ANALISIS DESKRIPTIF GAYA BELAJAR DAN KEMAMPUAN TOEIC DI ANTARA KADET MARITIM: IMPLIKASI TERHADAP PEMBELAJARAN BAHASA INGGRIS MARITIM

DESCRIPTIVE ANALYSIS OF LEARNING STYLES AND TOEIC PROFICIENCY AMONG MARITIME CADETS: IMPLICATIONS FOR MARITIME ENGLISH INSTRUCTION

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ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan distribusi preferensi gaya belajar dan tingkat kemampuan bahasa Inggris berdasarkan skor TOEIC di kalangan taruna Politeknik Pelayaran Malahayati. Sebanyak 56 taruna dari tiga program studi—Permesinan Kapal (n=13), Sistem Kelistrikan Kapal (n=23), dan Nautika (n=20)—dilibatkan dalam studi ini dengan menggunakan metode deskriptif kuantitatif dan teknik pengambilan sampel acak. Gaya belajar diukur melalui kuesioner berskala Likert yang mencakup empat dimensi: visual (9 item), auditori (7 item), kinestetik (10 item), dan kelompok (5 item). Sementara itu, skor TOEIC diperoleh dari tes mini TOEIC resmi yang diselenggarakan oleh institusi bekerja sama dengan penyedia layanan TOEIC, yang mengukur kemampuan menyimak (listening) dan membaca (reading). Hasil menunjukkan bahwa 51% taruna berada pada tingkat dasar (basic), 33% pada tingkat pemula (beginner), 12,5% pada tingkat menengah bawah (lower intermediate), dan hanya 1,8% mencapai tingkat menengah (intermediate). Dalam hal preferensi gaya belajar, gaya belajar kelompok (60%) dan auditori (58,9%) merupakan yang paling dominan, diikuti oleh visual (39,3%) dan kinestetik (17,9%). Temuan ini menyiratkan bahwa pengajaran Bahasa Inggris Maritim sebaiknya menitikberatkan pada aktivitas berbasis menyimak dan kerja kelompok agar sesuai dengan kecenderungan belajar taruna. Selain itu, data deskriptif ini mengindikasikan perlunya penyempurnaan kurikulum yang lebih responsif terhadap gaya belajar individu serta kebutuhan komunikasi profesional dalam konteks pelayaran.

Kata kunci: Gaya Belajar, TOEIC, Bahasa Inggris Maritim, Taruna, Deskriptif Kuantitatif

ABSTRACT

This study aims to describe he distribution of learning style preferences and TOEIC proficiency levels among cadets of Politeknik Pelayaran Malahayati, with the goal of providing pedagogical insights for Maritime English instruction. A total of 56 cadets participated in this quantitative descriptive study, selected through random sampling from three departments: Marine Engineering (n=13), Marine Electrical Engineering (n=23), and Nautical Studies (n=20). The learning styles were assessed using a Likert-scale questionnaire consisting of four dimensions: visual (9 items), auditory (7 items), kinesthetic (10 items), and group (5 items). TOEIC scores were collected from a campus-based mini TOEIC test in collaboration with an official testing provider, focusing on listening and reading skills. The findings showed that 51% of the cadets were at the basic TOEIC level, followed by beginner (33%), lower-intermediate (12.5%), and intermediate (1.8%). In terms of learning preferences, the most dominant styles were group (60%) and auditory (58.9%), followed by visual (39.3%) and kinesthetic (17.9%). These results suggest that Maritime English instruction should emphasize listening activities and collaborative learning to align with cadets' learning tendencies. The descriptive data also highlights the need for curriculum refinement that accommodates both individual learning styles and the functional language skills required in maritime communication.

Keywords: *Learning Styles, TOEIC, Maritime English, Cadets, Descriptive Quantitative*

1. Introduction

Maritime professionals are required to master English as a working language for global communication, particularly in accordance with the International Maritime Organization (IMO) and Standards of Training, Certification, and Watchkeeping (STCW) conventions. English proficiency is vital for ensuring safety at sea, efficient operations, and compliance with international standards. In this regard, English language competence—especially in listening and reading—plays a central role in supporting cadets' readiness for future maritime careers.

The TOEIC (Test of English for International Communication) is widely recognized as a standardized tool to assess English proficiency for workplace and professional contexts, including the maritime sector. Many maritime institutions in Indonesia have adopted TOEIC as a benchmark to evaluate the English skills of their cadets. However, a significant challenge remains: while TOEIC tests are standardized, cadets come from diverse educational backgrounds and have different learning preferences that may influence their performance (Al-Zayed, 2017).

Learning styles refer to the consistent ways individuals prefer to receive, process, and engage with information. Some individuals process information best through seeing and reading texts, charts, or diagrams; others through listening and verbal explanation; and some through tactile engagement, movement, and physical activity. Models such as VARK classify learning preferences into visual, auditory, kinesthetic, and read/write modalities (Imran Hussain, 2019); Wood (2000) in (Ramadian et al., 2020) . (Halim et al., 2024) also categorized these into three major types: visual, auditory, and kinesthetic. Learning style does not determine intelligence, but rather reflects how the brain processes and retains information effectively. Recent meta-analyses also suggest that while these preferences act more as learning preferences than fixed traits aligned with cognitive performance, instructional methods designed to engage multiple sensory modalities—such as visual, auditory, and kinesthetic inputs—can enhance memory encoding and retention by supporting the brain's natural processing strategies (Clinton-Lisell & Litzinger, 2024). Additionally, collaborative or group-based learning is gaining attention as a dimension of learning style relevant in active learning environments. These styles are not only relevant in general education but are increasingly important in specialized fields like maritime education, where the integration of language and operational training is essential (Pritchard, 2009) .

Learners differ in the ways they perceive and process information, leading to various learning style preferences that can influence their academic engagement and outcomes. Visual learners absorb information more effectively through images, written texts, and other visual formats such as charts or diagrams, often relying on visual organization and observation to enhance comprehension. Meanwhile, auditory learners tend to prefer oral explanations and benefit greatly from discussions, lectures, and listening-based activities that reinforce material through sound. Kinesthetic learners, in contrast, grasp concepts more readily when physically involved in the learning process, favoring hands-on tasks like experiments, role-plays, or physical movement to internalize ideas. Additionally, some students thrive in cooperative settings, where studying with peers and engaging in group assignments fosters better understanding and motivation. Recognizing these diverse preferences is essential in designing instructional approaches that cater to different learner needs (Al-Zayed, 2017).

Although learning styles differ from learning strategies, both can influence how learners' approach complex language tasks. Research by (Wulandari et al., 2019) in Bengkulu demonstrated that among 79 students studying listening comprehension, auditory learners performed notably better, suggesting that matching instruction to auditory preferences can enhance learning outcomes. Similarly, (Novia Russilawatie & Anang Widodo, 2020) in their study at the University of Technology Yogyakarta found that students with strong self-awareness of their learning preferences tended to perform better in English proficiency tests. They concluded that accommodating various learning styles in classroom instruction could improve students' engagement and outcomes. Another recent research by (Aboregela, 2023) confirmed that learning style preferences significantly influence students' academic performance, especially when instructional strategies align with their dominant modalities—visual, auditory, or kinesthetic. Conducted among medical students within an integrated curriculum, the study demonstrated that learners achieved higher

academic outcomes when learning activities matched their preferred styles. These findings support the argument that learning styles represent habitual cognitive preferences rather than measures of intelligence, and that accommodating these preferences can enhance knowledge retention and learning efficiency.

Despite the popularity of learning style theory, learners are often unaware of how they learn best, and instructors may not always accommodate these preferences in classroom settings (Al-Zayed, 2017); (Ramadian et al., 2020). Consequently, instructional strategies that ignore these differences may lead to reduced engagement and suboptimal outcomes. On the other hand, matching instruction to learners' styles can improve motivation, comprehension, and retention, particularly when teaching complex language skills (Dawi & Hashim, 2022).

Preliminary data collected from 56 maritime cadets revealed a lack of statistically significant correlation between learning styles and TOEIC scores. Despite this, dominant patterns in learning preferences and proficiency levels were identified. These findings suggest that instead of pursuing predictive relationships, it is more relevant to descriptively profile learners and align instructional strategies accordingly. Previous studies have not fully explored such descriptive mapping in the maritime education context, especially in Indonesia. This study, therefore, shifts the focus from correlation-based validation to instructional relevance, aiming to contribute pedagogical insights based on actual student tendencies.

Therefore, this study aims to provide a descriptive analysis of cadets' learning styles and TOEIC proficiency levels. By mapping out the dominant styles and TOEIC skill bands, the study offers practical implications for Maritime English lecturers to align instructional strategies with learners' tendencies, especially in listening and collaborative learning formats.

2. Method

This study employed a quantitative descriptive research design, which is appropriate for systematically describing the characteristics of a population without examining cause-and-effect relationships (Creswell, 2016). The aim was to identify the distribution of cadets' learning styles and TOEIC proficiency levels and to provide recommendations for Maritime English instruction. This approach was chosen due to the absence of statistically significant correlations in preliminary analyses, shifting the focus from hypothesis testing to descriptive mapping.

2.1 Participants and Sampling

The participants were 56 cadets from Politeknik Pelayaran Malahayati, selected using random sampling three academic departments: Marine Engineering (n = 13), Marine Electrical Engineering (n = 23), and Nautical Studies (n = 20). The selection was intended to represent the diversity of learning backgrounds among cadets undergoing maritime vocational training.

2.2 Instrumentation

Two instruments were used in this study. First, Learning Style Questionnaire – adapted from the VARK framework (Fleming, 1992); consisting of: 9 items measuring visual learning style, 7 items for auditory style, 10 items for kinesthetic style, and 5 items for group-based learning style. Each item used a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The instrument was validated through expert judgment and pilot-tested for clarity and reliability.

Second, Mini TOEIC Scores – obtained from an official campus-based TOEIC test administered in collaboration with a certified TOEIC provider. The test measured two skills: listening and reading, which reflect the primary components evaluated in international maritime communication standards.

2.3 Data Collection Procedures

The data collection took place in three main stages:

1. Distribution of the questionnaire, which was administered face-to-face to ensure completeness of responses.
2. Retrieval of TOEIC scores, which were accessed with participants' consent through institutional collaboration.
3. Categorization of scores includes the learning style scores were totaled and classified into low, medium, or high based on predetermined Likert scale cutoffs (e.g., 9–21 = low visual style). Furthermore, TOEIC scores were categorized into four levels: beginner, basic, lower-intermediate, and intermediate, based on TOEIC global descriptors.

2.4 Data Analysis Techniques

Data were analyzed using descriptive statistic including frequencies, percentages, and cross-tabulations. Since the preliminary correlation and regression analyses yielded no statistically significant relationships, no inferential tests were used in the final reporting. Instead, emphasis was placed on profiling

dominant learning styles and TOEIC levels across academic departments.

This shift from correlational to descriptive analysis is a modification of the original plan and is justified based on the actual characteristics of the data (Fraenkel, 2012). The findings are used to inform instructional recommendations rather than to generalize predictive relationships.

3. Result and Discussion

This section presents the findings of the study and interprets them in relation to the research questions and pedagogical implications. All calculations were carried out using SPSS 24, applying frequency distribution and percentage techniques to descriptively profile cadets' learning preferences and TOEIC levels.

3.1 Distribution of TOEIC Proficiency Levels

Table 1. Distribution of TOEIC Proficiency Levels (n = 56)

TOEIC Level	Percentage (%)
Beginner	33.0%
Basic	51.0%
Lower intermediate	12.5%
Intermediate	1.8%

The descriptive data revealed that the majority of cadets at Politeknik Pelayaran Malahayati fall within the lower proficiency range based on the TOEIC classification. As shown in Table 1 and Figure 1, 51% of respondents are at the Basic level, 33% at Beginner, and only a small portion (12.5%) achieved Lower Intermediate, with merely 1.8% reaching the Intermediate level.

These findings indicate that cadets generally possess foundational English skills, with significant room for improvement, particularly in understanding professional maritime discourse. Given that the TOEIC focuses on listening and reading, these results suggest a need to enhance both receptive language skills as part of the Maritime English curriculum.

Distribution of TOEIC Levels

Figure legend: Beginner, Basic, Lower Intermediate, Intermediate
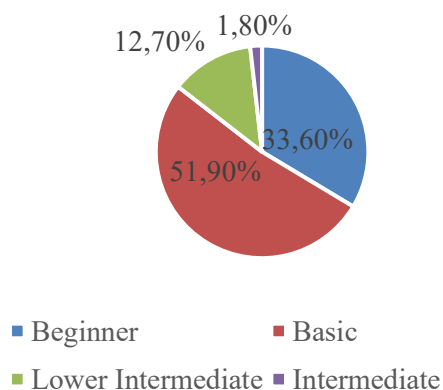
Figure 1. Pie Chart of TOEIC Proficiency Distribution

This result is consistent with observations in other technical-vocational settings, where English instruction may not fully address authentic communication demands in the field (Kim, 2021). In the maritime context, this gap may affect cadets' preparedness to handle international communication on board, suggesting that curriculum alignment with real-life linguistic tasks is urgently needed.
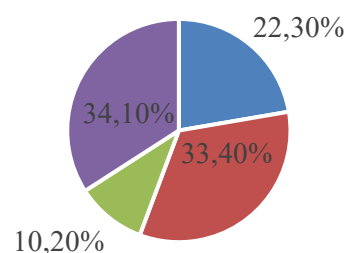
3.2 Distribution of Learning Style Preferences *Analysis*

Table 2. Distribution of Learning Style Preferences (n = 56)

Learning stage	Percentage (%)
Visual	39.3%
Auditory	58.9%
Kinesthetic	17.9%
Group	60.8%

Regarding learning styles, table 2 showed those cadets most frequently identified with group learning (60%) and auditory learning (58.9%), while visual and kinesthetic styles were reported at 39.3% and 17.9% respectively. This distribution suggests that the majority of cadets prefer collaborative environments and benefit from auditory input such as discussion, explanation, and oral repetition.

Distribution of Learning Styles

Figure legend: Visual, Auditory, Kinesthetic, Group

Figure 2. Pie Chart of Learning Style Preferences

Comparable findings were observed by Nordin and Yunus (2020), who noted that learners in skill-based training programs often gravitate toward interactive and auditory-centered instruction. The low preference for kinesthetic learning in this study could be attributed to the theoretical nature of TOEIC tasks, which may not stimulate action-based learning.

3.3 Pedagogical Interpretation

Although this study did not establish a statistical relationship between learning styles and TOEIC performance, the descriptive results are useful in guiding instructional design. The high presence of auditory and group-based learners corresponds with the TOEIC listening component and maritime English scenarios that involve teamwork and oral reporting. Thus, instructors should emphasize role-play, listening drills, and peer-based language tasks.

Additionally, the weak performance in TOEIC reading suggests a need to enhance vocabulary acquisition, skimming-scanning skills, and text-based maritime instruction using visual aids like flowcharts and signage common aboard ships.

To support differentiated learning, teachers should also apply diagnostic tools at the beginning of the course to detect learner preferences and adjust methods accordingly. Tools like learning style checklists or short learner profiling questionnaires are easy to administer and effective for planning.

3.4 Summary of Pedagogical Implications

1. Implement listening-centered modules and use authentic maritime recordings.
2. Incorporate peer interaction strategies and cooperative learning to reflect group-style preference.
3. Develop reading practice based on maritime manuals and procedural texts.
4. Design multimodal instructional materials to address diverse learning styles.
5. Align learning outcomes with communication scenarios cadets are likely to face in real onboard settings.

These findings highlight the importance of rethinking current instructional approaches and support the use of descriptive data for adaptive curriculum planning in Maritime English.

4. Conclusion

This study has presented a descriptive mapping of learning style preferences and TOEIC proficiency levels among cadets at *Politeknik Pelayaran Malahayati.* The findings reveal that most cadets possess basic English skills and favor auditory and group-based learning approaches. While no statistical correlation was found between learning styles and TOEIC scores, the alignment between preferred modalities and the nature of TOEIC tasks provides valuable insight into how Maritime English instruction can be improved.

The impact of this research lies in its contribution to more informed curriculum planning. By recognizing the dominance of collaborative and listening-oriented learners, Maritime English instructors can adapt their teaching strategies to better support learner engagement and skill development. This study also encourages maritime education institutions to integrate learning style diagnostics as part of instructional planning, ensuring that pedagogy is responsive to cadets' actual learning tendencies. In doing so, maritime training programs can foster more effective language learning experiences and enhance graduates' readiness for real-world communication demands at sea.

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