



Education and Competitiveness: How Maritime University Students Perceived their 21st - Century Learning Skills

Brian Gil S. Sarinas

Research Coordinator

John B. Lacson Foundation Maritime University (Arevalo), Inc.

briangilsarinas@gmail.com

ABSTRACT

This descriptive research was conducted because there is a dearth of information on the 21st-century learning skills of maritime students hence create an appropriate intervention for the enhancement of skills. This study aimed to determine the level of 21st-century learning skills among maritime students, identify their strengths and weaknesses, and evaluate the significant difference of the 21st-century learning skills when classified according to student level. The respondents were the Grades 11 and 12 and BSMT 1 to 3 students of JBLFMU-Arevalo enrolled during the second semester of the school year 2017-2018. A total of 350 respondents were utilized through stratified proportional random sampling. The instrument used was a 143-item validated questionnaire with a reliability index of 0.97. Mean, standard deviation, and One-way ANOVA were used as statistical tools set at .05 level of significance. The results reveal that the level of 21st-century learning skills was "High" when taken as an entire group among the six learning skills such as Personal and Social Responsibility, Communication, Critical Thinking, Making Decision in Everyday Life, Solving Problems, and Assessing Teamwork. This means that the skills are evident and often practiced but not always in many situations. Meanwhile, a different indicator was presented in each skill. The top three highest skills were also presented in each major skill. Furthermore, there is no significant difference in the perceived 21st-century learning skills of students when classified according to grade/year level. This might be attributed to family orientation, exposure to school activities, peer influence, social media, and many others. Constant positive behavior and appropriate direction in life is required to attain these skills with the help or support of family, school, and community.

Keywords:

Personal and Social Responsibility, Communication, Critical thinking, Making decision, Solving problems, Teamwork

Introduction

In the 21st century, students strive for quality education and skills to become competent, productive citizens (Suto, 2013), and will allow them to face complex challenges (21st Century Competencies

Foundation, 2016) or will tend them to survive in this fast-changing society. In addition, there is a rise in computers and machines where more workers are needed having higher-order thinking skills and/or advanced skills and there is rigid competition among the workers towards novel problems and dynamic



environment (Asia Society Partnership for Global Learning, 2012; Greenhill, 2010). These are the reasons why the “21st Century Skills” were laid down by educators.

The skills are grouped into three broad domains, namely: cognitive, interpersonal, and intrapersonal (21st Century Competencies Foundation, 2016). The 21st Century Skills is defined as a way of thinking, way of working, tool for working, and living in the world based on the Assessment and Teaching of the 21st century skills (AT21CS), a consortium of Australia, Finland, Portugal, Singapore, UK, and US (Asia Society Partnership for Global Learning 2012; Greenhill, 2010).

Suto (2013) enumerated the 21st Century Skills: creativity and innovation; critical thinking, problem-solving, and decision-making; learning to learn or metacognition; communication; collaboration or teamwork; information literacy; information and communications technology (ICT); citizenship – local and global; life and career; and personal and social responsibility. On the other hand, the Partnership for 21st Century Skills (2008) sub-categorized the 21st Century Student Outcomes or the 21st Century Learning and these are:

- A. Learning and Innovation Skills composed of creativity and innovation skills, critical thinking and problem-solving skills, and communication and collaboration skills;
- B. Information, Media, and Technology Skills composed of information literacy, media literacy, and ICT; and
- C. Life and Career Skills composed of flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility.

The 21st Century Competencies Foundation (2016) call it as employability skills and is divided into three major divisions:

- A. Fundamental Skills consist of communication, information management, use of numeric, and think and solve problems;
- B. Personal Management Skills consist of demonstration of positive attitude and behaviors,

responsible, adaptable, learn continuously, and work safely; and

- C. Teamwork Skills such as working with others and participating in projects and tasks.

Researchers and some organizations suggested the approaches to reach these skills. Suto (2013) mentioned long-standing teaching methods, developing curricula that cover the 21st-century skills explicitly, adopting skill-centered pedagogy in schools, nurturing skills through extra-curricular activities, nurturing skills through independent research projects; and nurturing skills in the workplace. The Pacific Policy Research Center (2010) mentioned that the Partnership for 21st Century Skills has six key elements, such as: 1. Emphasize core subjects, 2. Emphasize learning skills, 3. Use 21st century tools to develop learning skills, 4. Teach and learn in a 21st century context, 5. Teach and learn 21st century content, and 6. Use 21st century assessment that measures 21st century skills. These can be implemented through project-based, problem-based, and design-based learning. Meanwhile, the National Education Association (n.d.) suggested a guide for educators using the 4 C's (critical thinking and problem-solving, communication, collaboration, and creativity and innovation). These 4 C's can be integrated into the classroom most especially in arts, world language, science, geography, English, social studies, and mathematics. Moreover, Greenhill (2010) set the following criteria to achieve the 21st Century Skills: Improve standard, strengthen assessment, curriculum and instruction, professional development, and the learning environment.

In the study of Lai and Viering (2012), the approaches in measuring 21st Century Skills are the following: self-reports, global rating scales, standardized assessments such as multiple choice and performance-based, and observational measures. They suggested the following: multiple measures to permit triangulation of inferences, design complex and or challenging tasks, design open-ended and/or ill-structured tasks, use tasks that employ meaningful or authentic, real-world problem contexts, make students thinking and reasoning visible, and explore innovative approaches that utilize new technology and psychometric models.



Students of John B. Lacson Foundation Maritime University (Arevalo), Inc., as future seafarers, must imbibe the 21st century skills. These maritime students must be lifelong learners in order to adapt to the growing worldwide needs and trends of the seafaring industry.

This study was conceptualized because of the following reasons: First, there is a shortage of information about the 21st century skills of the maritime students and second, it could be an eye-opener for the school to impose proper intervention once the result is analyzed.

Thus, this study aimed to determine the 21st century skills of maritime students for school year 2017-2018. Specifically, this study sought to answer the following questions:

1. What is the level of 21st - century learning skills possessed by maritime students when taken as an entire group and when classified according to student level?
2. What are the students' strengths and weakness in terms of 21st - century learning skills?
3. Is there a significant difference in the 21st - century skills possessed by maritime students when classified according to student level?

Methodology

This study utilized survey as a research design. A descriptive survey uses the same set of questions for a large number of individuals (Fraenkel and Wallen, 2010). There were 350 respondents that were utilized in this study. These maritime students were officially

Table 1. Distribution of Respondents

Category	N	n
A. Entire Group	2, 797	350
B. Level		
Grade 11	718	90
Grade 12	551	69
BSMT 1	163	20
BSMT 2	365	46
BSMT 3	1,000	125

enrolled at JBLFMU-Arevalo during the second semester of school year 2017-2018. Furthermore, stratified proportional random sampling was used to select the respondents.

The 114-item validated standardized questionnaire was made up of two parts. The first part was the Personal Identification Data of respondents. The second part delved into the assessment of 21st-century learning skills that were answerable by a five-point Likert scale as shown below:

Five-point Likert Scale		Equivalent Point
Always	Strongly Agree	5
Often	Agree	4
Sometimes	Neutral	3
Rarely	Disagree	2
Never	Strongly Disagree	1

The questionnaire is further divided into six parts, namely: 14-items Personal and Social Responsibility (Watson, Newton, and Kim, 2003), 23-items Communication Scale (Barkman and Machtmes, 2002), 20-items Critical Thinking (Mincemoyer, Perkins, and Munyua, 2001), 20-items Making Decisions in Everyday Life (Mincemoyer and Perkins, 2001), 24-items Solving Problems (Barkman and Machtmes, 2002), and 42-items Assessing Teamwork Skills (Quest Meraki, 2017).



This questionnaire had also underwent reliability-testing using Cronbach alpha having an over-all index value of 0.97 with individual indexes as shown below:

Table 2. Reliability Indices of the 21st - Century Learning Skills

Skill	Reliability coefficient
Personal and Social Responsibility	0.78
Communication Scale	0.86
Critical Thinking	0.91
Making Decisions in Everyday Life	0.91
Solving Problems	0.93
Assessing Teamwork Skills	0.96

The researcher took the enrollment statistics summary of the respondents from the Registrar’s Office and determined the sample size using the sampling formula. Then, the questionnaires were distributed by the researcher to 38 third year students for pilot-testing. The data gathered were in the form of interval scale.

After pilot-testing, the questionnaires were reproduced and administered to the respondents. The results were encoded, analyzed, and interpreted to answer the research questions.

Mean and standard deviation were used to tabulate the results. In addition, One-way analysis of variance set at .05 level of significance was used to determine if there was no significant difference in the level of 21st - century learning skills possessed by BSMT students when classified according to level.

Tables 3 to 8 show the mean, description, and indicators for interpreting the six skills such as personal and social responsibility, communication, critical thinking, making decisions in everyday life, solving problems, and teamwork.

Table 3. Mean, Description, and Indicators for Interpreting Personal and Social Responsibility

Mean Scale	Description	Indicators
4.51-5.0	Very High	Set many goals and seek to improve oneself and proactively engage oneself to help and reach others
3.51-4.50	High	Set several goals and seek to improve oneself and engage oneself to help and reach others
2.51-3.50	Moderate	Set enough goals and seek to improve oneself and engage oneself to help others
1.51-2.50	Low	Set few goals and seek to improve oneself and selectively engage oneself to help others
1.0-1.50	Very Low	No goals and plan to improve oneself and no concern to others

**Table 4.** Mean, Description, and Indicators for Interpreting Communication Scale

Mean Scale	Description	Indicators
4.51-5.0	Very High	Always use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message
3.51-4.50	High	Often use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message
2.51-3.50	Moderate	Sometimes use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message
1.51-2.50	Low	Rarely use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message
1.0-1.50	Very Low	Never use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message

Table 5. Mean, Description, and Indicators for Interpreting Critical Thinking

Mean Scale	Description	Indicators
4.51-5.0	Very High	Always think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information
3.51-4.50	High	Often think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information
2.51-3.50	Moderate	Sometimes think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information
1.51-2.50	Low	Rarely think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information
1.0-1.50	Very Low	Never think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information

Table 6. Mean, Description, and Indicators for Interpreting Making Decisions in Everyday Life

Mean Scale	Description	Indicators
4.51-5.0	Very High	Always think about the problem before taking an action, ask others, analyze decision, and consider past choices
3.51-4.50	High	Often think about the problem before taking an action, ask others, analyze decision, and consider past choices
2.51-3.50	Moderate	Sometimes think about the problem before taking an action, ask others, analyze decision, and consider past choices
1.51-2.50	Low	Rarely think about the problem before taking an action, ask others, analyze decision, and consider past choices
1.0-1.50	Very Low	Never think about the problem before taking an action, ask others, analyze decision, and consider past choices

**Table 7.** Mean, Description, and Indicators for Interpreting Solving Problems

Mean Scale	Description	Indicators
4.51-5.0	Very High	Always figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out
3.51-4.50	High	Often figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out
2.51-3.50	Moderate	Sometimes figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out
1.51-2.50	Low	Rarely figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out
1.0-1.50	Very Low	Never figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out

Table 8. Mean, Description, and Indicators for Interpreting Assessing Teamwork Skills

Mean Scale	Description	Indicators
4.51-5.0	Very High	Always focus on goals; observe leadership and ownership; delegates tasks; observe time management and personal values and ethics; create frequent monitoring and feedback; observe team spirit and communication, bonding, trust, commitment, and motivation; and finally, share knowledge, skills, and resources
3.51-4.50	High	Often focus on goals; observe leadership and ownership; delegate tasks; observe time management and personal values and ethics; create frequent monitoring and feedback; observe team spirit and communication, bonding, trust, commitment, and motivation; and finally, share knowledge, skills, and resources
2.51-3.50	Moderate	Sometimes focus on goals; observe leadership and ownership; delegate tasks; observe time management and personal values and ethics; create frequent monitoring and feedback; observe team spirit and communication, bonding, trust, commitment, and motivation; and finally, share knowledge, skills, and resources
1.51-2.50	Low	Rarely focus on goals; observe leadership and ownership; delegate tasks; observe time management and personal values and ethics; create frequent monitoring and feedback; observe team spirit and communication, bonding, trust, commitment, and motivation; and finally, share knowledge, skills, and resources
1.0-1.50	Very Low	Never focus on goals; observe leadership and ownership; delegate tasks; observe time management and personal values and ethics; create frequent monitoring and feedback; observe team spirit and communication, bonding, trust, commitment, and motivation; and finally, share knowledge, skills, and resources

**Table 9.** Mean, Description, and Indicators for Interpreting the 21st - Century Learning Skills

Mean Scale	Description	Indicators
4.51-5.0	Very High	The skills are very evident and always practiced in all situations
3.51-4.50	High	The skills are evident and often practiced but not always in many situations
2.51-3.50	Moderate	The skills are seldom practiced in some situations
1.51-2.50	Low	The skills are rarely practiced in some situations; being reminded or supervised by an adult
1.0-1.50	Very Low	The skills are not evident and practiced at all; only observed in few formal occasions/situations

Results and Discussion

Table 10 shows the perceived 21st-century learning skills of JBLFMU-Arevalo students. The level of 21st-century learning skills of these maritime students is described as “High” (M=4.15). This means that the 21st-century learning skills such as personal and social responsibility, assessing teamwork, critical thinking, solving problems, making decision in everyday life, and communication are very evident and often practiced but not always in many situations.

Meanwhile, the highest composite mean is Personal and Social Responsibility (M=4.37, SD=0.70) which is described as “High” which means that students set several goals and seek to improve oneself and engage oneself to help and reach others. The next is Assessing Teamwork (M=4.24, SD=0.81), which is described as “High” which means the students often focus on goals, observe leadership and ownership, delegate tasks, observe time management and personal values and ethics, create frequent monitoring and feedback, observes team spirit and communication, bonding, trust, commitment, and motivation, and finally, share knowledge, skills, and resources. This was followed by Critical Thinking (M=4.16, SD=0.77), which is described as “High” which means that students often think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and

use correct information. Then, Solving Problems (M=4.09, SD=0.82), which is described as “High” which means that students often figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out. Second to the last is Making Decision in Everyday Life (M=4.08, SD=0.82), which is described as “High” which means that students often think about the problem before taking an action, ask others, analyze decision, and consider past choices. The least skill is Communication (M=3.93, SD=0.88), which is described as “High” which means that students often use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message.

For Grade 11, the level of 21st-century learning skills of these maritime students is described as “High” with a grand mean of 4.11. This means that the 21st-century learning skills such as personal and social responsibility, assessing teamwork, critical thinking, making decision in everyday life, solving problems, and communication are very evident and always practiced in all situations.

Furthermore, the highest composite mean in Grade 11 is Personal and Social Responsibility (M=4.37, SD=0.77) which is described as “High” which means that students set several goals and seek to improve oneself and engage oneself to help and reach others.



Table 10. 21st - Century Learning Skills of JBLFMU - Arevalo Students

Category	Personal and Social Responsibility		Communication		Critical Thinking		Making Decision in Everyday Life		Solving Problems		Assessing Teamwork		GM								
	CM	SD	CM	SD	CM	SD	CM	SD	CM	SD	CM	SD	Description	SD							
Entire Group	4.37	High	0.70	3.93	High	0.88	4.16	High	0.77	4.08	High	0.82	4.09	High	0.81	4.15	High	0.80			
Grade 11	4.37	High	0.77	3.89	High	0.77	4.10	High	0.79	4.07	High	0.83	4.04	High	0.78	4.11	High	0.79			
Grade 12	4.37	High	0.79	3.92	High	0.94	4.12	High	0.79	4.02	High	0.86	4.07	High	0.84	4.16	High	0.87			
BSMT 1	4.54	Very High	0.65	3.79	High	0.97	4.00	High	0.87	3.89	High	0.97	4.06	High	1.15	4.33	High	0.97	4.10	High	0.90
BSMT 2	4.38	High	0.66	4.02	High	0.81	4.27	High	0.71	4.19	High	0.76	4.15	High	0.75	4.30	High	0.76	4.22	High	0.73
BSMT 3	4.42	High	0.67	3.95	High	0.81	4.23	High	0.71	4.15	High	0.76	4.13	High	0.75	4.30	High	0.66	4.20	High	0.73

Note. CM means Composite Mean while GM means Grand Mean



The next is Assessing Teamwork ($M=4.18$, $SD=0.78$) which is described as “High” which means that students often focus on goals, observe leadership and ownership, delegate tasks, observe time management and personal values and ethics, create frequent monitoring and feedback, observe team spirit and communication, bonding, trust, commitment, and motivation, and finally, share knowledge, skills, and resources. This was followed by Critical Thinking ($M=4.10$, $SD=0.79$) which is described as “High” which means that students often think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information. Then Making Decision in Everyday Life ($M=4.07$, $SD=0.83$), which is described as “High” which means that students often think about the problem before taking an action, ask others, analyze decision, and consider past choices. Second to the last is Solving Problems ($M=4.04$, $SD=0.82$), which is described as “High” which means that students often figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out. And lastly, the least skill is Communication ($M=3.89$, $SD=0.77$), which is described as “High” which means that students often use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message.

Moreover, the highest composite mean in Grade 12 is Personal and Social Responsibility ($M=4.37$, $SD=0.79$) which is described as “High” which means that students set several goals and seek to improve and engage oneself to help and reach others. The next is Assessing Teamwork ($M=4.16$, $SD=0.97$), which is described as “High” which means that students often focus on goals, observe leadership and ownership, delegate tasks, observe time management and personal values and ethics, create frequent monitoring and feedback, observe team spirit and communication, bonding, trust, commitment, and motivation, and finally, share knowledge, skills, and resources. This was followed by Critical Thinking ($M=4.12$, $SD=0.79$),

which is described as “High” which means that students often think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sorts ideas, strategize to analyze issue, and use correct information. Then, Solving Problems ($M=4.07$, $SD=0.16$), which is described as “High” which means that students often figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out. Next is Making Decision in Everyday Life ($M=4.02$, $SD=0.86$), which is described as “High” which means that students often think about the problem before taking an action, ask others, analyze decision, and consider past choices. The last skill is Communication ($M=3.92$, $SD=0.94$), which is described as “High” which means that students often use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message.

In addition, the highest composite in BSMT 1 mean is Personal and Social Responsibility ($M=4.54$, $SD=0.65$) which is described as “Very High” which means that students set several goals and seek to improve and engage themselves to help and reach others. The next is Assessing Teamwork ($M=4.33$, $SD=0.76$), which is described as “High” which means that students often focus on goals, observe leadership and ownership, delegate tasks, observe time management and personal values and ethics, create frequent monitoring and feedback, observe team spirit and communication, bonding, trust, commitment, and motivation, and finally, share knowledge, skills, and resources. Then, Solving Problems ($M=4.06$, $SD=1.15$), which is described as “High” which means that students often figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out. This was followed by Critical Thinking ($M=4.00$, $SD=0.87$), which is described as “High” which means that students often think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct



information. Next is Making Decision in Everyday Life ($M=3.89$, $SD=0.97$), which is described as “High” which means that students often think about the problem before taking an action, ask others, analyze decision, and consider past choices. The least skill is Communication ($M=3.79$, $SD=0.97$), which is described as “High” which means that students often use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message.

Furthermore, the highest composite in BSMT 2 mean is Personal and Social Responsibility ($M=4.38$, $SD=0.66$) which is described as “High” which means that students set several goals and seek to improve oneself and engage themselves to help and reach others. The next is Assessing Teamwork ($M=4.30$, $SD=0.66$), which is described as “High” which means that students often focus on goals, observe leadership and ownership, delegate tasks, observe time management and personal values and ethics, create frequent monitoring and feedback, observe team spirit and communication, bonding, trust, commitment, and motivation, and finally, share knowledge, skills, and resources. Critical Thinking ($M=4.27$, $SD=0.71$), which is described as “High” which means that students often think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information This was followed by Making Decision in Everyday Life ($M=4.19$, $SD=0.76$), which is described as “High” which means that students often think about the problem before taking an action, ask others, analyze decision, and consider past choices. Then, Solving Problems ($M=4.15$, $SD=0.75$), which is described as “High” which means that students often figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out. The least skill is Communication ($M=4.02$, $SD=0.81$), which is described as “High” which means that students often use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message.

Furthermore, the highest composite mean in BSMT 3 is Personal and Social Responsibility ($M=4.42$, $SD=0.67$) which is described as “High” which means that students set several goals and seek to improve and engage themselves to help and reach others. The next is Assessing Teamwork ($M=4.30$, $SD=0.66$) which is described as “High” which means that students often focus on goals, observe leadership and ownership, delegate tasks, observe time management and personal values and ethics, create frequent monitoring and feedback, observe team spirit and communication, bonding, trust, commitment, and motivation, and finally, share knowledge, skills, and resources. This was followed by Critical Thinking ($M=4.23$, $SD=0.71$) which is described as “High” which means which means that students often think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information. Then Making Decision in Everyday Life ($M=4.15$, $SD=0.76$), which is described as “High” which means that students often think about the problem before taking an action, ask others, analyzes decision, and consider past choices. Next is Solving Problems ($M=4.13$, $SD=0.75$), which is described as “High” which means that students often figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not worked out. The least skill is Communication ($M=3.95$, $SD=0.81$), which is described as “High” which means that students often use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message.

Furthermore, there is no significant difference in the perceived 21st-century learning skills of students when classified according to level, $F(4, 442) = 2.058$, $p = .085$. This might be attributed to family orientation (Sheldon and Epstein, 2005), exposure to school activities (Kerby and Romine, 2010), peer influence (Kourea, Cartledge, and Musti-Rao, 2007), social media (New York Behavioral Health, n.d.), and many others.



Conclusions

This study concludes that the level of the 21st-century learning skills of maritime students is “High”. This means that the skills such as Personal and Social Responsibility, Communication, Critical Thinking, Making Decision in Everyday Life, Solving Problems, and Assessing Teamwork are evident and often practiced but not always in many situations. This might be attributed to the exposure of students in their everyday life with their family (Sheldon and Epstein, 2005), exposure to school activities (Kerby and Romine, 2009), peer influence (Kourea, Cartledge, and Musti-Rao, 2007), social media (New York Behavioral Health, n.d.), and others.

The 21st-century learning skills such as *Personal and Social Responsibility* was “High” which connotes that students set several goals and seek to improve oneself and engage themselves to help and reach others; *Assessing Teamwork* was also “High” which denotes that students often focus on goals, observe leadership and ownership, delegate tasks, observe time management and personal values and ethics, create frequent monitoring and feedback, observe team spirit and communication, bonding, trust, commitment, and motivation, and finally, share knowledge, skills, and resources; *Critical Thinking* was again “High” which means that students often think in advance, gather ideas from others, carefully select solution to solve problems, open-minded, sort ideas, strategize to analyze issue, and use correct information; *Solving Problems* was rated “High” that means students often figure out the problem, access all facts and/or viewpoints, open-minded, try possible solutions, compare previous experiences, and ponder for solutions that did not work out; *Making Decisions in Everyday Life* was described as “High” which means students often think about the problem before taking an action, ask others, analyze decision, and consider past choices; and finally, *Communication* which was described as “High”. This means that students often use eye contact and body language to convey message, understand others point of view, organize thoughts, and redirect conversation to clarify message.

Meanwhile, no weaknesses were found due to the support of their family, peers, and teachers. There was no significant difference in the perceived 21st-century learning skills of students that might be attributed to family orientation (Sheldon and Epstein, 2005), exposure to school activities (Kerby and Romine, 2010), peer influence (Kourea, Cartledge, and Musti-Rao, 2007), social media (New York Behavioral Health, n.d.), and others.

Recommendations

Since the 21st-century learning skills of maritime students are high then it is recommended to sustain them. Constant positive behavior and appropriate direction in life is required in order to attain them with the intervention of family, school, and community.

References

- Asia Society Partnership for Global Learning. (2012). Teaching and Learning 21st Century Skills. Lessons from the Learning Sciences. A Global Cities Education Network Report. Retrieved from <http://asiasociety.org/filesrand1012report.pdf>.
- Barkman, S. and Machtmes, K. (2002). Communication Scale. Youth Life Skills Evaluation Project, Pennsylvania State University. Retrieved from <https://cyfar.org/sites/default/files/PsychometricsFiles/Communication%20Scale%20%28ages%2012-18%29.pdf>.
- Barkman, S. and Machtmes, K. (2002). Solving Problems. Youth Life Skills Evaluation Project, Pennsylvania State University. Retrieved from <https://cyfar.org/sites/default/filesPsychometricsFiles/Solving%20Problems%20%2812-18%20years%29.pdf>.
- Fraenkel, J. R. and Wallen, N. E. (2010). *How to design and evaluate research in education*. NY: McGraw-Hill Companies, Inc.



- Greenhill, V. (2010). American Association of Colleges of Teacher Education and the Partnership for the 21st Century Skills (P21). 21st Century Knowledge and Skills in Educator Preparation. Retrieved from http://www.p21.org/storage/documentsaacte_p21_whitepaper2010.pdf.
- Kerby, D. and Romine, J. (2010). Develop oral presentation skills through accounting curriculum design and course-embedded assessment. *Journal of Education for Business*, 85 (3), 172-179. DOI:10.1080/0883232090325238.
- Kourea, L., Cartledge, G., and Musti-Rao, S. (2007). Improving the reading skills of urban elementary students through total class peer tutoring. *Remedial and Special Education*, 28, 2, 95-107.
- Lai, E. R. and Viering, M. (2012). Assessing 21st Century Skills: Integrating Research Findings. National Council on Measurement in Education. Vancouver, B. C. Retrieved from http://images.pearsonassessments.com/images/tmrsAssessing_21st_Century_Skills_NCME.pdf.
- Mincemoyer, C. and Perkins, D. F. (2001). Making Decisions in Everyday Life. Youth Life Skills Evaluation Project, Pennsylvania State University. Retrieved from [https://cyfar.org/sites/default/files/PsychometricsFiles/Making%20Decisions%20in%20Everyday%20life%20\(12-18%20yrs\)_0.pdf](https://cyfar.org/sites/default/files/PsychometricsFiles/Making%20Decisions%20in%20Everyday%20life%20(12-18%20yrs)_0.pdf).
- Mincemoyer, C., Perkins, D. F., and Munyua, C. (2001). Critical Thinking. Youth Life Skills Evaluation Project, Pennsylvania State University. Retrieved from [https://cyfar.org/sites/default/files/Critical%20Thinking%20in%20Everyday%20Life%20\(12-18%20yrs\)_0.pdf](https://cyfar.org/sites/default/files/Critical%20Thinking%20in%20Everyday%20Life%20(12-18%20yrs)_0.pdf).
- National Education Association. (n.d.). An Educator's Guide to the "Four Cs". Preparing 21st Century Students for a Global Society. Retrieved from <http://www.nea.org/assets/docs/A-Guide-to-Four-Cs.pdf>.
- New York Behavioral Health (NYBH). (n.d.). The Impact of Social Media Use on Social Skills. Retrieved from <http://newyorkbehavioralhealth.com/the-impact-of-social-media-use-on-social-skills>.
- Pacific Policy Research Center. (2010). 21st Century Skills for Students and Teachers. Honolulu: Kamehameha Schools. Research and Evaluation Division. Retrieved from http://www.ksbe.edu/_assets/spi/pdfs/21_century_skills_full.pdf.
- Partnership for 21st Century Skills. (2008). 21st Century Skills, Education and Competitiveness. A Resource and Policy Guide. Retrieved from http://www.p21.org/storage/documents/21st_century_skills_education_and_competitiveness_guide.pdf.
- Quest Meraki. (2017). Assessing Teamwork Skills Questionnaires. Retrieved from <http://questmeraki.com/wp-content/uploads/2017/05/Assessing-Teamwork-Skills-Questionnaire.pdf>.
- Sheldon, S. B. and Epstein J. L. (2005). Involvement counts: Family and community partnerships and mathematics achievement. *The Journal of Educational Research*, 98 (4), 196-207. DOI:10.3200/JOER.98.4.196-207.
- Suto, I. (2013). 21st Century Skills: Ancient, Ubiquitous, Enigmatic? Research Matters: A Cambridge Assessment Publication. University of Cambridge. Local Examination Syndicate. Retrieved from <http://www.cambridgeassessment.org.uk/Images/130437-21st-century-skills-ancient-ubiquitous-enigmatic-.pdf>.
- Watson, D. L., Newton, M., and Kim, M. (2003). Recognition of values-based constructs in a summer physical activity program. *Urban Review*, 35, 217-232.
- 21st Century Competencies Foundation. (2016). Phase 1 Towards Defining 21st Century Competencies for Ontario. Winter 2016 Edition. Retrieved from http://www.edugains.ca/resources21CL/About21stCentury/21CL_21stCenturyCompetencies.