

# Analysis on Teaching Method based on Bridge Resource Management Course Survey

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Abstract : This research studies on Bridge Resource Management (BRM) improvement method base on BRM questionnaire result which was conducted and participated by the mariners and cadets who finished the basic onboard training by STCW 2010 (The Convention on Standards of training, Certification and Watch-keeping for Seafarers) Code A. Through questionnaire result, this paper collected opinions and analyzed data above all of survey items, such as: Time, education times, education material etc relate on theory, practice, simulation,...to suggest efficient BRM program.

Key Words : Maritime Casualty, Human error, Maritime education

요 약 : 본 연구는 STCW 2010에 기초를 두고 실습선 실습을 마친 해기사와 실습생을 대상으로 BRM 프로그램개선에 관한 설문조사를 실시하고 그 결과에 따른 BRM 교육방법 개선안을 찾는데 목적을 둔다. 설문조사 결과에 따라 BRM 교육프로그램의 항목별 평가, 즉 BRM 교육의 이론, 학습, 시간, 시뮬레이션에 대한 시간, 교육의 횟수, 교육자료 등에 대한 현황과 최종적으로 효과적인 BRM 프로그램 개선안을 제공한다.

핵심용어 : 해양사고, 요인, 해기교육

## Background

The attitudes and knowledge of bridge officer have been identified as a cause to mishaps in high-risk situations. To prevent maritime accident due to human errors, we conduct this on a research study entitled "A Survey on Teaching Method in Bridge Resource Management".

The purpose of this survey is to determine cadet's opinions about Maritime Education and Training- Bridge Resource Management Program in Mokpo Maritime University which can provide knowledge to prevent accident.

We will find an effective education method for cadet base on harmonizing Mokpo Maritime University's Model Course with STCW (The International Convention on Standard of Training, Certification and Watch-keeping for Seafarers).

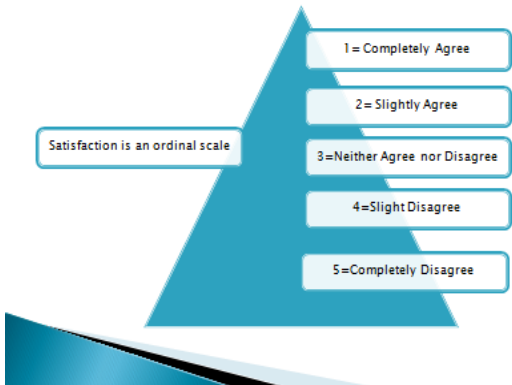
## Questions

1. Have you satisfied with BRM education program?
2. Do you think BRM education program time is enough?
3. The objectives of the BRM education program were clear?
4. The lecture makes the topic of BRM education program easy to understand?
5. The lecture makes the topic of BRM education program easy to understand?
6. The lecturer makes good use of examples?
7. The simulator rooms and facilities were excellent?
8. Have you satisfied with **teamwork** education content?
9. Have you satisfied with **leadership and decision making** education content?
10. Have you satisfied with **communication** education content?
11. Have you satisfied **simulation** education content?

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# Satisfaction



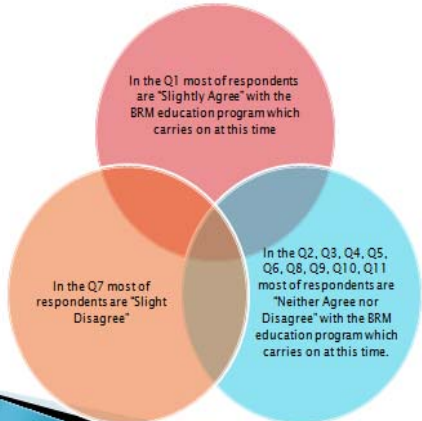
# Descriptive Statistic

Statistic	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Mean	2.0509475	2.0329983	2.7457627	2.7112644	2.7112644	2.7627119	2.3050813	2.7796611	2.7796611	2.79661037	2.8820508
Mode	1	3	3	3	3	3	4	3	3	3	3
	크다	크다	크다	크다	크다	크다	크다	크다	크다	크다	크다

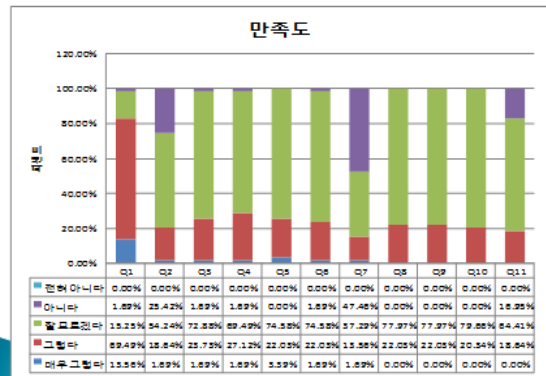
- Q1 → Q11** - Question1 to Question11 which related on the satisfaction on BRM education program
- Mean** - The mean, or "average", is the most widely used measure of central tendency. The mean is defined technically as the sum of all the data scores divided by n (the number of scores in the distribution)
- Mode** - The mode in a distribution of data is simple the score that occurs most frequently.

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# Frequency



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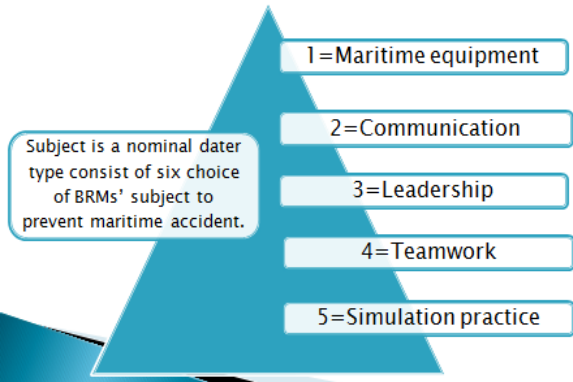
# Analyzing the meaning of data

From the figure above, you see that the mean satisfaction is 2 (from the scale 1 to 5). You may conclude that people are quite satisfied with the BRM education. This answers the first research question of "in general, what is the level of cadets' satisfaction toward education quality?"

You may also see that the sum of values in education items and subject may produce frequency that you may graph it further.

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# Subject



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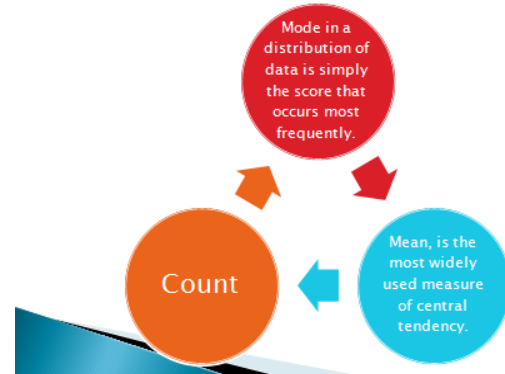
## Frequency of Subject

Subject is a nominal data type consist of six choice of BRMs' subject to prevent maritime accident.

	Subject				
	1	2	3	4	5
평균	0.00%	0.00%	0.00%	0.00%	16.95%
최빈값	0	0	0	0	0
합	0	0	0	0	10
관측수	59	59	59	59	59

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## The meaning of data



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## Frequency of item

Item is a nominal data type consist of four choices of item to improve BRM education program efficiently.

	Item			
	1	2	3	4
평균	15.25%	0.00%	3.39%	0.00%
최빈값	0	0	0	0
합	9	0	2	0
관측수	59	59	59	59

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## Conclusion

BRM program in STCW recognizes the need for effective communication, and the importance of assertiveness and leadership, including motivation.

BRM program in Korea bases on STCW's BRM program to establish BRM program suitable for cadet.

This paper suggests the BRM experience model to improve BRM education quality. BRM experience model use real maritime

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## Item

Item is a nominal data type consist of four choices of item to improve BRM education program efficiently.

1 = Practice

2 = Theory

3 = Maritime Accident

4 = Others

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