet Elusive

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ABSTRACT: There is extensive literature addressing the subject of “emotional intelligence” (EI) and its importance to the profile of leaders and models of leadership. Despite what some have argued as the sine qua non of leadership, there are arguably few, if any, valid instruments available to predict demonstration of EI competencies. This paper focuses on EI and challenges to measurement as it relates to leadership development in maritime management — where EI competencies are deemed critical to effective performance. The authors review and evaluate current instruments that claim to measure EI, survey hiring practices in selected companies in the shipping industry, and make recommendations for further research.

1 INTRODUCTION

There is extensive literature addressing the subject of “emotional intelligence” (EI) and its importance to the profile of leaders and models of leadership. Yet, despite what some claim to be the “sine qua non” of leadership (Goleman 1998, p. 93), there are arguably few, if any, valid instruments available to predict demonstration of EI competencies in the workplace. This paper focuses on EI and challenges to measurement as they relates to leadership development in maritime management — where EI competencies are generally acknowledged as critical to effective job performance. The paper proceeds as follows:

- 1 definition of EI;
- 2 review and evaluation of current instruments that claim to measure EI;
- 3 rationale for study;
- 4 survey results of hiring practices in selected companies in the shipping industry; implications to the imperative for testing and measurement of EI;
- 5 and, recommendations for further research.

2 DEFINING EMOTIONAL INTELLIGENCE

The term emotional intelligence, while popular in many academic and practitioner forums, continues to generate significant controversy regarding its meaning, its measurement, and its predictability or validity (Livingston & Day 2005, p. 757). Although definitional grounding is important to this paper, a

comprehensive review of the literature devoted to defining EI lies beyond the scope of this study. Suffice to say that we — the authors — frame the understanding of EI, in part, around the five competencies and personality attributes posited by Daniel Goleman (1998, p. 95):

- self-awareness: The ability to recognize and understand one’s moods, emotions, and drives as well as their effect on others.
Demonstrated: self-confidence; realistic self-assessment; self-deprecating sense of humor;
- self-regulation: The ability to control or redirect disruptive impulses and moods; the propensity to suspend judgment – to think before acting.
Demonstrated: trustworthiness and integrity; comfort with ambiguity; openness to change;
- motivation: A passion to work for reasons that go beyond money and status; a propensity to pursue goals with energy and persistence.
Demonstrated: strong drive to achieve optimism, even in the face of failure; organizational commitment
- empathy: The ability to understand the emotional makeup of other people; skill in treating people according to their emotional reactions.
Demonstrated: expertise in building and retaining talent; cross-cultural sensitivity; service to clients and customers
- Proficiency in managing relationships and building networks; an ability to find common ground and build rapport
Demonstrated: effectiveness in leading change;

persuasiveness; expertise in building and leading teams.

Reuven Bar-On's definition (1997) is another that informs this paper as he addresses, "...noncognitive capabilities, competencies, and skills that influence one's ability to succeed in with environmental demands and pressures" (p. 14). Non-cognitive refers to the "emotional, personal, and social components of intelligent behavior" (Bar-On 1998, p. vii). These capabilities appear to be particularly important given the environmental variables inherent in maritime management, and so are included as a consideration.

3 MEASURING AND PREDICTING EI

Consensus is also clearly lacking regarding availability of instruments that accurately predict demonstration of EI competencies. Three tests that are currently used with arguable claims of some success are The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT—MHS Multi-Health Systems), the BarOn EQ-i (Bar-On 1997) and the Emotional Competence Inventory--e.g., ECI360 (Hay Group 1999-2005). Because each test defines emotional intelligence differently—e.g. focusing in part or not on personality traits, cognitive abilities, and/or other arrays--users might not necessarily have just the one test to meet their needs. Additionally, making comparisons of different test results is not feasible as comparability is simply not possible: Some tests results are based on self-reporting models (e.g., the BarOn EQ-i); others incorporate observer input and self-reporting (e.g., the ECI360), and so on.

Another concern, as with any instrument, involves that of reliability and validity. Reliability—does the instrument consistently measure over time what it purports to measure? Construct validity—is there evidence that the instrument measures what it claims to measure? Construct validity claims are frequently supported through triangulation, where multiple instruments/observers corroborate findings. This is problematic, however, in the case of EI instruments for reasons discussed earlier. Predictive validity, or the degree to which the test is accurate in forecasting on-the-job performance, is particularly important to this paper. Nevertheless, it is one thing to hypothetically score high (or low) in a test setting for EI—particularly if by self-reporting methods (versus impartial observers). It is quite another when one factors in the work environment such as weather, fear, terrorism, and a multitude of other variables such as crew diversity—all of which have the potential to affect operationalization of predicted performance. Crew diversity is a factor of life on ocean going vessels, many of which bear foreign flags and count on crews representing many nations, both developed and developing. Therefore, if we add cross-

cultural and national dimensions to measuring and predicting EI as defined earlier, the challenges loom even larger. Alternatively stated, history has proven that results obtained in an "antiseptic" or closed system will not necessarily translate in real world situations where the environment intervenes regularly.

An Internet search of the importance of EI to decision making reveals over 26,000 cites illustrating its value across industries. Therefore, if it were available, predictive validity for EI would not be uniquely important to maritime management. Yet, the rationale to meet these needs in this particular industry appears particularly impelling in a global post 9/11 environment, which brings us to the section that follows.

4 RATIONALE FOR STUDY: A MARITIME PERSPECTIVE

...the prospect of a relationship between EI, leadership and individual, group and organizational outcomes is sufficiently compelling to attract the attention of researchers who will resolve the question and move leadership theory and understanding of social influence to its next stage (Brown and Moshavi 2005, p. 870).

In March of 2006, Pamela Turner, Assistant Secretary for Legislative and Governmental Affairs of the U.S. Department of Homeland Security, directed a letter to Congress regarding the results of a project that implemented the Crew Endurance Management System (CEMS) on towing vessels. Crew endurance is "the ability to maintain performance within safety limits while enduring job-related physical, psychological and environmental challenges" (Crew Endurance Management 2006). Management of the elements that heighten risk that leads to poor performance and/or human failures is a goal of CEMS. The report also included a description of the resources that would be needed to implement the CEMS on all U.S. flag-towing vessels (CEMS Demonstration Project Report, 2006). While the report's main concern is to reduce marine casualties as a result of stress and fatigue, the opening statements of the report point to the imperative not only to find predictive indicators for EI, but also for the maintenance and development of EI competencies:

Numerous studies indicate that human factors contribute to the vast majority of marine casualties. Most of these human factors relate to cognitive abilities such as situational awareness and situational assessment (p. 1).

This imperative prompted the authors of this paper to determine if and how EI competencies were currently being assessed in the shipping industry. Discussion of that survey and its components are addressed in the section to follow.

5 METHODOLOGY

Through the Careers/Cooperative Education Office of Maine Maritime Academy in Castine, ME., we identified 100 individuals in management positions in a wide range of maritime-related companies. These included, but were not limited to major U.S. shipping, offshore drilling, tug boat service, marina management, and logistics and related transportation companies, and pilots' associations. A survey, including Goleman's definition (1998), was mailed to all with the request that they rank order the importance of EI competencies. They further were asked to note whether their company or if they themselves screened for these competencies through recruitment, hiring, selection and/or their performance appraisal process. Appendix A of complete paper includes survey details.

6 FINDINGS AND DISCUSSION

Thirty individuals surveyed responded over a four month period—from July to October of 2006. Eight of those who did not respond were due to mail returns because of outdated addresses or personnel changes. We feel that this response rate is a respectable one given the nature of the industry—particularly as many of these individuals frequently ship out for months at a time—making surveying a challenge at best. Results are as follows:

Category 1. *Please read the definition of EI competencies. Do you feel that these competencies are important to effective management in the shipping industry?*

100% of the respondents voted affirmatively (“Yes”). Several added comments that are illustrative of the importance of EI:

Regarding their relative importance specific to the maritime industry:

- “Especially onboard the vessel when they are together 24/7.”
- “Within the boundaries of the command structure aboard a ship.”
- “Due to the close quarters and strenuous work conditions our crewmembers experience, it is imperative we take each competency into account when crewing and managing our vessels.”

One individual found these competencies to be uncommon in a shipboard environment and added:

- “These sophisticated ‘touchy/feely’ concepts are difficult to teach or impart to those who manage others. . . .”
- “As a C/M[Chief Mate], a department head, directing/leading/working w/others has many different requirements that vary from managing another officer, with skills and a permanent job aboard, unlicensed crew, skilled/semi-skilled with a permanent job aboard, to unlicensed, semi-skilled without permanent job status/one trippers, all require somewhat different approaches.”

Regarding their relative importance in any industry:

- “The EI competencies appear important to lead a productive & fulfilling life.”
- “It’s difficult to quantify which are most important, but they are all ingredients for most effective management.”
- “In any industry, for that matter.” (2 responses)
- “Absolutely. I feel these concepts are key to nearly anything one attempts in life.”

Category 2. *In order of importance from 1-6, with 1 being the most important, pls. rank order the EI competencies that you consider to be important to effective management in the shipping industry.*

It was obvious that respondents had difficulty rank ordering the six EI components listed in Appendix A. In fact, three individual comments suggested that it was difficult to pull them apart in importance. One individual rated all 6 as #1; others rated several equally, making it very challenging to attempt to represent the data in Figure form. For those who provided comments, it could be argued that they viewed the competencies from their specific job responsibility or personal vantage point—understandably. As example, a “marine personnel administrator” favored “e” as #1 in importance, commenting that vessel masters who promote teamwork appeared more effective in her view than others. An “owner” of a U.S. based, but Mid-East affiliated maritime company emphasized the importance of “d” which includes “cross-cultural sensitivity.” He states, “Any chump can turn a wrench or steer a course. Only a human relations ‘expert’ can motivate a team.” A “personnel administrator” commented that all were important when deciding if an individual would receive a permanent job aboard a ship or a promotion to a position of higher responsibility.



Figure 1. Category 2-- Rank Ordering of EI Competencies

Despite the challenge of representing the data from Category 2 in figure form due to double-counting of several items, it is displayed in the form of a scatter gram in Figure 1. As explanation, if “b” was considered #1 in importance and “c” was also considered #1 in importance by the same individual, those choices are both represented on the scatter-gram.

For Category 2 only, four individuals are not represented due to the fact that they obviously did not either follow or understand the instructions.

The most interesting findings (to the authors of this paper) were the highs and lows. Choice “b” or “self-regulation” clearly rated #1, with “e”, “proficiency in managing relationships” clearly in second place. “Self-awareness” was top choice in the #2 ranking. A total surprise to the authors was the fact that “f” was ranked overwhelmingly least in importance. However, that may be explained by a qualitative comment that was offered by one respondent who stated, “f is too general a definition.” Perhaps there was a need for further explanation that might have influenced the results. While the data results are interesting, the authors are unwilling to jump to generalizations without further research, discussed later in the paper.

Category 3. *To the best of your knowledge, does your Company or do you screen for these EI competencies in recruitment, hiring, selection, and/or in the performance appraisal process?*

- Twenty-two or seventy-three percent: “Yes”—many with qualifiers, to be discussed.
- 2 individuals: did not know, but did offer opinions.
- Six: “No.”

Regarding the “yes” choices, comments clearly indicated that many of the components of EI are taken into consideration for after-hire decisions: e.g.,

for retention, promotions to management or senior officer positions such as Captain or Chief Engineer as part of the performance appraisal process, and in decisions for granting part-time hires permanent job status. Several comments illustrated that a formal process for measuring these competencies is not in place. Representative examples of such qualifying comments are as follows:

- “Informally—we do not use a formal tool.”
- “Not done in a formal way yet; is part of evaluation and discussions by people making selections.”
- “Partly, difficult to evaluate empathy and self-awareness in an employment candidate. [italized by authors of paper].”
- “More so in the performance appraisal process; most hiring is done based on professional qualifications & experience.”
- “Theoretically yes; in practicality, somewhat to not at all; it often is based on seniority more than these qualifications or dogged determination.”
- “We try, but it’s difficult in an interview to see how people really are.”

[One respondent, who checked “no,” indicated that “but the factors become evident very quickly.”]

Only one individual claimed to screen for these competencies when interviewing potential candidates. Three others, *while attesting to the importance of EI competencies on Question 1*, pointed to the influence of unions in hiring decisions. First-level decisions for hire of unlicensed positions often related to basic performance issues such as showing up to work on time and getting work done in a timely matter. As indicated earlier, for promotions, these three also indicated that many of the EI components would be taken into consideration, although they did not offer how. One individual makes this illustrative statement regarding the role and influence of unions in the hiring process which, in turn, indicates why EI components are generally considerations “after the fact” (i.e., the hire) decisions:

- “Personnel are only screened for these competencies with regards to retention. Initial hires are appointed to employment with a company by a union, and the unions recognize their role as being one of protection for all members, versus the culling or development of individuals.”

7 CONCLUSIONS AND RECOMMENDATIONS

While EI competencies were deemed important by all who were surveyed, and considerations in the performance appraisal (PA) process for varying reasons such as retention and rehire for permanent positions and promotions, it was unclear as to how these competencies were evaluated. In part, this is a limi-

tation to the survey itself as that question was not specifically asked. Nevertheless, with EI only as an informal consideration for many in the performance appraisal process, and a minimal to non-consideration in hiring due to union/and or other variables involving full or part-time hiring, one might question how the road to leadership could be optimized if predictive indicators for EI in this industry could be identified. Additionally, how might training and career development be optimized if build around an EI model? Another concern relating to the informality of the EI screening process involves the possibility of rater bias and legal repercussions that might ensue due to perceptions of “informality” (aka, “unfairness”) in promotion and retention decisions.

Research results point to numerous and worthwhile areas for further research, including, but not limited to:

- 1 surveying further how EI is presently being assessed in this industry;
- 2 developing a formal, performance-based Performance Appraisal model/instrument that is grounded in EI competencies for purposes of training—teaching of specific EI-related skills, development—career improvement and organizational effectiveness;
- 3 continued effort to identify tests for predictive validity of EI;
- 4 studies using personnel samples to assess the relationship between EI components and promotions within the maritime industry; and,
- 5 assessment to discern if the importance and the respective value of each of the EI competencies (Goleman, 1998) is shared across cultures. This last area of research is still an un-chartered one for EI in general, and appears important given the diversity of crews and foreign-flagged vessel ownership that is characteristic of this industry.

In short, we are still a long way from identifying and measuring a quality (EI) that appears crucial to any industry. Nevertheless, in a post 9/11 world where teamwork, cross-cultural sensitivity, and self-regulation and awareness (and more) in uncertain surroundings are of paramount importance, continued research in this area appears as imperative as ever. We invite interested faculty and others to contact us if there is interest in collaborating regarding further cross-cultural survey research that needs to be done on this issue.

REFERENCES

- Bar-On, R. 1997. Emotional Quotient Inventory: Technical manual. Toronto: Multi-Health Systems, Inc.
- Bar-On, R. 1998. EQ-I BarOn Emotional Quotient Inventory: A measure of emotional intelligence (facilitator’s resource manual). Multi-Health Systems.
- Brown, F. W., & Moshavi, D. 2005. Transformational leadership and emotional intelligence: A potential pathway for an increased understanding of interpersonal influence. *Journal of Organizational Behavior*, 26(7), 867-871.
- CEMS Demonstration Project Report to Congress. (2006, Mar. 29). Retrieved June 14, 2006, from <http://www.uscg.mil/hq/g-m/cems/index.htm>.
- Crew Endurance Management. U.S. Coast Guard/Homeland Security (2006) Retrieved June 14, 2006, from <http://www.uscg.mil/hq/g-m/cems/index.htm>.
- Goleman, D. 1995. Emotional intelligence: Why it can matter more than IQ. New York: Bantam Books.
- 1998. What makes a leader? *Harvard Business Review*, 76(6), 93-103.
- Hay Group. 1999-2005. Emotional intelligence services. Retrieved June 13, 2006 from, <http://ei.haygroup.com/default.asp>.
- Livingstone, H., & Day A. 2005. Comparing the construct and criterion-related validity of ability-based and mixed-model measures of emotional intelligence. *Educational and Psychological Measurement*, 65(5), 757-779.
- MHS Multi-Health Systems, Inc. (2004). Retrieved June 13, 2006, from <http://www.mhs.com>.