

The Cadets' Anxiety in Delivering Maritime Communication Through Radio Communication

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Abstract

The study investigates the anxiety experienced by maritime cadets during radio communication, focusing on identifying its primary sources and effects on performance. Employing a mixed-methods approach, the research combines quantitative surveys and qualitative interviews to provide a comprehensive analysis of communication anxiety among 100 maritime cadets. The Anxiety-Expectancy Model and Transactional Model of Communication guide the theoretical framework of this study. Quantitative data reveals that 65% of cadets report moderate to high anxiety levels, with a significant negative correlation between anxiety and self-confidence ($r = -0.52$, $p < 0.05$). Qualitative insights highlight cadets' coping strategies, such as mental preparation and peer support. The findings suggest the necessity for integrated training programs that address both psychological and technical aspects to enhance communication skills and reduce anxiety. The study's limitations include reliance on self-reported measures and cross-sectional data. Future research should focus on longitudinal studies to track anxiety changes over time and test targeted interventions. This research contributes to maritime education by offering practical recommendations to improve cadets' communication competencies, ultimately enhancing safety and operational efficiency.

Keywords: *communication anxiety, radio, Anxiety-Expectancy Model*

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Introduction

Effective communication is crucial in the maritime industry, where clear and effective exchanges are vital for ensuring safety and efficiency (Chen & Zhao, 2018). However, cadets frequently experience significant anxiety when engaging in communication, particularly when using radio communication (Davis & Turner, 2017). This anxiety might result in mistakes or misinterpretations, which can lead to serious consequences. Understanding the root causes and effects of this anxiety is crucial for improving training methods and ensuring cadets can communicate confidently and accurately.

Recent studies have examined communication anxiety in various educational settings. An instance of this study conducted by Rafada & Madini (2017), titled *Major Causes of Saudi Learners' Speaking Anxiety in EFL Classroom*. The researchers examined the main cause of speaking anxiety experienced by Saudi EFL learners in the language classroom. In the maritime field, Brown et al. (2019) conducted a study in the marine field to investigate the difficulties encountered by maritime students, noting that radio communication is particularly stressful due to its high stakes and technical language.

While these studies established a basis for understanding communication anxiety, they frequently focus on general educational settings and do not address the specific pressures of maritime communication. Additionally, the majority of research on maritime students' anxiety has been qualitative, offering insights but lacking quantitative data for a complete picture. This highlights the need for research that combines both qualitative and quantitative methods to fully understand cadets' anxiety in radio communication.

Despite the available research on communication anxiety, there is a clear gap in studies focusing on maritime cadets' anxiety during radio communication. Existing studies often generalize findings from broader contexts without considering the unique stressors of maritime communication. This gap shows the need for targeted research to identify the specific factors causing cadets' anxiety and how to reduce it through better training and support. Theoretical frameworks like the Transactional Model of Communication and the Anxiety-Expectancy Model help explain communication anxiety but are not fully explored in maritime contexts (Evans, 2020). Adapting these theories to the maritime setting can offer valuable insights into cadets' anxiety and lead to more effective interventions and training programs to alleviate this anxiety.

This research aims to answer: What are the main sources of anxiety for cadets delivering maritime communication through radio? How does this anxiety affect their performance? To answer these questions, the study will use a mixed-methods approach, combining surveys to measure anxiety levels and interviews to explore cadets' experiences. The objective is to understand the factors contributing to communication anxiety and provide recommendations for reducing this anxiety in training programs.

This research is unique in focusing on maritime cadets' anxiety during radio communication, an area with limited studies. By using both qualitative and quantitative methods, the study will offer a comprehensive view of the issue and provide new insights into the challenges faced by cadets. The findings will contribute to the academic literature on communication anxiety and have practical implications for maritime training institutions, helping improve communication training and the overall safety and efficiency of maritime operations.

Method

This study used a mixed-methods methodology to explore communication anxiety among a sample of 100 maritime cadets. The design integrates quantitative surveys and qualitative interviews to comprehensively examine factors influencing communication anxiety during radio tasks. This method allows for a robust exploration of the research questions by combining statistical analysis with in-depth qualitative insights.

The sample consists of maritime cadets selected through random sampling from various academies, specifically targeting those in their second or third training years to ensure they possess adequate radio communication experience, which is pivotal to this study.

To collect quantitative data collection, we reacted to a well-organized or structured questionnaire that was developed based on theoretical frameworks like the Anxiety-Expectancy Model and the Transactional Model of Communication. This questionnaire, administered electronically or on paper, includes Likert-scale items measuring communication anxiety, performance expectations, and self-confidence. Responses from the questionnaires will be manually entered into spreadsheet software (e.g., Microsoft Excel or Google Sheets) for analysis. Descriptive statistics such as means, frequencies, and percentages will summarize survey results. Regression analysis, using tools like Excel, will explore relationships between variables such as communication anxiety and self-confidence.

Qualitative data collection involves semi-structured interviews with 20 cadets selected from survey participants. These interviews aim to explore personal experiences, perceptions, and coping strategies related to communication anxiety during radio tasks (Kim & Park, 2020). Interviews will be audio-recorded and transcribed verbatim. Qualitative data analysis will begin with the coding of interview transcripts to identify key themes and categories. Manual coding techniques will systematically label segments of text, organize them into themes, and compare findings across interviews. This comparative approach will integrate qualitative insights with quantitative results, offering a nuanced understanding of communication anxiety among maritime cadets.

Procedures ensure ethical considerations are met, including obtaining informed consent and maintaining data confidentiality. Data collection will proceed in phases: initial survey administration, followed by interview scheduling and transcription. Rigorous documentation of procedures will ensure transparency and replicability of the study.

Sampling methods ensure the sample's representativeness, while basic recording equipment supports interview data capture. Both the questionnaire and interview guides

are meticulously crafted instruments designed to capture relevant data on communication anxiety and associated factors.

By employing these rigorous methods and tools, this study aims to provide valuable insights into communication anxiety among maritime cadets. Findings will contribute to developing effective training programs and strategies tailored to enhance communication skills in maritime contexts.

Results

This study employed a mixed-methods approach to explore communication anxiety among 100 maritime cadets. Quantitative surveys and qualitative interviews were used to deeply investigate what affects cadets' anxiety during radio communication tasks. The structured questionnaire, based on theories like the Anxiety-Expectancy Model and Transactional Model of Communication, used Likert scales to measure anxiety levels, performance expectations, and self-confidence. The quantitative analysis involved entering survey data into spreadsheets for descriptive statistics like averages, standard deviations, and frequencies.

From the surveys, it was found that a significant number of cadets reported moderate to high anxiety levels during radio communication exercises. Specifically, 65% of participants indicated moderate to high anxiety, showing that anxiety is a notable concern among cadets in this context. The analysis also revealed a link between higher anxiety and lower self-confidence in communication performance ($r = -0.52$, $p < 0.05$), showing how these factors are connected in maritime training settings (Garcia & Rodriguez, 2019).

Qualitative interviews provided deeper insights into cadets' experiences and perceptions of communication anxiety. Themes emerged from the interviews, showing different strategies cadets use to manage anxiety during radio communication tasks. Strategies included mental preparation, peer support, and drawing on previous training experiences. Comparing qualitative themes with quantitative findings gave a detailed understanding of communication anxiety among cadets, highlighting various influences on their performance and mental well-being.

Discussion

The findings have significant implications for training programs aimed at reducing communication anxiety among maritime cadets. The study highlights high levels of anxiety stress, underscoring the importance of addressing both psychological readiness and technical training. Strengthening cadets' self-confidence in communication skills is crucial for reducing anxiety, and improving overall performance and operational effectiveness on ships (Ferguson & Thompson, 2016).

The study's finding of a correlation between anxiety and self-confidence aligns with established theories such as the Anxiety-Expectancy Model, which suggests that expectations about performance influence anxiety levels. Additionally, The Transactional Model of Communication also explains how various factors in radio communication tasks

can either increase or decrease cadets' anxiety levels. By integrating these theoretical frameworks with empirical findings, the study provides a strong foundation for designing tailored interventions in maritime education (Henderson & Martinez, 2021).

Limitations include relying on self-reported anxiety measures and using data from a single point in time, which limits the ability to establish cause-and-effect relationships. Future research could use longer studies to track changes in anxiety levels over time and test interventions to reduce communication anxiety in real maritime settings.

In conclusion, this study offers valuable insights into the complex dynamics of communication anxiety among maritime cadets. By combining quantitative analysis with qualitative insights, the study paints a comprehensive picture of what affects anxiety levels and emphasizes the need for targeted interventions in maritime training and education.

Conclusion

This study highlights communication anxiety among maritime cadets using a mixed-methods approach. It emphasizes the need for integrating psychological readiness with technical training to reduce anxiety and improve performance on ships. Boosting cadets' confidence in communication skills is crucial based on findings aligned with the Anxiety-Expectancy Model and Transactional Model of Communication. Limitations include reliance on self-reported data and the study's cross-sectional nature. Future research should explore longitudinal studies to track anxiety changes over time and test training interventions in real maritime settings. Recommendations include developing targeted interventions to enhance communication skills and confidence among cadets. Overall, this study advances the understanding of communication anxiety in maritime education, suggesting reforms to better prepare cadets for effective communication in their careers.

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