

P r o c e e d i n g s  
16<sup>th</sup> IAMU Annual General Assembly  
Opatija, Croatia, 2015



Sveučilište u Rijeci  
Pomorski fakultet Rijeka  
University of Rijeka  
Faculty of Maritime  
Studies Rijeka



**IAMU**

International Association of Maritime Universities

---

## ARE WE READY FOR THE MILLENIALS?: THE STATE OF READINESS OF THE MARINE EDUCATION AND TRAINING COMMUNITY: A PILOT STUDY

Szwed, Paul S.\*

Massachusetts Maritime Academy  
USA

---

**Abstract.** The need to transform and accelerate employee learning is a top three global human capital trend according to a large longitudinal survey of thousands of human resource and talent management professionals across a wide range of industries [1]. The percentage of companies rating employee learning as very important tripled since last year, now more than eight in 10 indicate that learning and development is important. The reason for this rise in the importance of employee learning and development is in response to the “skills gap” [2] (where skilled trade workers are the toughest jobs employers are having difficulty filling [3]). In regards to seafarers, the maritime sector is not immune to this “skills gap” [4]. However, despite this increased recognition of its critical importance of employee learning and development, there is a significant readiness gap (i.e., fewer than 40 percent of respondents indicated that their organizations are ready for learning and development in 2015 [1]). This readiness gap is reflected in the fact the currently *Millenials* make up more than one-third of the workforce (and by 2020, *Millenials* will make roughly half of the workforce [5]). *Millenials* seek personalized, digital, on-demand, fast-to-absorb learning solutions that is available on mobile devices. Many companies are stuck with decades-old learning management systems with only 25 percent indicating comfort with today’s digital learning environment [1]. There are many strategies for closing skills gap by closing the capability gap (e.g., [6]). By surveying the MET community, this pilot study examines a small subset of the maritime sector and its current state of readiness to determine if similar capabilities gaps may exist. While the results of this pilot study are indicative of the readiness of the maritime sector, they are by no means conclusive. Based on the results of this pilot study, a much broader survey should be completed and such results many also identify several solutions for addressing the capabilities gap, including potential suggested modifications to the existing IMO model courses paradigm.

**Key words:** maritime education and training (MET), learning and development, skills gap, capability gap, state of readiness

\*Corresponding author

e-mail: pszwed@maritime.edu

# 1 INTRODUCTION

The need to transform and accelerate employee learning is a top three global human capital trend according to a large longitudinal survey of thousands of human resource (HR) and talent management (TM) professionals across a wide range of industries [1]. The percentage of companies rating employee learning as very important tripled since last year, now more than eight in 10 indicate that learning and development is important. The reason for this rise in the importance of employee learning and development is in response to the “skills gap” [2] (where skilled trade workers are the toughest jobs employers are having difficulty filling [3]). In regards to seafarers, the maritime sector is not immune to this “skills gap” [4]. However, despite this increased recognition of its critical importance of employee learning and development, there is a significant readiness gap (i.e., fewer than 40 percent of respondents indicated that their organizations are ready for learning and development [1]).

This readiness gap is exacerbated by the fact that most of the learning and development programs are being directed and coordinated by *Baby Boomers* (born between 1946 and 1964) and *Gen Xers* (born between 1965 and 1980) and currently *Millenials* (born between 1981 and 1997) make up more than one-third of the workforce (and by 2020, *Millenials* will make roughly half of the workforce [5]). *Millenials* are digital natives [7] and grew up immersed in digital technologies (e.g., using personal computers, mobile devices, video games, social media, and the Internet) and are considered technologically adept/interested and digitally literate [8]. *Millenials* seek personalized, digital, on-demand, fast-to-absorb learning solutions that is available on mobile devices. On the contrary, *Baby Boomers* and *Gen Xers* are digital immigrants [9] since they largely grew up in an analog world and have had to adapt their ways to the growth of these digital technologies which were introduced during their lifetimes. Thus, this divide between digital immigrants (who

oversee learning and development) and digital natives (who will become the majority consumer of learning and development in the near future) only make the readiness gap even starker. In fact, many companies are stuck with decades-old learning management systems with only 25 percent indicating comfort with today’s digital learning environment [1].

This pilot study sets out to examine if the readiness gap and the digital divide in the maritime industry is the same, better, or worse than that described by the Deloitte Global Human Capital Trends survey.

# 2 METHOD

To better understand maritime learning and development, a global study of maritime professionals was conducted. A descriptive survey was selected as an effective means to gather information that is not easily observed [10].

## 2.1 Measurement

A survey was developed to replicate the information elicited in Deloitte’s Global Human Capital Trends survey. See the appendix for a complete listing of the instrument. The survey was designed to key information about human resource (HR) practices in the maritime industry:

1. Identify the most significant HR challenges,
2. Determine level of HR readiness, and
3. Elicit best or effective HR practices.

In order to achieve those objectives, four categories of questions were developed. The first group of questions gathered information about HR priorities and readiness. The second group of questions gathered information about HR capabilities. The third group of questions asked about HR trends and practices within the organization. Finally, the last group of questions gained demographic information about the maritime organization in which the respondent worked.

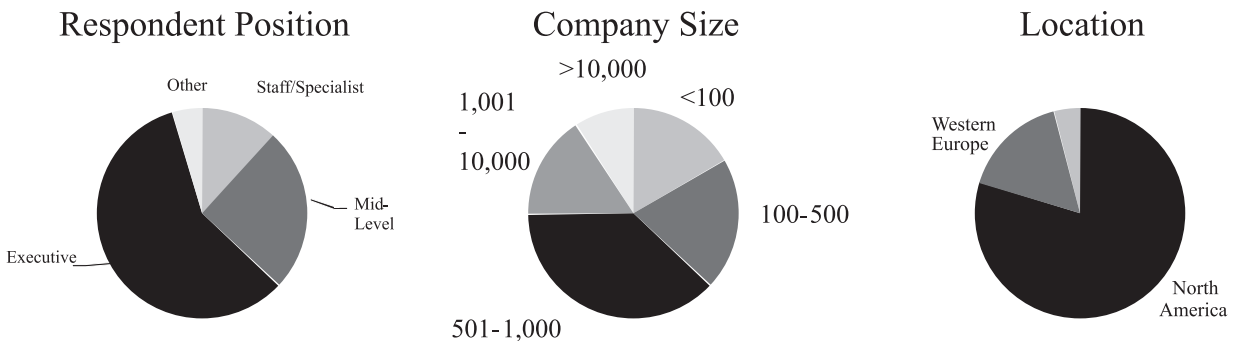


Figure 1 Demographics of Survey Respondents

## 2.2 Data and Sample

An online survey was administered during the second quarter of 2015. Since survey participation is declining in general [11], it was sent directly to 142 maritime industry leaders (e.g., Chairmen, Presidents, VPs, CEO's, COO's, Executive Directors, etc.) of global companies, predominantly based in North America and the U.K. with a personal invitation to participate. This direct appeal using a modified Dillman technique [12] yielded 28 responses (for a response rate of 19.7%) to the survey, of which 20 were complete (for a completion rate of 71.4%). The following figure set provides a summary of the demographic data of the respondents.

The following describes the results of this survey of maritime readiness for a selected list of five HR trends/challenges.

## 3 RESULTS

Using a Borda count to combine the respondents' ranking of the five HR trends posed (see question 1 in Appendix), the following is the order of maritime HR trends:

1. Culture and Engagement of workforce
2. Workforce capability
3. Learning and Development of workforce
4. Leadership
5. Performance Management of workforce

This is similar to the global results found in the Deloitte study of all industries, with the exception that leadership and workforce capability are inverted. Thus, workforce capability (leadership) is more (less) important in maritime than in industry at large.

Using the methodology of the Deloitte study, respondents were asked to rate the importance of each of the five HR challenges using a four-point scale (very important, important, somewhat important, not important) (see question 2 in Appendix). They were also asked to rank their readiness for dealing with each of the five HR challenges again using a four-point scale (not ready, somewhat ready, ready, very ready) (see question 3 in Appendix).

These ratings were then indexed on a 0–100 scale in which 0 represents the lowest possible degree of importance/readiness (“not important/ready”), and 100 represents the highest possible degree of importance/readiness (“very important/ready”). An overall index score was calculated for each trend using the respondents' ratings of “importance” and “readiness.” The index scores were also used to calculate the “capability gap” described in the following endnote. The Deloitte Human Capital Capability Gap is a research-based score that shows HR's relative capability gap by looking at the difference between the “readiness” and “importance” index scores for each trend. It is computed by taking the “readiness” index score and subtracting the “importance” index score based on the 0–100 scale described in the previous endnote. For example, a trend with a readiness index score of 50 and an impor-

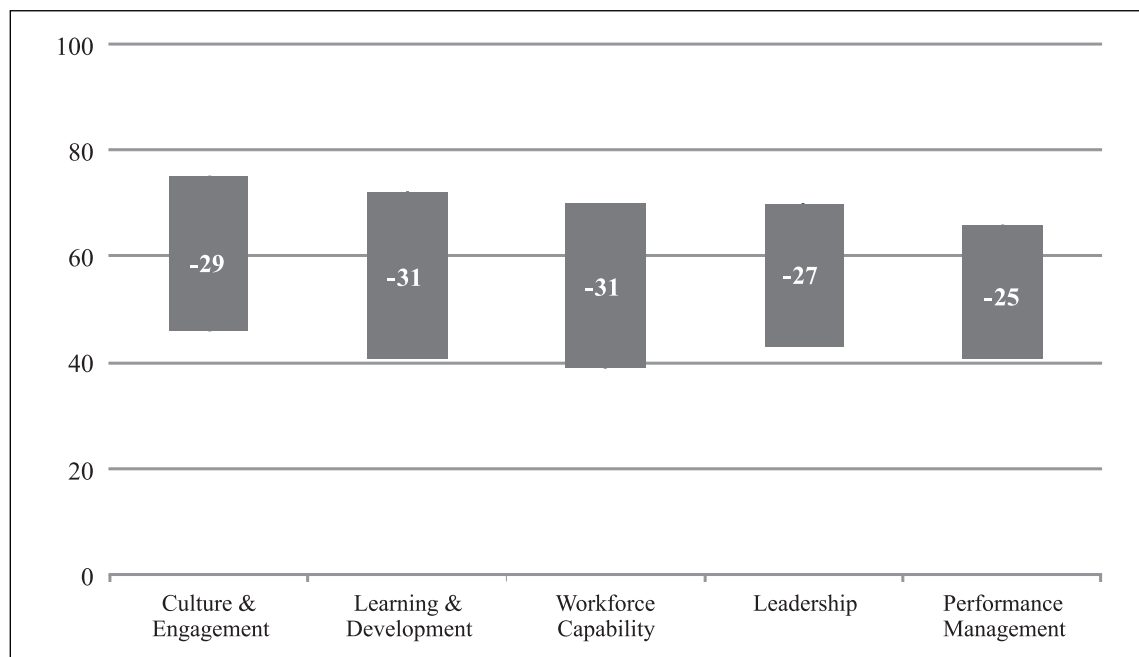


Figure 2 Maritime Capability Gaps

tance index score of 80 would produce a capability gap of -30. Negative values suggest a shortfall in capability, while positive values suggest a capability surplus. [1]

The following is a summary of the capabilities gaps.

In comparison to industry at large, maritime has smaller capability gaps for the HR challenges of culture and engagement, leadership, and performance man-

agement. On the other hand, the maritime capabilities gaps for learning and development, and workforce capability are larger than that of industry at larger.

Respondents were also asked to assess specific capabilities of their organization associated with each of the five selected HR trends. The following are the summary results:

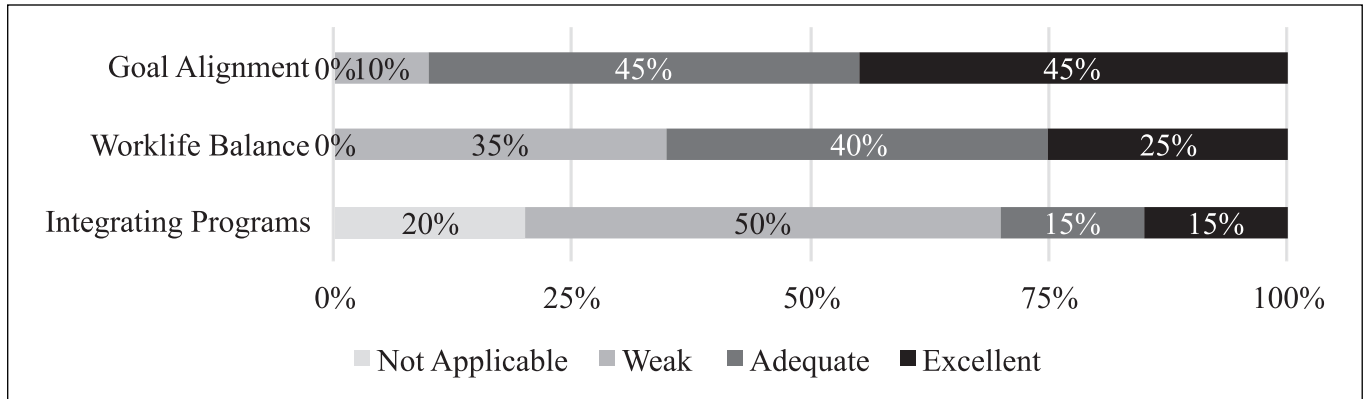


Figure 3 Culture & Engagement Capabilities

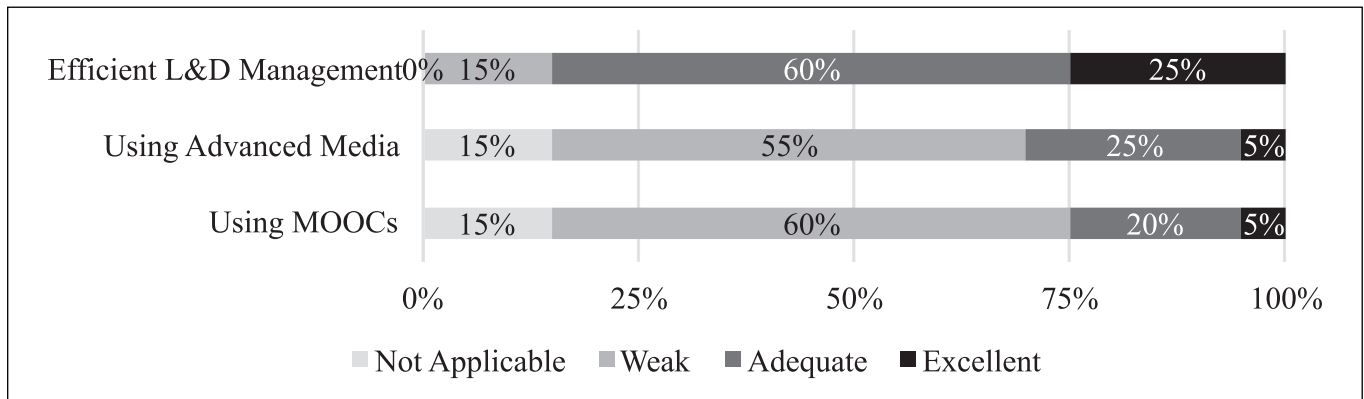


Figure 4 Learning & Development Capabilities

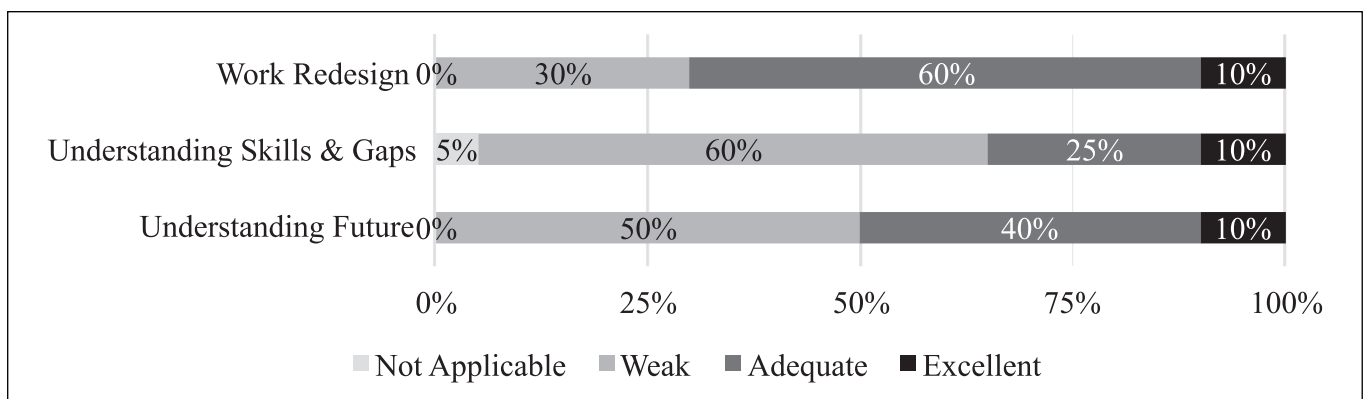


Figure 5 Workforce Capability Capabilities

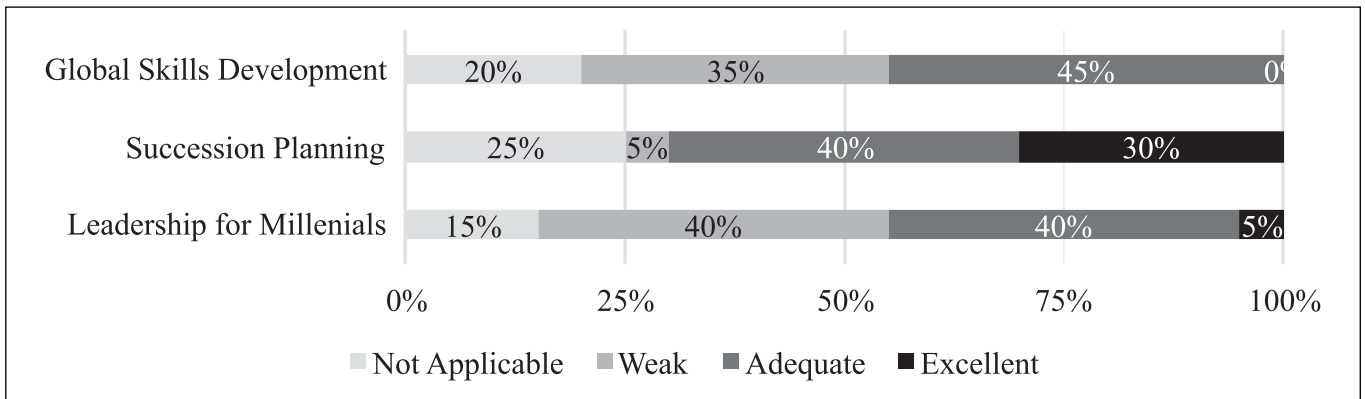


Figure 6 Leadership Capabilities

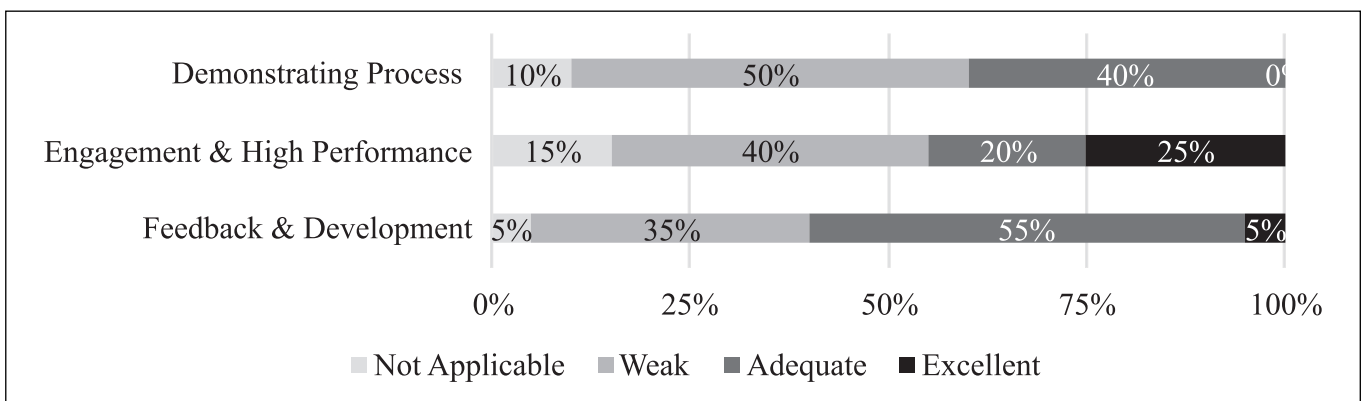


Figure 7 Performance Management Capabilities

In general, the self-assessed maritime capabilities are similarly distributed to those of industry at large, but culture and engagement, and workforce capabilities are considerably lower (for this small sample).

Respondents were also asked to rate their state of their organization’s HR capabilities beyond the current year (see question 9 of Appendix). The following are the responses:

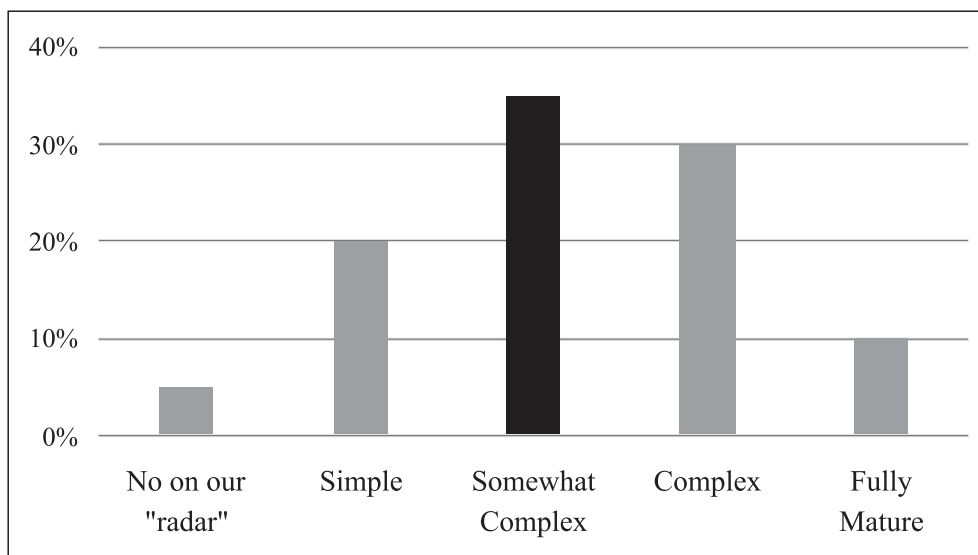


Figure 8 Maturity of HR Capabilities

For this small sample, most respondents (35%) viewed their organization as having a somewhat complex set of capabilities for the future, while only 40% viewed their future capabilities as complex or fully mature and another 25% as simple or not yet considered.

#### 4 DISCUSSION

In general (and based upon an extremely small sample), the HR trends for maritime industries are similar to those of other industries. However, it is unclear if the small sample can be considered representative of maritime industries at large and additional survey responses will be necessary to validate this statement. Maritime rated workforce capabilities relatively higher and leadership as relatively lower. Likewise, the readiness gap (difference between perceived importance and perceived capabilities) for workforce capabilities and learning and development are considerably more significant than that describes by the Deloitte survey for all industries. Even as a pilot study, attention should be paid to these two significant gaps – the first of which uncovers the skills gap and steps taken to address that gap. There are many strategies for closing skills gap by closing the capability gap (e.g., [6]). Again, even with a small sample size, the second gap reveals potential MET deficiencies. Perhaps the largest issue here may be the long delay in updating the MET regime – perhaps including the existing IMO model course paradigm. Given the demands of *Millenials* for an on-demand training environment and the fact that they will soon become a majority element of the workforce, the notion of a prescriptive hours-on-task style of training is outdated and needs to be modernized to a performance-based, on-demand, interactive,

multi-modality form of MET. Additional study in this area is required to confirm these gaps and to recommend future improvements to MET.

#### REFERENCES

- [1] Deloitte Consulting LLP, "Global Human Capital Trends 2015: Leading the new world of work," Deloitte University Press, Dallas, 2015.
- [2] J. Bessen, "Employers aren't just whining – the skills gap is real," *Harvard Business Review*, no. October, 2014.
- [3] ManpowerGroup Inc., "The talent shortage continues: How the ever changing role of HR can bridge the gap," Manpower Group, Milwaukee, 2014.
- [4] K. Reinikainen, "UK confronts maritime skills gap," *IHS Maritime Fairplay*, p. 381, 2014.
- [5] J. Brack, "Maximizing Millennials in the workplace," UNC Kenan-Flagler School of Business, Chapel Hill, NC, 2012.
- [6] J. Tyszko, R. Sheets and J. Fuller, "Managing the talent pipeline: A new approach to closing the skills gap," US Chamber of Commerce Foundation, Washington, DC, 2014.
- [7] S. Bennet, "Digital natives," in *Encyclopedia of Cyber Behavior*, Z. Yan, Ed., US, IGI Global, 2012, pp. 212-219.
- [8] S. Bennett, K. Maton and L. & Kervin, "The 'digital natives' debate: A critical review of the evidence," *British Journal of Educational Technology*, vol. 39, no. 5, pp. 775-786, 2008.
- [9] M. Presnky, "Digital natives, digital immigrants - part 1," *On the Horizon*, vol. 9, no. 5, pp. 1-6, 2001.
- [10] A. Buckingham and P. Saunders, *The survey methods workbook*, Cambridge: Polity Press, 2004.
- [11] M. K. Kennedy and B. Vargus, "Challenges in survey research and their implications for philanthropic studies research," *Nonprofit and Voluntary Sector Quarterly*, vol. 30, no. 3, pp. 483-494, 2001.
- [12] D. A. Dillman, "The design and administration of mail surveys," *Annual Review of Sociology*, pp. 225-249, 1991.

APPENDIX

**Global Survey of Maritime HR Trends**

A report by Deloitte published the global human capital trends for 2015. Based on surveys and interviews of more than 3,300 business and HR leaders from 106 countries, it is one of the largest longitudinal studies of talent, leadership, and HR challenges and readiness around the world. We are interested in learning if these global trends apply to the maritime industries or if there are unique trends within our industry.

1. Which human resource challenges are most important to your organization?

Please rank the following five human resource challenges.

- Leadership
- Culture & Engagement of the workforce
- Learning & Development of the workforce
- Workforce Capability
- Performance Management of the workforce

2. How important are the human resource challenges to your organization?

Please rate you're the importance of each of the HR challenges to your organization.

|   | Not Ready | Somewhat Ready | Ready | Very Ready |
|---|-----------|----------------|-------|------------|
| Leadership                              | ○         | ○              | ○     | ○          |
| Culture & Engagement of the workforce   | ○         | ○              | ○     | ○          |
| Learning & Development of the workforce | ○         | ○              | ○     | ○          |
| Workforce Capability                    | ○         | ○              | ○     | ○          |
| Performance Management of the workforce | ○         | ○              | ○     | ○          |

3. What is your organization's readiness to deal with the human resource challenges?

Please rate your organization's readiness to deal with each of the HR challenges.

|   | Not Ready | Somewhat Ready | Ready | Very Ready |
|---|-----------|----------------|-------|------------|
| Leadership                              | ○         | ○              | ○     | ○          |
| Culture & Engagement of the workforce   | ○         | ○              | ○     | ○          |
| Learning & Development of the workforce | ○         | ○              | ○     | ○          |
| Workforce Capability                    | ○         | ○              | ○     | ○          |
| Performance Management of the workforce | ○         | ○              | ○     | ○          |

4. What are your organization's capabilities associated with leadership?

|   | Not Applicable | Weak | Adequate | Excellent |
|---|----------------|------|----------|-----------|
| Including global skills and experiences in leadership program | ○              | ○    | ○        | ○         |
| Maintaining clear and current succession plans and programs   | ○              | ○    | ○        | ○         |
| Providing focused leadership programs for Millennials         | ○              | ○    | ○        | ○         |

5. What are your organization's capabilities associated with culture and engagement?

|   | Not Applicable | Weak | Adequate | Excellent |
|---|----------------|------|----------|-----------|
| Aligning our employees; personal goals with corporate goals           | ○              | ○    | ○        | ○         |
| Helping employees balance personal and professional life/work demands | ○              | ○    | ○        | ○         |
| Integrating social, community, and corporate programs                 | ○              | ○    | ○        | ○         |

6. What are your organization’s capabilities associated with learning and development?

|  | Not Applicable        | Weak                  | Adequate              | Excellent             |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Effectively managing L&D operations              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using advanced media (gaming, video, simulation) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using on-demand formats                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

7. What are your organization’s capabilities associated with workforce capability?

|   | Not Applicable        | Weak                  | Adequate              | Excellent             |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Redesigning work to assess skills in different places | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understanding current skills and capabilities gaps    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understanding future skills requirements              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

8. What are your organization’s capabilities associated with performance management?

|   | Not Applicable        | Weak                  | Adequate              | Excellent             |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Demonstrating performance process as an effective use of time       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Driving engagement and high performance through performance process | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Driving feedback and development through performance process        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

9. What is the current state of your organization’s HR capabilities for 2016 and beyond?

- Not on our “radar”
- Simple
- Somewhat Complex
- Complex
- Fully Mature

10. How much will your organization invest in learning and development in the 12-18 months?

11. How do you measure the return on your organizational investment for learning and development?

12. What do you see as the biggest HR trends for the maritime industries?

13. What is the size of your organization?
- Small (<100 employees)
  - Small/Medium (100-500 employees)
  - Medium (501-1,000 employees)
  - Medium/Large (1,001-10,000 employees)
  - Large (>10,000 employees)

14. What is your level within the organization?

- Staff/specialist
- Mid-level
- Executive-level
- Other

15. Where are you located?

- Central/Eastern Europe
- Western Europe
- Africa/Middle East
- Latin and South America
- North America
- Asia/Oceania